

1897.

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NEW SOUTH WALES.

VOTES

AND

PROCEEDINGS

OF THE

LEGISLATIVE ASSEMBLY

DURING THE SESSION

OF

1897,

WITH THE VARIOUS DOCUMENTS CONNECTED THEREWITH.

IN SEVEN VOLUMES.

VOL. VII.

SYDNEY :

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1898

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LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

VOTES AND PROCEEDINGS.

SESSION 1897.
(IN SEVEN VOLUMES.)

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1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

HINDOOS IN THE TWEED, BRUNSWICK, RICHMOND,
AND CLARENCE RIVER DISTRICTS.
(RETURN SHOWING NUMBER OF.)

Printed under No. 15 Report from Printing Committee, 12 August, 1897.

[Laid upon the Table of this House in accordance with promise made in answer to Question No. 8 of 3 August, 1897.]

Question.

(8.) HINDOOS IN THE TWEED AND CLARENCE RIVER DISTRICTS:—*Mr. Pyers*, for *Mr. Ewing*, asked the Colonial Secretary,—Can he state the number of Hindoos in the Tweed, Brunswick, Richmond, and Clarence River Districts, specifying the localities, as far as possible, where they are resident?

Answer.

Mr. Brunker answered,—This information will be prepared and laid upon the Table in the form of a return.

RETURN of Hindoos in Clarence, Richmond, and Tweed River Districts on 31st July, 1897.

Localities where Resident.										Number.
Lismore and Wyrallah	...	...	...	...	...	...	...	...	...	120
Coraki	...	...	...	...	...	...	...	...	...	22
Wardell	...	...	...	...	...	...	...	...	...	9
Rous...	...	...	...	...	...	...	...	...	...	109
Ballina	...	...	...	...	...	...	...	...	...	96
Byron Bay	...	...	...	...	...	...	...	...	...	28
Total...	...	...	...	...	...	...	...	...	...	384
Murwillumbah	...	...	...	...	...	...	...	...	...	23
Tumbulgum...	...	...	...	...	...	...	...	...	...	35
Total...	...	...	...	...	...	...	...	...	...	58
Grafton	...	...	...	...	...	...	...	...	...	32
South Grafton	...	...	...	...	...	...	...	...	...	4
Brushgrove	...	...	...	...	...	...	...	...	...	15
Chatsworth	...	...	...	...	...	...	...	...	...	20
Palmer's Island	...	...	...	...	...	...	...	...	...	8
Total	...	...	...	...	...	...	...	...	...	79
Hindoos in Richmond River District	...	...	...	...	...	...	...	...	...	384
Do Tweed do	...	...	...	...	...	...	...	...	...	58
Do Clarence do	...	...	...	...	...	...	...	...	...	79
Total	...	...	...	...	...	...	...	...	...	521

There are no Hindoos in the Brunswick River District.

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

FACTORIES.

(COMPARATIVE STATEMENT BY THE VICTORIAN STATIST RESPECTING THE AVERAGE NUMBER OF HANDS EMPLOYED IN, OF VICTORIA AND NEW SOUTH WALES.)

Printed under No. 20 Report from Printing Committee, 21 October, 1897.

MANUFACTURES—COMPARISON BY VICTORIAN STATIST.

Published in the Melbourne *Argus* and *Age*, September, 1897.

Classified Groups of Industry.	Victoria.				New South Wales.			
	Fac- tories.	Average Number of Hands Employed.			Fac- tories.	Average Number of Hands Employed.		
		Males.	Females	Total.		Males.	Females	Total.
Art and mechanic produc- tions—								
Books and Stationery ...	203	3,956	697	4,653	271	4,251	396	4,647
Machinery, tools, and implements ...	293	6,608	18	6,626	221	5,990	16	*6,006
Carriages and harness ...	221	2,029	18	2,047	178	1,608	13	1,621
Furniture ...	104	1,322	119	1,441	84	1,067	91	1,158
Chemicals ...	43	479	218	697	28	280	46	326
Others ...	62	615	61	676	54	1,303	6	†1,309
Textile fabrics, dress, and fibrous materials ...	472	5,451	10,253	15,704	389	4,542	5,291	9,833
Food, &c.—								
Animal food ...	230	1,484	32	1,516	178	1,703	78	1,781
Vegetable food... Drinks and stimulants...	(275) 117	275 2,221	... 699	275 2,920	(152) 122	313 1,807	26 361	339 2,168
Animal matters ...	238	3,024	334	3,358	301	5,511	380	§5,891
Vegetable matters ...	183	2,876	60	2,936	288	3,963	41	4,004
Heat, light, and energy ...	380	3,753	213	3,966	453	4,353	166	4,519
Stone, clay, earthenware, and glass ...	32	662	...	662	74	859	...	859
Gold, silver, and precious stones ...	115	1,724	18	1,742	218	2,098	...	2,098
Metals, other than gold or silver ...	34	415	13	428	11	100	3	103
Unclassified (chiefly single establishments) ...	38	448	1	449	58	2,699	...	||2,699
Total¶	...	...	...	...	16	226	18	244
Total¶	2,765	37,342	12,754	50,096	2,044	42,677	6,932	49,609

Note.—The published returns of New South Wales include creameries, which are not reckoned as separate establishments in Victoria, although the hands are counted; also stone-crushing works, which are included with quarries in Victoria. The figures for such establishments have, however, been eliminated for the purposes of comparison. In other respects the returns of the two colonies are, for the first time, believed to be on a uniform basis.

* Including 2,470 hands in railway and tramway workshops in New South Wales, as compared with only 969 similar works in Victoria, where, however, only one railway workshop—at Newport—has been deemed worthy of inclusion in the returns.

† Including 950 hands employed on docks and ships.

‡ Hands employed in creameries, which are regarded as employees of butter factories; but the number of creameries, shown in brackets, were not included as factories.

§ Including 23 sugar mills, employing 1,475 hands; and 32 ice and refrigerating works, employing 1,047 hands.

¶ Including 22 smelting works, employing 2,076 hands.

|| Including, under hands employed, home workers chiefly in connection with clothing factories, viz., 1,087—166 males and 921 females in Victoria; and 785—117 males and 668 females in New South Wales.

CLASSED ACCORDING TO NUMBER OF HANDS EMPLOYED.

Factories Employing on the Average—	Victoria.		New South Wales.	
	Factories.	Hands.	Factories.	Hands.
Under 4 hands*	446	1,368	454	1,380
4 hands	320	1,280	374	1,496
5 to 10 hands	1,055	7,442	1,148	7,733
11 to 20 hands	422	6,273	475	6,825
21 to 50 hands	324	10,077	299	9,379
51 to 100 hands	116	8,155	99	6,837
101 and upwards	82	15,501	105	15,405
Home-workers (undistributed in New South Wales) ... ..	.....	.....	.....	785
Total	2,765	50,096	{ 2,944 10†	{ 49,609 231† }

* Including only establishments using machinery worked by steam, gas, electric, water, wind, or horse power.

† Stone-crushing works which could not be eliminated in detail.

Office of the Government Statist,
Melbourne, 17th September, 1897.

JAS. J. FENTON,
Assistant Government Statist.

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

CORPORATION OF THE CITY OF SYDNEY.
(STATEMENT OF RECEIPTS AND EXPENDITURE FOR YEAR 1896.)

Presented to Parliament, pursuant to Act 43 Vic. No. 3, sec. 220.

Printed under No. 2 Report from Printing Committee, 6 May, 1897.

STATEMENT of the RECEIPTS and EXPENDITURE OF THE CORPORATION OF THE
CITY OF SYDNEY, for the year ending 31st December, 1896.

ABSTRACT

ABSTRACT of the RECEIPTS and DISBURSEMENTS of the MUNICIPAL COUNCIL of the CITY OF SYDNEY, on account of the CITY FUND, for the Year ending 31st December, 1896.
 Incorporated by Act of Colonial Legislature, 43 Vic. No. 3.

RECEIPTS.			DISBURSEMENTS.			
	£	s. d.	£	s. d.	£	s. d.
City Rate, raised by assessment, under authority of Act 43 Vic. No. 3	133,941	13 2	133,941	13 2	Balance due to Union Bank, 31st December, 1895	41,850 7 4
Fees and Fines—Building Fees	975	15 0			Office of Mayor	1,000 0 0
Special Building Fees	44	2 0			Town Clerk and Department	1,078 16 8
Police Dues	451	0 3			City Surveyor and Department	2,801 7 11
Hoarding Licenses, &c.	355	1 0	1,856	4 3	City Treasurer and Department	1,725 0 0
Rents and Dues from Markets—Be'more (old)	4,067	9 0			Inspector of Nuisances and Department	908 6 8
" " " (new)	3,539	18 0			City Architect and Department	1,345 0 0
" " Eastern Fish	1,536	8 0			City Health Officer	250 0 0
" " Cooling Chamber	518	10 8	10,009	11 8	Clerk of Markets	225 0 0
Rents from City Wharfs	2,769	4 2			City Solicitor	500 0 0
Public Baths	389	1 8			City Organist	500 0 0
Exhibition Building	87	16 0			City Assessor	300 0 0
Town Hall	1,670	18 0			Inspector of Eastern Fishmarkets	173 6 8
Stores, &c., Sussex-street	784	1 4			City Auditors	200 0 0
Hay-street Buildings	331	14 0			City Improvements—Wages:—	
Plymouth Pumping Plant	60	0 0			Cleansing Streets, &c.	37,526 11 1
Haymarket Land	450	10 0	0,490	5 2	Inspector of Nuisances' Department	2,376 6 0
Cleansing Earth Closets	91	8 6			Street watering	4,038 11 1
Sussex-street Sale-yard Dues	1,322	7 10			General Works	14,525 3 11
Auctioneers' Licenses	3,437	17 2			City Markets	2,275 19 0
Rent and Agent, Moore Park	97	11 2			General Establishment and sundries	12,569 3 7
Organ Recitals	993	2 6			Streets Loan	575 11 4
Bailiffs' Costs	275	3 0			City Improvements—Metal	74,785 6 9
Miscellaneous Receipts	2,201	13 0			City Improvements—Street Works:—	4,002 9 8
Cattle Sale-yards (surplus transferred)	5,782	0 1	14,301	17 4	Kerbing, Guttering, Flagging, &c., under contract	5,563 9 7
					Tar Paving, under contract	1,053 18 11
					Sundries for General Works	4,210 14 2
					Wood Blocking, &c. (Streets Loan)	9,486 1 1
Balance due to Union Bank, 31st December, 1896			100,499	11 7	City Markets—Material	767 3 3
			78,528	6 0	Street watering—Material	103 12 1
					Fire Brigades Board—Annual contribution	2,700 19 8
					Lighting expenses	14,108 11 0
					Printing, stationery, advertising, stamps, cab hire, rates, &c.	4,177 11 5
					Government rents, &c.	1,265 12 6
					Insurance	674 16 2
					Purchase of land	1,082 7 0
					Reports and sundries	2,820 17 0
					Law expenses	1,048 0 10
					Gratuities	643 15 0
					Interest expenses:—	
					City Fund; on Overdraft, £460 0s. 9d.; on Debentures, £4,800—(Sydney, £2,400; London, £2,400)	5,269 6 9
					Town Hall Loan (on Debentures—Sydney, £4,500; London, £3,000)	12,500 0 0
					Streets Loan (on Debentures, London)	14,000 0 0
					Moore-street Improvement Loan, (on Debentures, London)	5,055 0 0
					Public Markets Loan, (on Debentures, London)	12,000 0 0
					Sinking Funds—Annual Contributions:—	
					Town Hall Loan, £2,250; Colonial Treasurer Account, £1,400	3,650 0 0
					Streets Loan, £6,000, Colonial Treasurer account, £700	6,700 0 0
					Public Markets Loan	2,500 0 0
						49,415 6 9
						12,850 0 0
			£	245,027	18 1	245,027 18 1

City Treasury,
 Sydney, 19th February, 1897.

JAMES ROBERTSON, F.S.I.A., }
 GEO. CHRISTIE, F.S.I.A., } City Auditors.

R. C. ROBERTSON,
 City Treasurer, pro tem.

ABSTRACT of the RECEIPTS and DISBURSEMENTS of the MUNICIPAL COUNCIL of the CITY OF SYDNEY,
for the Year ending 31st December, 1896, on account of CATTLE SALE-YARDS FUND.

RECEIPTS.				DISBURSEMENTS.										
	£	s.	d.	£	s.	d.	£	s.	d.					
Revenue by dues.....	13,051	11	9				Balance due to Union Bank, 31st December, 1895.....		7	4	0			
Sale of manure	30	0	0				Salaries of officers	400	0	0				
Rent of offices	52	0	0				Interest expenses (on Debentures, Sydney)	2,100	0	0				
Sale of Land	591	5	4				Incidental expenses	373	7	5				
				13,724	17	1	General Works	2,853	5	4				
							Wages	1,036	18	7				
							City Fund (Surplus).....	5,782	6	1				
											12,545	17	5	
							Balance due by Union Bank, 31st December, 1896.....				1,171	15	8	
				£	13,724	17	1				£	13,724	17	1

City Treasury,
Sydney, 19th February, 1897.

JAMES ROBERTSON, F.S.I.A., } City Auditors.
GEO. CHRISTIE, F.S.I.A., }

R. C. ROBERTSON,
City Treasurer *pro tem.*

PUBLIC MARKETS LOAN FUND.

RECEIPTS.				DISBURSEMENTS.										
	£	s.	d.	£	s.	d.	£	s.	d.					
Balance due by Union Bank, 31st December, 1895.....				11,322	0	4	General Works	65,351	0	0				
Interest on Fixed Deposit	1,750	0	0				Wages.....	212	0	0				
Fixed Deposit Matured	50,000	0	0				Incidental Expenses	487	16	0				
Sale of Debentures—Amount on Account.....	75,000	0	0				Balance due by Union Bank, 31st December, 1896.....				66,050	16	0	
				120,750	0	0					72,021	4	4	
				£	138,072	0	4				£	138,072	0	4

City Treasury,
Sydney, 19th February, 1897.

JAMES ROBERTSON, F.S.I.A., } City Auditors.
GEO. CHRISTIE, F.S.I.A., }

R. C. ROBERTSON,
City Treasurer *pro tem.*

CITY FUND SUSPENSE ACCOUNT, *RE* MOORE-STREET IMPROVEMENT.

RECEIPTS.			DISBURSEMENTS.					
	£	s.	d.	£	s.	d.		
Balance due by Union Bank, 31st December, 1895	93	5	7	Interest expenses (on Debentures, London)...	4,345	0	0	
Annual contributions	3,059	19	8					
Balance due to Union Bank, 31st December, 1896	1,191	14	9					
	£	4,345	0	0	£	4,345	0	0

City Treasury,
Sydney, 19th February, 1897.

JAMES ROBERTSON, F.S.I.A., } City Auditors.
GEO. CHRISTIE, F.S.I.A., }

R. C. ROBERTSON,
City Treasurer *pro tem.*

LIABILITIES of the MUNICIPAL COUNCIL of the CITY OF SYDNEY, 31st December, 1896.

CITY FUND.		£	s.	d.	£	s.	d.
Debentures outstanding		100,000	0	0			
Amount due to Union Bank		78,528	6	6	178,528	6	6
CATTLE SALE-YARDS FUND.							
Debentures outstanding		35,000	0	0			
Less amount due by Union Bank		1,171	15	8	33,828	4	4
TOWN HALL LOAN FUND.							
Debentures outstanding					275,000	0	0
STREETS LOAN FUND.							
Debentures outstanding					300,000	0	0
MOORE-STREET IMPROVEMENT FUND.							
Debentures outstanding					250,000	0	0
PUBLIC MARKETS LOAN FUND.							
Debentures outstanding	£300,000	0	0				
Savings Bank of New South Wales	75,000	0	0				
					375,000	0	0
Less amount due by Union Bank					72,021	4	4
					302,978	15	8
CITY FUND SUSPENSE ACCOUNT <i>re</i> MOORE-STREET IMPROVEMENT.							
Amount due to Union Bank					1,191	14	9
Less SINKING FUNDS—							
Cattle Sale-yards: Invested in Debentures, £5,200. Amount at Union Bank, £30,580.		35,780	0	0	1,341,527	1	3
Town Hall Loan: Invested in Debentures, £7,000; N.S.W. Government Funded Stock, £38,000. Colonial Treasurer, £16,757 14s. 8d.; Union Bank, £12,085 18s. 10d.		73,823	13	6			
Streets Loan: Invested in Debentures, £17,500; N.S.W. Government Funded Stock, £55,000. Colonial Treasurer, £8,368 17s. 4d.; Union Bank, £26,503 15s.		107,372	12	4			
Moore-street Improvement Loan: Amount at Union Bank		6,983	9	2			
Public Markets Loan		2,500	0	0	226,459	15	9
					£ 1,115,067	6	3

City Treasury,
Sydney, 19th February, 1897.

JAMES ROBERTSON, F.S.I.A. }
GEO. CHRISTIE, F.S.I.A. } City Auditors.

R. C. ROBERTSON,
City Treasurer *pro tem.*

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

MILITARY FORCES OF THE COLONY.

(REPORT FOR THE YEAR ENDING 30TH JUNE, 1897, BY MAJOR-GENERAL G. A. FRENCH, R.A., C.M.G.,
COMMANDING MILITARY FORCES.)

Printed under No. 24 Report from Printing Committee, 2 December, 1897.

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MILITARY FORCES OF THE COLONY.

REPORT for the Year ending 30th June, 1897, by Major-General
G. A. FRENCH, R.A., C.M.G., Commanding Military Forces.

To the Principal Under Secretary,
Chief Secretary's Office,—

Sir,

I have the honor to submit the following Report on the Forces and Defences of the Colony.

(A.) INTRODUCTION.

(1.) I arrived in Sydney from India on 25th April, 1896, and took over the command of the Forces at once. My predecessor, Major-General Hutton, had sent me copies of his Reports, and of the "Australian Federal Defence Scheme," and other documents bearing on defence matters, which I was enabled to study carefully on my way over, and this, with my previous acquaintance with Local Defences, enabled me to drop into work at once.

(2.) Having made a thorough inspection of the Defences at Sydney, Botany, Newcastle, and Wollongong, and of the Permanent Artillery at those places, I was in a position to make definite recommendations with regard to the command of that Force. This had been a burning question for years, and, for want of settlement, had produced a state of affairs anything but conducive to discipline or efficiency. I am glad to be able to report that the condition of affairs is now completely altered, and that in the near future there is the prospect of this Force being in every respect satisfactory, except, perhaps, in numbers.

(3.) I was anxious at as early a date as possible to visit the outlying districts of the Colony, and consequently commenced my inspections earlier than usual. During the year I visited the Clarence and Richmond River districts, Glen Innes, Armidale, Tamworth, Singleton, Newcastle, Wollongong, Camden, Picton, Bowral, Goulburn, Wagga, Albury, Young, Bathurst, and Mudgee, inspecting Corps at all the above places. I was also present at the Rifle Association Meetings at Sydney, Singleton, and Moss Vale. I hope during the current year to visit all other portions of the Colony where the Head-Quarters of Companies are located.

(4.) The Federal Military Conference that assembled in Sydney in October, 1894, recommended that a Military Defence Bill should be passed for all the colonies of Australia and Tasmania, and that it should be based on the Queensland Act of 1884 and amendments of 1891. Major-General Hutton, in his 1896 Report, strongly urged the adoption of a Military Act, adding: "It is impossible, with any regard to any sound military organisation, to postpone the adoption of such a Bill until a national emergency arises. The existing Volunteer Acts of 1867 and 1878, under which the troops of New South Wales are enrolled, are well known to be obsolete."

In view of the above, as well as the fact that I was Commandant in Queensland when the 1884 Act was passed there, I felt it incumbent on me to take action (though I should have preferred to have given my undivided attention to other duties), and consequently I framed an Act of the nature indicated. This was put into proper legal form by the Attorney-General, and I hoped might have been passed last Session. I trust that another Session will not be lost in the matter, as I can make little headway in the efficient and economic administration of the Forces till the existing Acts and the Regulations thereunder are materially modified.

(5.) Having now had full opportunities for seeing the greater portion of the Force, and going thoroughly into its working and administration, and having had some considerable knowledge of it prior to 1891, I would say, in the first place, that probably not sufficient credit was ever given to the late Major-General Richardson,
C.B.,

C.B., for his exertions in forming the Force, *ab initio*—a feat which cannot be appraised at its proper value except by the few who have had to do similar work. The unending brain work involved in the organization of the complex military machine is little understood, and as little appreciated, by the general public. The reward too, even when successful, does not seem great; for although he raised and trained a Force where no Force existed before, and took a large portion thereof to the Soudan in 1885, a matter which has brought lasting credit to the Colony, his pension was cut down after his retirement, and his widow refused a pension after his death.

(6.) Major-General Hutton arrived at a time when, owing to the general depression expenses had to be cut down in every direction. The Military Estimates, as usual were the first to suffer, and during his tenure of command (nearly three years) he was never able to get the Force, or even a large part of it, into camp for combined training. He nevertheless carried out numerous improvements in the organisation and discipline of the Force generally, and specially as to mobilization for war. (His unceasing efforts in the direction of Australian Federal Defence are too recent and well-known to require remark from me.) Had half of his recommendations been carried out, the Force would be in a far better state than it is now; but year after year he had to make the same recommendations and find that no action was taken thereon; this was notably the case as regards the Permanent Artillery.

(7.) I will now submit *seriatim* the opinions at which I have arrived regarding all branches of the Force.

(B.) PERMANENT ARTILLERY.

(1.) "A" BATTERY, FIELD ARTILLERY.

(8.) I considered this Battery fairly efficient at period of my first inspection, the horses generally good, the Non-Commissioned Officers, Gunners, and Drivers well trained and of good physique. The Officers were not up to the regular standard in the matter of Fire discipline, and the results of actual practice were bad, though this latter may be largely qualified by the fact that practice was carried on with the old muzzle-loading 9-pounders. Hearing on my arrival that a Battery of 12-pounder B.L. guns had been ordered, and was probably shipped, I advised a cable being sent to inquire, and as they had not been, we were fortunately in time to order the new 15-pounder gun, with Cordite charges, the modern Field Gun for the Regular Army, and the one now recommended by the Colonial Defence Committee for all the Australian Colonies. These guns, with equipment complete, have now arrived out. The Battery is provided with an excellent lot of horses, which are also available for the instruction of Field Artillery, Cavalry, Mounted Rifles, and Classes of Officers, and also for a large amount of cartage of stores and camp equipment. I propose to increase their number, and reduce their cost by the simple expedient of turning most of them out to grass when not required. There is no doubt in my mind that with the thorough instruction that will be afforded to all ranks under Colonel Smith, R.A., this Battery will be in a much more efficient state by the time of my next Annual Report.

(2.) PERMANENT GARRISON ARTILLERY.

(9.) The state of affairs in connection with some of the senior Officers of this Branch, which was alluded to in previous Reports of my predecessors, I do not wish to call attention to. From my point of view, it is not merely galling to Officers to have their demerits canvassed in public for matters for which the system is perhaps more to blame than the individual; but it is fatal to efficiency and discipline when senior Officers are held up as objects of derision to their juniors.

(10.) I sincerely trust that in future the shortcomings of senior Officers may be dealt with under the heading "Strictly Confidential," and that when such Officers have to be retired it may be carried out quietly but promptly in the interest of the Service generally.

(11.) From the above causes this branch of the Force has been at a great disadvantage; but a large number of the Officers have qualified at the School of Gunnery, Shoeburyness, and are well up in matters of coast defence. I advised the extension of this system to specially selected Non-commissioned Officers, and it is satisfactory to know that two so selected are likely to prove valuable instructors on their return here.

(12.)

(12.) As a further development of the Local Long Course of Instruction at South Head, the other Australian Colonies were invited to send Officers or Non-commissioned Officers of the Permanent Artillery to join a course commencing on 1st July, 1897, this Colony finding instructors and camp equipment free.

(13.) This has been well responded to, and at the present time the following are represented :—

	Officer.	Non-com. Officers.
Victoria	1	5
Queensland ... ..	...	2
West Australia ... ..	...	1

(14.) I hope to see this Course continued annually, even though it represents such a small instalment of Military Federation for Defence.

(15.) The Non-commissioned Officers and men of the Permanent Garrison Artillery are generally well trained. Many of the latter are too much employed, though none are supposed to be employed till thoroughly trained (and then put through a course of training every year). This will want watching, private convenience being sometimes considered before the public benefit.

(16.) More practice is required in firing at moving targets, firing with q.-f. guns, firing at night at targets lit up with the electric light. The first of these three is all that can be carried out for the present.

(17.) I expect to see much general progress in this branch during the current year. Colonel Smith is using every endeavour to make it thoroughly efficient.

(C.) PERMANENT SUBMARINE MINERS.

(18.) This small Force exists really to take charge of Submarine Mining Plant, to form a nucleus for submarine mining operations, and to act as instructors in that branch. At my inspection all stores were in excellent order, and practical operations were well carried out.

(19.) I am strongly of opinion that a Technical Branch of this sort should occasionally be thoroughly overhauled by a skilled expert of the Royal Engineers.

(20.) At the Conference of Commandants held in Melbourne last December, it was strongly recommended that an officer of the Royal Engineers should be employed by the Australian Colonies, but no action has apparently as yet been taken. At the present time there is no certainty that any of the several branches that come under the head of "Engineer Services" are in as efficient a state as they should be, and with the large interest that all these colonies have in forts, submarine mining stores, and electric lighting gear, there seems to be ample work for one skilled Superintending Officer.

(21.) Nine carefully selected Non-commissioned Officers and men were included in the detachment of the Permanent Forces sent to England this year, and went through courses of instruction with the Royal Engineers at Chatham. The cost was slight and the advantage obvious.

(21½.) Since August, 1896, correspondence has been going on with reference to a submarine mining steamer, but little practical headway has been made in obtaining one. The necessity for expediting the matter may be judged from the following extract from my letter of 20th July, 1897 :—

The country has, at a very large expenditure, procured the mines, stores, and appliances for a Submarine Mining Defence of Port Jackson, and a large sum is expended annually in maintaining and training the necessary personnel; there is a grave danger that when a national emergency arises, the equivalent result in the way of defence will not be obtained unless there is a reliable and efficient submarine mining steamer.

(D.) PARTIALLY-PAID FORCES.

(1.) MOUNTED FORCES.

(22.) *New South Wales Lancers*.—This Regiment contains a very large proportion of Officers and men of the right sort for a Cavalry Corps—excellent riders, plenty of go and dash, especially amongst the Country Squadrons.

(23.) *Cavalry Horses*.—The horses are, in many instances, quite below the standard for Cavalry work; and as such a statement may be something of a shock to Australians, I think it advisable to discuss shortly the required conditions.

(24.)

(24.) A light Cavalryman, with saddle, accoutrements, kit, arms, and ammunition, rides about 18 stone. It is evident that a horse that will work day after day, scouting, reconnoitring or carrying this weight along a road, must be one of good size and substance, even without considering the question of the "shock of impact" in the charge, when weight and speed must tell. Such horses are by no means plentiful in Australia, and are usually in demand by Indian buyers; consequently many men in the Lancers cannot afford to buy such. Possibly it is not generally known that the horses of all the Mounted Corps are in one sense "gift" horses; in fact, the Government only pay the mounted man the same rate as a foot man, the former finding both horse and saddlery for nothing. This in itself is an astounding evidence of the popularity of the Mounted Services; and I must confess that at my inspections, though I had frequently to find fault with the horses, I felt I only did so in a half-hearted fashion—it was difficult to "look a gift horse in the mouth."

(25.) *Mounted Rifle Horses.*—Here we have a totally distinct condition of affairs, as far as the horse is concerned. In this case the horse is merely the means of locomotion from time to time or from point to point. He is not used in the charge; he does not require much height or weight—in fact, preferably he should be small, so that men can readily mount and dismount. Instead of having to take his share in a charge at top speed, after perhaps several hours of work, he is relieved of the weight of rider, arms and ammunition, the Mounted Rifleman dismounting to do his part of the fighting. While, therefore, the Cavalry horse is scarce and expensive, horses suitable for Mounted Riflemen could be obtained here in myriads for nominal prices.

(26.) The Lancer is paid for twenty-five half days in the year. He is armed with a lance, sword, and carbine, and supposed to be instructed fully in the use of these arms, in addition to field drills. It is quite a supposition, because it is an impossibility; one or two of these weapons must go to the wall. It is usually the fire-arm. The true Cavalryman has commonly a fine contempt for fire-arms and villainous saltpetre generally, and no doubt both have detracted largely from the pleasure of being in that branch of the Service; but to do any good in modern warfare, we must be painfully up to date.

(27.) Now let us take the ideal Cavalryman, with the *arme blanches*: a first-rate, well-drilled man, a horse to match, and a sword or lance. Having got these, I would ask how much are we in advance of Julius Cæsar's Cavalry? But the catapult and balista have gone ahead since then, and the modern Archer and Slinger are not satisfied with a range of eighty yards. The main point for us to consider is, taking into consideration all the circumstances of *this country*, what form should our Mounted Forces take—"Cavalry" or "Mounted Riflemen"?

(28.) I have dealt with the horse portion of this question in the foregoing. I would now point out—

- (a) That the country along the coast, which must be the seat of war, is quite unsuited for the action of Cavalry in large bodies.
- (b) An enemy could not bring any number of Cavalry here, and horses so landed would, in many cases, be unfit for immediate service; consequently Cavalry will not be required to repel Cavalry.
- (c) The main reliance of an invading force must be in its Infantry, which can be carried in large numbers in modern vessels. Infantry have little to fear from Cavalry; but would be sorely pressed if mounted men with magazine rifles, and well able to use them, attacked them at pleasure in front, flanks, or rear.
- (d) Finally, we can turn out excellent Mounted Riflemen in thousands; but the number of properly trained and Mounted Cavalrymen would be few.

(29.) For the above reasons, I have no hesitation in advising that any extension of our Mounted Forces should be in the direction of Mounted Riflemen, and that every encouragement should be given for the formation of Volunteer Mounted Corps, in which the fire-arm would be the only, or at least the primary, weapon.

(30.) *Mounted Rifles.*—This Regiment consists of eight half-companies, scattered over the Colony from Camden to Tenterfield. It is to my mind the Force that compares most favourably with the similar branch in the Regular Service.

(The

(The Mounted Infantry are not exactly similar.) I have had every reason to be satisfied with the portions of the Regiment that I have seen, and was especially struck with the workmanlike way in which detachments from the various companies carried through the Mounted Competitions at the National Rifle Association Meeting. I should like to see this branch enlarged and extended, and have asked approval for ten extra men per half-company.

(2.) "B" AND "C" BATTERIES, FIELD ARTILLERY.

(31.) The term "Field Artillery" seems scarcely appropriate to apply to an aggregation of obsolete guns and cart-horses, even though the latter may be attached to the former by the usually recognised Field Battery means. If force of circumstances compels Artillerymen to use such horses, they at least should feel that if, by dint of spur, and whip, and strong language, they have got a gun into a suitable position, the labour ought to be repaid by seeing effective fire opened. This is scarcely possible with the present old muzzle-loaders, and the first step towards the efficiency of these two Batteries is to provide them with modern weapons.

(32.) The horsing has always been a troublesome matter. Hired horses are objectionable enough, even if otherwise suitable; but the style of horse usually supplied is of the clumsy cart-horse order, incapable of trotting any distance, rough, ungroomed, and anything but the sort of animal that men would take a pride in. The rates of hire paid are high enough, viz., 15s. for a whole day and 12s. 6d. for a half day. In Canada the Field Battery Drivers were farmers, and each brought a pair of his own horses to Camp. In this way, each pair of horses having been accustomed to work together, dropped at once into their places in a gun team under the hand of a man who knew all about them, and was interested in taking care of them. I carried out this system to some extent in Queensland; but the requisite conditions do not prevail here, and cannot while the headquarters of the Batteries are in Sydney.

(33.) The best suggestion that I can at present offer is: that, instead of paying large sums for the hire of horses, the Government should purchase horses for the gun teams at least, turning them out to grass when not required.

(34.) It seems to me so inconsistent that while all the Horse and Field Artillery in India are excellently mounted on "Walers," the horsing of a couple of Field Batteries in the Capital of New South Wales should only be a laughing-stock for those acquainted with the requirements of a mobile Artillery.

(35.) Further particulars regarding this branch will be found in Colonel Smith's report, Appendix "C."

(3.) ENGINEERS.

(36.) This Force consists of two Field Companies, one Submarine Mining Company, and one Electricians.

(37.) Up to 3rd September, 1894, this branch had the advantage of the supervision of specially-selected Officers of the Royal Engineers, and had attained a high standard of efficiency.

(38.) The Submarine Mining Company is commanded by Major Lee, an Officer who attained certificates of proficiency at Long Course of Submarine Mining at Chatham and Portsmouth.

(39.) Lieutenant-Colonel Walker and Captain Nelson look after the Telegraph and Electrician Company; and from their daily occupation in connection with such services, it is needless to say that this portion of the Force could not be in better hands.

(40.) The two Field Companies are commanded by Major Parrott and Captain Cansdell, and did good work at the Easter Camp; they require some further equipment.

(41.) The men of all the above are selected, as far as possible, from those trades and occupations in civil life which work-in most advantageously with their military duties.

(42.) Not long ago New South Wales, Victoria, and Queensland had officers of the Royal Engineers in their own employ; but since 7th May, 1896, all the Australian Colonies have been left without an officer of that arm.

(43.)

(43.) Last December, the Commandants in Conference, at Melbourne, strongly recommended that a Consulting Officer of the Royal Engineers should be engaged by the Colonies generally to supervise their Submarine Mining Defences, Electric Lighting plant, and Engineer work generally. No action has so far been taken in the matter; and in default of this being carried out, I would strongly urge that an inspection by a special officer of that Corps be made at least biennially: probably such an Officer could be obtained from India at a slight cost comparatively.

(44.) The importance of this portion of our Defences, and the great value of the material involved, seems to point to the desirability of occasional inspection by skilled experts.

(4.) INFANTRY.

(45.) The Infantry, comprising the 1st, 2nd, 3rd, and 4th Regiments, has been organised in Regiments of ten Companies, the first and 2nd having their Head Quarters in Sydney, the 3rd at Richmond, and the 4th at Newcastle. There are several Companies at the Head Quarters of each Regiment, the remaining Companies at other important centres, along a main line of rail usually. This seems a very suitable organisation, and difficult to be improved on.

(46.) Having had some previous knowledge of this Branch, I cannot say that I notice much advance; the fact is, that owing to there being no Camps for several years past, the Country Companies have had little opportunity for carrying out anything but mere Company drill. The difficulties of doing even this satisfactorily will be readily understood when the size of a Company is considered. This at full strength consists of three Officers and 57 men; but with recruits, men absent with leave, without leave, &c., &c., it often happens that not half the above number are on parade. I have had as few as 29 paraded for my inspection—an occasion on which every effort is made to obtain a good muster.

(47.) The first remedy I propose for this is to raise the strength by ten men per Company, or 100 men per Regiment; the second is to revert, as a regular thing, to the nine-day Camps, under which these Corps previously attained a high degree of efficiency.

(48.) I do not think that the interest taken in Camps by the rank and file of the Force is properly appreciated. Apart from the pleasure of meeting old comrades, there is the additional interest of work on a larger scale, of seeing other Branches of the Service, and joining with them in Field Manoeuvres, besides the very important personal one of performing the greater portion of the Annual Military Training in a very short consecutive period.

(49.) Comparing this portion of the Force with the Militia in England, we find that there the whole training is performed in twenty-one consecutive days, recruits doing twenty-eight. In Canada the whole training, including Musketry, was in my time carried out during Camp. The advantage of consecutive days training has been so impressed on me by long years of experience with Militia and Volunteers, that if offered nine days in Camp, or eighteen days throughout the year, I should have no hesitation in choosing the shorter period; and I am fully of opinion that if this Force is to attain a reasonable state of efficiency, we must revert to the nine-day Camps, and carry out a fair proportion of recruit and elementary drills throughout the year.

(50.) The Infantry Schools of Instruction have done much to improve this Branch of the Force. There is quite a large proportion of Officers and Non-commissioned Officers well up in Company drills, and to some extent in Battalion drill, though the chances for instruction in the latter are few and far between.

(51.) The physique is generally good, but in occasional cases very old men and young boys are to be seen in the ranks.

(52.) The training in Musketry, which ought to be the great aim and object of the Infantry, is not all that it might be. The Musketry Course is usually got through in two half days.

(53.) I was very much astonished to find that no prizes were given for Musketry, the Government apparently, though giving handsome assistance to encourage rifle shooting, taking no steps to see that the shooting of the Defence Forces was a matter of primary consideration. I have gone thoroughly into this matter, and my conclusions will be seen under the heading "Rifle Associations"; but I would here remark that
thorough

thorough instruction in rifle shooting, under conditions as nearly as possible to "Service," is, to my mind, of the utmost importance, and that one of the best methods of keeping up the interest of all ranks is by a system of Company prizes, by which the men of every Company will have certain definite prizes to compete for annually, and which cannot be carried off by the outside professional "pot-hunters." To work this idea out, I have asked for a sum for "Musketry Prizes," and I sincerely hope that it may be viewed favourably.

(54.) I am not satisfied that the Infantry have all the advantages which this large portion of the Force should have. There is no one to look specially after their interests. If there was, it is difficult to believe that they would have been left all these years without any prizes for musketry practice. While the Artillery, Engineers, Cavalry, and Mounted Rifles have from time to time had special Instructors from the Regular service, the Infantry have been allowed to drift. Adjutants and Sergeant Instructors picked up locally, with little qualifications beyond barrack square drill, could ordinarily bring little military experience for the benefit of the Corps; and although good ones are often picked up in this way, the best must suffer from our baneful system of practically putting men into such billets for life. Major-General Hutton endeavoured to break this system down by the ordinary expedient of removing Staff Officers and others after being a certain number of years in their appointments, as in the Regular Service. It devolves on me to carry this system out; but before doing so, I should like to know where they are to be removed to? Failing that, unpopular though it may be, I feel bound to recommend that an occasional Adjutant and Sergeant Instructor be introduced from the Regular Service. There is no difficulty about their removal when their engagements are up. By these means, a portion of the Infantry will at all events be brought up to date.

(55.) The question of the removal of Instructors and others who are past their work, is not special to the Infantry. In every Branch there is a similar state of affairs, the cause being that there is no form of pension on retirement for any rank, and the want of this is sapping the foundations of the whole Force. It is all very well to say that the same state of affairs exists in the Civil Service; but I would point out that for the Military Service, active, smart men in the prime of life are a necessity, and that if the Force is to be a success, there must, as in the Regular Service, be a limit of age for all ranks. This can only become possible by retiring those who by age or infirmity are unable to carry out their duties properly. I have had to deal with some of the most extreme cases myself, but in the hope that Parliament may in due course provide some gratuity for them.

(5.) ARMY SERVICE CORPS.

(56.) Consists of a small Permanent Section of one Officer, and seven Non-commissioned Officers and men, and one Partially-Paid Company organised for Supply and Transport. I have recommended a slight increase so as to form two Companies—one for Supply and one for Transport.

(57.) This small Force would be readily expanded when necessary, and even now does excellent work in Supply and Transport.

(58.) Whoever arranged the pay of the Permanent Section has a good deal to answer for. A Driver in this branch, with one horse and set of harness to look after, no guards or night duties, gets just three times the pay of a Permanent Artillery Driver, who has to take his turn of guard and night duties, and look after two horses and their harness. This seems too absurd to last.

(6.) MEDICAL STAFF CORPS.

(59.) Consists of a small Permanent Section of one Officer and ten Non-commissioned Officers and men, and a Partially-Paid Company of three Medical Officers and 113 Non-commissioned Officers and men, the whole forming a nucleus readily expanded when necessary.

(60.) Surgeon-Colonel Williams, who has worked up this branch *ab initio*, is deserving of every credit for the zeal and attention shown, and for the excellent equipment of ambulance waggons and stores which he has gradually accumulated. I had every reason to be satisfied with my inspection of the Hospital and appurtenances, and with the turn-out and drill of the Non-commissioned Officers and men.

I think that in the matter of Ambulance Equipment, and general readiness for the development of Field Hospitals and attention to sick and wounded, this Colony is well ahead of the other Australian Colonies.

(61.) I attach some interesting extracts from the Principal Medical Officer's report. (*Vide Appendix "D."*)

(E.) VOLUNTEERS.

(62.) Since my arrival there has been a very extraordinary development of the Volunteer Force, the Establishments having risen from—Officers, 7; men, 193, on 31st March, 1896, to Officers, 100; men, 2,363, at present time.

(63.) Hitherto it must be confessed that Volunteers as such have failed repeatedly in various parts of Australia, and especially in New South Wales. This seems the more extraordinary in view of the great success of the Force in England. I, however, take great encouragement from the fact that two Companies of Scottish Volunteers, formed in Sydney some twelve years ago, are still in existence, and now compare most favourably with the best Companies of the Partially-paid Force.

(64.) I argue that if the Volunteer movement can be proved a success in one case over such a long period, there is no reason why it should not be an equal success in others, if similar means be employed. From a long experience, I am satisfied that one of the first conditions for success is in obtaining suitable officers, in touch with the men—not joining the Force for the sake of the rank they may get, but determined, whatever rank they may hold, that they will fit themselves for it by the necessary course of training, and thus obtain the respect and esteem of those they have to lead.

(65.) The next important condition is the selection of the rank and file. Too many Officers are apt to think that one man signing the roll is about as good as another. This is a grievous mistake. The man you want is the man who is likely to stay. Now, it is too much to suppose that the hard-worked labourer or artisan, who signs the roll in a fit of enthusiasm, is likely to stay. What have you to offer him? Pay would be an object to him, but you have none to offer, direct or indirect; but you can offer some considerable marching and exercise. This is scarcely what a man, who has put through eight hours hard physical work during the day, would look forward to as an evening or Saturday afternoon recreation. Clearly, then, the men to join a Volunteer Corps are those to whom pay is not a primary object, but physical exercise is. And these men must be selected from those whose ordinary occupations are indoors, and of a sedentary nature. To them the evening drill is a useful exercise and recreation, and such men are likely to remain in the Corps.

(66.) Rifle-shooting, Squads for drill and gymnastic competitions, &c., &c., do much in holding Corps together, and should be encouraged by every means.

(67.) I shall look forward with much interest to the development of these new Corps, and I hope that the Government will do their share in the matter. Men who serve for nothing naturally expect that the ordinary requisites for carrying on their drill and instruction should be furnished; and to give the Force a fair chance, it is imperative that Drill Halls, Orderly Rooms, and Armouries should be found without delay. Drilling at night a dozen men at a time in a public place under one gas jet, with a running fire of chaff from the ubiquitous larrikin, is not encouraging; but this leads me to one of the greatest blots in the previous administration of the Forces in this Colony.

(F.) DRILL HALLS AND ARMOURIES.

(68.) Throughout Victoria and Queensland (possibly in other Colonies) wherever a corps is established there is usually a drill-shed, armoury, office, and perhaps an instructor's quarters. This is the Head-quarters of the Corps. Here the recruits learn elementary drill, and all hands can parade in bad weather. Commonly some gymnastic apparatus is supplied, and social entertainments are given. How many of the above are to be found in New South Wales? There is no doubt in my mind that a social centre of this sort does much in holding the men together, and establishing a feeling of *camaraderie*, apart from the direct benefits of drill and training. I hope that early steps will be taken to supply this long-felt want at all military centres.

(G.) ADMINISTRATION.

(69.) When Commandant in Queensland I was much struck with the extraordinary cost of the New South Wales Forces in comparison. In round numbers, a Force of 4,000 men cost £50,000 per annum in Queensland; but a similar Force of 5,000 in New South Wales cost five times that amount.

(70.) This excessive cost was subsequently officially inquired into, and wholesale reductions made. Unfortunately these reductions did not always take the form of cutting off excrescences and superfluities: the excessive Staff, the high rates of pay of officers who really had only a few days work in the year remained; but the fighting men were reduced in numbers, and this took its most objectionable form, by a reduction of over 100 men of the Permanent Force. At my inspection of the Forts I was astonished to find that some of our most powerful breech-loading guns were told-off to be manned in war-time by Partially-paid Artillerymen—that is to say, by men whose whole training for the year in all sorts of drills amounted to twenty-five half-days.

(71.) It is not generally understood how trained gunners are absorbed. When numerous guns in many scattered forts have to be manned, there are positions in which slightly-trained gunners, or even infantry, can be employed—hoisting shot or shell, &c., but you would not care to employ them in magazines, or where explosives were stored, in the heat and excitement of action, nor would they be fitted for any of the important positions connected with the direction or working of Coast Defence guns. All such posts must be taken by Officers, Non-commissioned Officers, and trained men of the Permanent Artillery; and thus it will be seen that, under present circumstances, even some of our principal guns cannot be fully manned by trained men. A reference to Colonel Smith's Report, paragraph 11 (*Appendix "C"*), gives his opinion on this point; and, in view of its importance, I have asked on the present year's Estimates for an additional ninety men.

(72.) I would also submit in this connection the opinion of His Excellency the Admiral Commanding-in-Chief on the Australian Station on the general question of the manning of the Defences, and at the same time point out that, as this is the base for the fleet, an additional responsibility is thrown on us in the matter.

(73.) The Navy is clearly our Offensive Force. The Admiral should never have any anxiety about the safety of his base, or think it necessary to leave one ship or one man to assist in its defence. The responsibility is clearly ours, and we must accept it. If, after this plain statement, our guns are left short-handed, I venture to submit that the responsibility cannot rest with either the Military or Naval Authorities.

[From *Sydney Morning Herald* of 15th March, 1897.]

INTERVIEW WITH THE ADMIRAL.—AUSTRALASIAN DEFENCE.—INSUFFICIENCY OF MEN.—SOME STRONG COMMENTS.

WHEN a *Herald* reporter saw the Admiral last night, the first question asked was in regard to the condition of the Defences of New Zealand.

"I can only say," he replied, "that the condition of the Defences in New Zealand is much the same as in all the other colonies—there is a very striking insufficiency of men. It is a very extraordinary thing to me, having observed the almost universal desire there is in these colonies that the money raised from the Colonial taxpayer should be spent in the Colony, to see how very large a proportion of the really considerable sums which the Australian colonies have expended on their Defences has gone into the pockets of manufacturers and contractors outside the limits of the colonies themselves. Of the total sum expended by Australia and New Zealand on their Defences—a sum which must amount to several hundreds of thousands of pounds—considerably more than half has probably been spent in the purchase of material that could be procured from only outside the colonies. This makes all the more remarkable the curious feature of the local Defences—that costly and elaborate passive fortifications have in several instances been provided without, one might almost say, an attempt having been made at arranging that an adequate number of men to man them should be available. What makes this so astonishing is that the really defensive wealth of these colonies—that is, their abundance of highly efficient fighting men—has been neglected. In Australasia, at this moment, there must be over half a million of fighting men, probably the best material for making efficient soldiers of any that exists anywhere in the world; and yet this abundance of supply has been largely neglected, and great sums have been expended on passive defensive material beyond anything like due proportion relative to the *personnel*. I am almost ashamed to say this over again; I have said it in possibly different words more than once; but the subject is too important a one to permit anyone in a responsible position to neglect it for fear of being charged with iteration."

"Your Excellency has not made any inference that war material should be manufactured in the colony?"

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"I do not mean to say that any material that has been purchased abroad could have been manufactured in the Colony; and I am confident that, so far as material is necessary, you will get it better and most likely cheaper in England; but what I do mean to say is, that in the distribution of the sums available an unduly large proportion has been devoted to passive material, leaving relatively an insignificant amount for the most important element of all—the *personnel*.

"The Defence Works which I have seen in New Zealand," the Admiral continued, "like those in all the colonies, are in admirable order. They are beautifully kept, and reflect the highest credit upon the people in charge of them. When visiting some of these really formidable, and at the same time well-kept works, one is perpetually haunted by the question—What is the good of all this if there are not enough of the proper men to man them?"

(H.) RIFLE ASSOCIATIONS.

(74.) I think I may safely say that the matter of the encouragement of rifle shooting has been deliberately handed over by the Government to certain irresponsible bodies called "Rifle Associations."

(75.) I admit that it is a great advantage to have all the work and worry necessary for carrying out Rifle Meetings done by Committees for nothing but the mere love of the thing; but, from close observation of the working of these Associations, I am compelled to inquire,—For what purpose does the Government hand over such large sums? And I assume that it is mainly for the purpose of encouraging and improving the shooting of the Defensive Forces of the Colony.

(76.) Being an old rifle shot myself, I probably have interested myself more than might seem necessary in this matter; but I am not sorry for having done so, as I feel certain I can now show good cause for the present system being considerably modified.

(77.) I find that Government subsidises these Associations as follows, viz.:—

National Rifle Association of N.S.W.	...	...	£1,000
Northern Rifle Association	...	...	250
Southern Rifle Association	...	...	250
Western Rifle Association	...	...	250

and in addition they get free ammunition valued at £882, and free railway passes valued at £675, viz.:—

National Rifle Association of N.S.W.	...	...	£405
Northern Rifle Association	...	...	90
Southern Rifle Association	...	...	90
Western Rifle Association	...	...	90

(78.) In no other form of sport that I know of, are such facilities provided by Government for its enjoyment. The "pot-hunter" is not an ideal sportsman in any line; but in the line of rifle shooting in New South Wales, he must have approached as nearly to the Pot-hunter's Paradise as is possible on this sinful earth. A paternal Government gives him a rifle to shoot with, free ammunition to use with it, a free railway pass to and from the shooting grounds, even if hundreds of miles from his own residence, and then very handsome cash prizes to reward his skill. Finally, if a master in his art, he may look forward to a trip to England on the simple condition that he takes the prizes, and some one else foots the bills.

(79.) I understand that at the last Association Meeting at Randwick, some of the competitors took as much as £100 in prizes. There is no pretence at handicapping; the same crack shots are allowed to enter match after match on equal terms with beginners; the consequence of all this being, that very few of the rank and file of the Defence Forces have much chance of obtaining good prizes. From all this, I infer that if it is the desire of the Government to bring up the general average of the shooting of the Defence Forces rather than furnish fancy prizes for a favoured few, it will be necessary to modify considerably the conditions on which grants are now given to Rifle Associations.

(80.) I trust that nothing in the above may be construed into my being opposed to Rifle Associations. They have done excellent work, and I hope will continue to do it; but I do not think their present system the best means of bringing up
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the general average of shooting. At the same time, anything which goes to encourage rifle-shooting in any shape or form is a distinct gain to Defence. I append some extracts bearing on this question.

Army and Navy Gazette, 20th February, 1897.

There is no doubt that by degrees the old Wimbledon "pot-hunters" are being lost to sight. The Council of the Association are beginning to recognise that to be of value the competitions at Bisley must be conducted more on Military lines.

Just at first, perhaps, receipts will fall off; but as soon as it is recognised that the Bisley Meeting is a Military gathering in the truest sense, its popularity will increase enormously.

At Wimbledon matters were conducted in the loosest way at times. Any "get-up," however extravagant and unsoldierlike, was permitted, and all ideas of Military regularity were set at defiance. As Volunteering became more of a serious business and less of a pastime, the members of the Force themselves kicked against such proceedings, and many of the best shots refused to support a gathering which they felt to be lowering to the Military status of the body in which they were enrolled.

By degrees, as the Council elbow out the "pot-hunting element," the National Rifle Association will come into favour again; but a firm stand will have to be made against the free-and-easy air which characterises a large portion of the provincial Volunteers.

They must be taught that at Bisley they are required to be soldiers first, and good shots afterwards. There is now such a thing as fire discipline, and a man who cannot be taught to salute Officers in uniform, or dress himself correctly, is a disgrace to the Volunteer Force, and ought not to be tolerated at a representative Rifle Meeting.

Singleton Argus.

As an example of how the public money is thrown about, the meeting of the Northern Rifle Association which is now being held here may be cited. We have no desire to decry the practice of rifle-shooting. It is, undoubtedly, to many a very excellent form of sport and amusement, and to some it may be instructive; but why the public should be called upon to provide a number of "pot-hunters" with the means of having a week's enjoyment, and, at the same time, provide a portion of the prize money, is a matter that is not easy to understand. For the purposes of this meeting, the Government granted the sum of £250, besides which several thousand rounds of ammunition and railway passes are also provided free for the competitors. How is it that free drinks and free accommodation are not also included seems incomprehensible in the face of the liberality of the Government in other directions. For this grant of £250 it is not unreasonable to ask what return does the country get. We fail to see that anyone benefits, except a few marksmen, who probably make a good thing out of rifle meetings of this character. No one can cavil at any number of persons promoting a shooting contest and awarding prizes to those who secure the greatest number of points, so long as the taxpayer is not obliged to pay for the fun which these gentlemen avail themselves of. . . . The specious arguments that are used about Rifle Associations forming an adjunct to the Defence Forces is all moonshine, and no one knows this better than the members of the Associations themselves. . . .

To this Mr. A. A. Dangar, the President of the Northern Rifle Association, replies:—

The idea of these local meetings is good—encourages young riflemen, encourages shooting in each of the towns; but they should confine themselves to their own districts, and thus add as main feeders to the main district and Metropolitan Associations, instead of coming into competition with them in the entries, as they do at present.

To resume: As to 'pot-hunters,' I regard them as excrescences that appear at all times and everywhere when the chance offers, and the fewer the entries and the weaker the Association the more they flourish. . . .

(81.) It was reserved for the Western Rifle Association, Bathurst, to show how little it was interested in the encouragement of rifle shooting amongst members of the Defence Forces. This Association actually arranged its meeting at Easter, and refused to alter the date, though it was pointed out that men of the Defence Forces from Bathurst and vicinity must necessarily be in camp at Sydney then.

(82.) The following figures are worth consideration:—Of 536 competitors at the 1896-97 meeting of the National Rifle Association of New South Wales, 147 belonged to the Land Forces; Southern Association, 18 out of 88; Western, 28 out of 157; Northern, 33 out of 109—making a total of 226 out of 890 competitors.

(83.) As there were 6,200 men in the Defence Force at the time, it will be seen what a fraction of the Force derives any benefit from the Association Meetings. Of the 890 competitors, 15 attended 4 meetings; 27, 3 meetings; and 54, 2 meetings.

(84.) From all the above, I have come to the conclusion that the Government should reconsider the conditions on which grants are made to Rifle Associations; and disapproving, as I do, of the manner in which these grants are applied, I think I may reasonably object to the Military Vote being made liable for the ammunition and free passes granted.

(I.) CAMPS.

(85.) A short course of training was carried out at Easter at Sydney. The only ground available for camping on was a portion of the old Rifle Range at Paddington—I say a portion, as a part has been cut off the top of this old Imperial reserve, another part off the bottom, and a road run through the balance.

(86.)

(86.) The troops have now no place on which to parade without the permission of the municipal authorities, or the Trustees of one or the other of the parks or reserves. In any case the Force has outgrown them all.

(87.) I should hope that, before it is too late, the Church and School Lands beyond Randwick, which still remain public property, may be reserved as a training-ground for our Defence Forces.

(88.) The numbers in Camp at Paddington were as follows :—

	Officers.	N.-C. Officers and Men.
Head-quarters Staff	9	4
New South Wales Lancers	8	65
Mounted Rifles	6	57
Brigade Division, Field Artillery	18	209
1st Garrison, Division Artillery	1	46
Field Companies, Corps of Engineers	7	107
Infantry Brigade Staff	3	2
1st Infantry Regiment	22	326
2nd Infantry Regiment	35	535
3rd Infantry Regiment	27	311
5th Infantry Regiment	3	113
Army Service Corps	5	57
Medical Staff Corps	5	82
Total	149	1,914

(89.) As the four days in Camp included the day of arrival and day of departure, as well as a Sunday, the net amount of training could not be much, especially with such raw men. As a matter of fact, from inquiries made, it was found that from 22 per cent. to 70 per cent. of the men of the 1st, 2nd, and 3rd Regiments had not been in a Camp before, owing to the number of years that have elapsed since Camps were held. These short Camps seem to be very extravagant affairs proportionately, as the expenses of bringing the men back and forward are as great as for nine-day Camps, and you really do not get three clear days work.

(90.) Another small Camp was held at Newcastle on the 22nd to 25th May. Numbers as below, viz. :—

	Officers.	N. C. Officers and Men.
N. S. Wales Lancers	6	70
B. D. F. Artillery	1	17
4th Infantry Regiment	21	403
Medical Staff Corps	3	5
Total	31	495

(91.) An objection to these small Camps is that by the time all the Camp Guards and duties are told off there are so few men for parade.

(92.) The vicinity of Newcastle does not afford much suitable ground for camping or manœuvres, but it is a distinct advantage that the Troops should be acquainted with the ground that they are likely to have to defend; and it is therefore desirable that the Troops in the Northern District should occasionally be concentrated at or near Newcastle.

(J.) RAILWAY PASSES.

(93.) The necessity for paying at all times when Troops are carried by rail on Government Railways is not very apparent. In the adjoining Colonies, under such circumstances, men are always carried free. Taking money out of one pocket and putting it into another does not help the taxpayer much; but the Railway Commissioners insist that payment must be made when our men are carried under any circumstances.

(94.) I do not know anything more prejudicial to the training of the Forces than this. Infantry Companies within 20, 30, or 40 miles of each other, that might readily be brought together occasionally for combined training, are prohibited from doing

doing so because there is no money available. If a Rifle Club wishes to shoot a match with an adjoining Club, they are similarly blocked. We could only bring into Camp at Easter the Corps nearest to Sydney and Newcastle for like reasons; and, finally, for the Queen's Jubilee Parade, on 22nd June, all distant Corps had to be omitted. It seems somewhat paradoxical that while children are carried free to school every day in the week, men training for the defence of the Country cannot be carried free even once a quarter. I trust this system may be so amended that a paper credit, and not a cash one, may be sufficient for the requirements of the Commissioners in future.

(K.) THE QUEEN'S DIAMOND JUBILEE.

(95.) The invitation sent by the Secretary of State for the Colonies, with a view to the representation of our local Forces at the Queen's Jubilee, was heartily responded to. Lieutenant-Colonel Lassetter had for months previously been arranging for a strong team of his fine Regiment to visit England, and to take part in the Military Tournaments there; and when the invitation arrived, his men and horses were ready, and their expenses provided for by public subscription. Major Burns of the New South Wales Lancers promptly took steps to have his Corps represented, and, starting a subscription list with a handsome donation himself, had the satisfaction of seeing some 32 Officers and men embark by the 10th April. The Government did not see its way to carry out my original recommendation about having all Arms of the Forces represented, but eventually approved of two Officers and 50 Men of the Permanent Artillery and Engineers being sent, the whole cost for which was only about £1,500, and against which may be set the advantages which these men obtained by three months instruction in their own special branches.

(96.) I think it must have been very satisfactory to the people of New South Wales to read from day to day of the success of their representatives,* and the golden opinions which they won wherever they went; and even that sensitive person, the taxpayer, I feel assured, will be satisfied that he had a fair return for his money when he understands that, for a cost of about £2,000, New South Wales was represented in London by a Force equal to all the other Australian Colonies combined.

(97.) The following numbers were present at the Jubilee Celebrations, in London, viz. :—

	Officers.	N.-C. Officers and Men.
N. S. Wales Lancers	4	28
Mounted Rifles	7	36
Artillery { Permanent Field	1	17
{ „ Garrison	2	26
Engineers (S.M.M.)	...	9
Total	14	116

(98.) The parade in Sydney on June 22nd was a highly satisfactory one. Although distant Corps were not brought in, on account of the expense (Railway), there were some 300 more on parade than on any previous occasion. The only real drawback was the comparatively small size of the ground on which they had to be formed up. The march through the City afterwards by the whole Force (some 3,800 men) was an imposing Military spectacle. As New South Wales took her full share, and rather more, in the Jubilee Celebrations, the following letter has a special interest for us :—

DESPATCH from the Secretary of State for the Colonies, to His Excellency the Governor and Commander-in-Chief.

My Lord,

Downing-street, 16 July, 1897.

The time has arrived for the departure from this country of the various component units of the remarkable military assemblage which has constituted one of the most striking features of the recent Jubilee celebrations; and I cannot allow the occasion to pass without expressing the great satisfaction of Her Majesty's Government, that such a unique and characteristic gathering of Her Majesty's Colonial Forces should have been so successfully brought about.

2. The Colonial Troops have attracted the marked attention, not only of the British public, but of military experts of all nations; and by their soldier-like bearing and appearance, and their discipline and general behaviour, both on parade and in quarters, they have won the highest opinions on all sides.

3.

* The New South Wales Lancers carried off two of the seven Gold Medals offered at the close of the Tournament for competition amongst the highest prize winners from the Regular Army, the Volunteers, Yeomanry, and Colonial Troops.

3. Her Majesty's Colonial Forces, during their stay in England, have been treated in all respects as regular soldiers. They have readily and cheerfully conformed to every requirement of regimental and barrack discipline; and by an intimate association with their comrades of Her Majesty's Regular Forces have become acquainted with every detail of a soldier's life.

4. It has been a particular satisfaction to Her Majesty's Government that this great occasion has been the means of bringing together men of all creeds and of all races, who, although coming, as many of them have done, from widely separated portions of the Empire, are all united by one bond of allegiance as soldiers of Her Majesty the Queen Empress.

5. Her Majesty's Government feel that they are justified in hoping that the effects of the exceptional military gathering will be permanent, and that the Imperial and national interests which have been by this means so forcibly illustrated and brought home to the minds of all classes of Her Majesty's subjects, will now be realised in a manner that had been scarcely possible before. They can hardly doubt that the events of the last few weeks will have done much to knit closer the bonds of union between the Colonies and the Mother Country, and to this end the presence of the Colonial Troops will have largely contributed.

6. I will only add, in conclusion, the expression of my hope that the troops will carry with them to their homes pleasant memories of their visit, and that their stay in this country will have proved not only agreeable but instructive; and I feel confident that in years to come it will be a source of pride and satisfaction to those who are now leaving our shores to think that they have taken part in this great and important national demonstration.

7. I shall be glad if you will publish this despatch.

I have, &c.,

J. CHAMBERLAIN.

(L.) NAVAL BRIGADE AND NAVAL ARTILLERY VOLUNTEERS.

(99.) The above, consisting of over 500 Officers and men, have no vessel to train on, and are exercised on the shore with old obsolete guns for the most part.

(100.) To try and find some employment for them, a certain number have been told-off to man guns belonging to the Land Defences. I am not enamoured of this system, as the method of working guns afloat is totally different to that on shore. To catch the roll, and fire at the right time, is the great art of the seaman gunner. This would not apply to a land fort (except perhaps during an earthquake). For land service we wish to take all the advantages that science gives for practice from a steady platform. Any officers and men, therefore, employed in the forts should be trained on exactly similar lines to the Garrison Artillery.

(101.) At my request, His Excellency the Admiral was asked to have an inspection made of the *personnel* and material of these Forces. This was thoroughly carried out, and the Government now know the exact state of affairs. I think, therefore, that some definite policy should be laid down as to the future of these Forces.

(102.) I should very much like to see the Naval Brigade made a reality. Large numbers of the men are old men-of-war's men, and it seems to me that it would be more in keeping with the status of a free people if their contribution to the Australian Squadron took the form of men rather than money. With the difficulty that there ever has been to fully man the immense British Fleet in war time, I have little doubt that a contribution of men would be more appreciated. There are two spare cruisers for the Australian Squadron. In case of war, are Australians to wait until crews can be sent from England to defend them? If Australians are willing to wait, will the enemy? It is somewhat outside my line; but I confess I see little difficulty in working out a system by which this Colony should man one of the spare cruisers, and Victoria the other. His Excellency the Admiral in his Report speaks most highly of the *personnel* of the Naval Brigade. With this to start with, and certain special positions on board being filled from the Royal Navy, it would seem that a good fighting crew could be at once made available in war-time, especially if they did their annual training on board in peace time. I am further of opinion that this system need not entail extra expense, as I feel sure a proportionate reduction would be made in our money contribution to the Australian Squadron.

(103.) As it might seem that I am going outside my proper sphere in alluding to these matters, I should like it to be understood:—

(a.) That in my opinion the Naval Brigade or Naval Artillery Volunteers will not fit in readily with the land system of Coast Defence.

(b.) That such a double system of organizing our Naval Forces is needlessly expensive and cumbersome, entailing as it does two paid systems with duplicate Staff, Bands, &c., &c.

(c.) That considering the whole question of the Defence of the Colony, it is desirable that they should be drilled and trained afloat, for service afloat in time of war.

(M.)

(M.) SUPPLIES.

(1.) WARLIKE STORES.

(104.) The method of supply of warlike stores is, and has been, most unsatisfactory in all the Australian Colonies. The question was taken up at the Conference of Commandants held in Melbourne last December, and they made definite recommendations, which, as far as this Colony was concerned, were fully reported on by me last February; but, as I have heard nothing further in the matter, I presume nothing has been done.

(105.) The supply of small-arm ammunition is not, to my mind, at all in a satisfactory state. With the sound view of encouraging its manufacture in the country, certain of the colonies have entered into a contract with a private company to manufacture it; but, from what I make out, the manufacture pretty well consists in importing all, or nearly all, the parts from England, and putting them together out here. We could almost do this ourselves, I think; without the intervention of middlemen.

(106.) I am plainly of opinion that if such a prime necessity to us as small-arm ammunition is to be manufactured in Australia, it should be a Government affair. In that case, the first consideration of the officials so employed would be to make ammunition; with a private company, the first consideration is to make money. It may, of course, be objected that private companies in England make excellent ammunition; but it should be borne in mind that the British Government have ammunition of their own manufacture to compare contract supplies with; and, further, that they have specialists in their employ to watch the contract manufacture in all stages, as well as to test the finished result. We have neither one nor the other.

(107.) As an old inspector of warlike stores, I wish to give a plain note of warning on this most important point. If our troops were out on service, and 10 per cent. of the ammunition failed, as occurred here recently in a new supply of ammunition, what might the consequences be?

(2.) RATIONS.

(108.) The question of rations for the Permanent Forces early engaged my attention. As the prices seemed high, I went into the matter, and was somewhat surprised to find that the Government was paying as high for meat bought by the ton as private individuals paid by the pound. I found, also, that instead of the ordinary common-sense system of contracting with a butcher to supply meat, a baker to supply bread, and a grocer to supply groceries, the contracts were so drawn up that a butcher would have to supply bread, groceries, vegetables, &c., and so on all round. I can conceive no advantage in this system, except to the "Universal Provider," or the lazy Government official. The former, of course, would have the advantage of having all competition choked off; and the latter, the advantage to him of having less work to do in dealing with one contractor instead of several; but I think it must now be satisfactory to the Government to know that the cost has been reduced nearly 30 per cent., and that there is every probability of a permanent saving of £3,000 per annum on this item.

(N.) DEFENCES, THURSDAY ISLAND AND ALBANY.

(109.) From correspondence that has passed, the Government are aware that matters are not as they should be at these important Federal outposts. What is everybody's business is commonly nobody's. I venture to think, however, that New South Wales, as the principal partner, has a certain responsibility thrown on it, and that steps should be taken to insure that these outposts are, as regards material and *personnel*, in a state to carry out the services for which they were intended, and for which this Colony pays the largest share.

(O.) UNIFORM.

(110.) The supply of uniform has apparently got into the hands of a few firms, who, I imagine from the prices charged and the class of goods supplied, will soon be able to retire with, at least, a competence.

(111.) At my inspections I have seen five men standing alongside one another supposed to be uniformly clad, but whose frocks were of five different shades of cloth.

(112.) The cut of the uniform is rarely satisfactory, and as the colour is not of a taking sort, it is not to be wondered at that the Infantry of all ranks were in favour of reverting to scarlet for full dress.

(113.)

(113.) A year ago I pointed out officially the advantage and saving to be effected by the Government manufacturing the uniform wanted. It took six months to get an answer to this, and as another six months have elapsed since my reply, I conclude that a change of system is not likely at that rate to occur in my time, so I propose devoting my attention to other matters.

(P.) EXPENDITURE.

(114.) For one who is interested in the efficiency of our Defensive Forces, I imagine twenty are interested in their cost. As previously stated, there is little doubt on my mind that the Force was extravagantly administered at one time, and that the reductions subsequently made were not in the direction of efficiency. A sum of £200,000 per annum was stated by Major-General Hutton as a minimum annual cost; this was a reduction of some £50,000 on previous years.

(115.) There is a popular fallacy abroad that Volunteers cost next to nothing; but, excepting the actual pay of individuals, all other expenses are as great, or greater, than in the Partially-paid Force. The *direct cost* of the Volunteer Force will be seen on reference to the Estimates (total, £24,974), and as almost the whole of this Force (2,913 officers and men) has been raised since my arrival, it must be obvious that a considerable increase is necessary on that account alone; but provision has also been made for an additional 500 men to the Partially-paid Force, an addition of 90 men to the Permanent Force, training for the whole Force for nine days in Camp and for three and a half days extra throughout the year, and for the gradual formation of a Reserve of *trained* men, &c., &c.; so that an increase on the above minimum is inevitable for the present.

(116.) I, however, see so clearly how and where expenses may be cut down when the necessary changes are made in the Act and Regulations, that I have no hesitation in guaranteeing that when fully carried out the annual cost will not exceed £200,000.

(117.) For this expenditure, I hope to see eventually :—

	Officers.	Others.
A Permanent Force of say	30	550
A Militia (Partially-paid), including Permanent Staff, of	275	5,000
A Volunteer Force of	115	3,000
A Trained Reserve of	50	1,500

Sixteen days drill for Infantry, 9 of which in Camp.

Twenty days drill for Artillery, Engineers, and Mounted Corps, 9 of which in Camp.

Musketry prizes for all Corps.

Artillery prizes for Field and Garrison Artillery.

(Q.) CIVILIAN CLUBS.

(118.) The attempt to work in members of these Clubs as Reservists for the Partially-paid Force has not proved much of a success. While in some Clubs members will turn out for occasional drills, in others they will not, even when Instructors are sent long distances, at much expense, to train them.

(119.) The Colonial Defence Committee has drawn attention to the serious objection to flooding the ranks of the Partially-paid Force with 40 per cent. of recruits at the outbreak of war—a fatal objection to my mind—and I am strongly of opinion that a Reserve, to be any use, must be a Reserve of men already trained. Most Commanding Officers hold this view also, and we should have little difficulty in forming one from those who have completed their time in the ranks, and for a small retaining fee annually would keep their names on the books. An occasional training or Course of Musketry would keep these men up to date, and in this way we could gradually create a Reserve that would be worth having.

(120.) Rifle Clubs should be given a free hand in carrying out their own work—the practice and encouragement of rifle-shooting throughout the Colony. Many of the best shots will gravitate towards the Defence Forces eventually, especially if the latter can offer them good prizes for skill in marksmanship. I am satisfied that there is little use in trying to dragoon the members into drilling whether they like it or not; and as we give them very little, we should not expect very much in return.

(R.) A MILITARY COLLEGE.

(121.) War is supposed to be a science in modern days; and for elementary instruction in the science, such Institutions as the Royal Military College and Royal Military Academy exist. To enter these a good preliminary education is necessary. There is a course of instruction extending over a couple of years, and afterwards the graduates have a life-long training in practical work. I find a notion prevailing that in these democratic Colonies there is a specially-made Royal road to the attainment of Military knowledge. Thus an officer, who without any training in early life, or even the requisite education to avail himself fully of the instruction imparted, if he goes for a few months to England or India, comes back with the idea that for the rest of his natural life he has established a claim on his country for employment in the highest Military situations. Unfortunately, this style of claim is too frequently admitted, with the most baneful results on the Force at large. In Civil life no one would pretend to assert that a young man of scanty education, who passed six months or a year at a London Hospital, was fit on his return here to instruct in the Science of Medicine, or that, similarly, another was fit to instruct in Law; but those responsible for the proper carrying out of the duties pertaining to Law and Medicine take very good care that none shall instruct in either branch without having been thoroughly instructed themselves, and they have provided in the country the necessary schools and colleges for the purpose.

(122.) It seems obvious to me that for the Military Service a similar course must be pursued if we are to attain a reasonable degree of efficiency; and if a Military College is an impossibility for the Australian Colonies until Federation is an accomplished fact, we must, in the interim, occasionally obtain the services of an Imperial Officer for each branch of our Forces, to prevent the whole sinking to a state of helpless mediocrity.

(123.) I wish to write very plainly on this subject. It has been practically before me for the last quarter of a century in Canada, Queensland, and here. Canada solved the question by establishing a Military College over twenty years ago, and while rarely now requiring the services of an Imperial Officer, supplies officers in large numbers to the Imperial Service, and amongst them men who have distinguished themselves all over the Empire. When she does want an Imperial Officer, she obtains fresh out of the Imperial Service one of her own graduates, and after a reasonable period of employment returns him thereto, and obtains another up to date. Compare this with our pitiful system of employing a half-trained officer for local or political reasons, and supporting him for the rest of his life, unless his unfitness becomes too obvious; and in this case his friends will probably consider he should have a pension for "services rendered to the State."

(124.) Even where we have been fortunate enough to pick up good officers locally, the system works out in a most extravagant fashion at times. Thus we have twenty-five Submarine Miners commanded by a Major, though a small command for a Lieutenant. This Officer must ere long become a Lieutenant-Colonel, with all the pay and allowances thereof.

(125.) We have a four-gun Battery under a *Regimental* Lieutenant-Colonel, though only two-thirds of a Major's command; Adjutants with the pay and allowances of Majors, doing exactly similar work with others who are Lieutenants, &c.

(126.) I see no way out of this difficulty, except by the rigid enforcement of the rule limiting employment to a specified term, and to carry this out a small sum would be required annually as half-pay for Officers temporarily unemployed.

I have the honor to be,

Sir,

Your obedient Servant,

G. A. FRENCH, Major-General,

Commanding N.S.W. Military Forces.

Head-Quarters, Sydney, 24th September, 1897.

APPENDIX A.

RETURN showing the Establishment and Actual Strength of the Partially-paid and Volunteer Forces at the end of each year from 1888 to 30th June, 1897.

Year.	Establishment— all ranks.	Actual strength— all ranks.	Wanting to complete— all ranks.	Percentage short— all ranks.	General remarks.
1888	3,114	2,657	457	14.67	Camp held at Paddington Rifle Range.
1889	4,337	3,973	364	8.39	" " National Park.
1890	4,229	4,062	237	5.81	" " "
1891	4,660	4,397	263	5.64	" " Campbelltown.
1892	4,667	4,268	399	8.54	No camp held.
1893	4,418	4,070	348	7.87	" " "
1894	4,418	4,169	249	5.63	Short camps held locally.
1895	4,637	4,372	265	5.71	" "
1896	6,228	5,447	781*	12.54	" "
1897 to 30 June.	6,873	6,232	641*	9.33	" "

* The formation of new Regiments, whose establishment is not yet complete, accounts for shortage in 1896 and 1897.

G. A. FRENCH, Major-General,
Commanding N.S.W. Military Forces.

Head-quarters, Sydney 24th September, 1897.

APPENDIX C.

REPORT of the Officer Commanding the New South Wales Artillery Forces.

Sir,

Artillery Staff Office, Victoria Barracks, 5 August, 1897.

I have the honor to forward a report on my Command:—

(1.) The various subjects are dealt with in a general manner; a more detailed report will be submitted later, if required.

BRIGADE DIVISION, FIELD ARTILLERY.

(2.) The armament of "A" Battery is about to undergo a much needed change, the 15-pounder B.L. equipment having at length arrived in the Colony. This change will greatly enhance the efficiency of this Battery. Its present armament of 9-pounder R.M.L. I propose to pass on to "D" or the Cadet Battery, relegating the old bronze guns, with which the latter are armed, to obscurity.

(3.) I consider it advisable to gradually increase the strength of the Permanent Battery, both in men and horses, so as to ensure, in time of trouble, that at least a good solid ground-work of a capable Battery may be available to do justice to the excellent equipment that is now being placed in their charge. Of the general increase that it is proposed to apply for, for the Permanent Artillery, I would suggest allotting 8 men to this Battery, namely, 4 Gunners and 4 Drivers; also that the number of horses be now raised to 60. The advantage gained in time of peace will quite balance the small extra expense. The addition of the men will ensure a better care of the harness and equipment than has previously been the case. It will enable all 6 guns to be exercised in Battery, instead of only 4 as heretofore—a change which is essential, 6 guns being the fighting establishment of the Battery.

The increase of horses—a subject which is further dealt with below—will afford a fair nucleus of trained horses of the Battery when raised to war strength, and enable in time of peace the combination of two Batteries for ordinary parade work without having recourse to the very expensive "hire" system for short parades of this description. I may here mention that it is now universally accepted that the unit of Field Artillery is the Brigade Division, and that our local Officers have at present little or no experience of the drill or working of such unit.

(4.) A Practice Camp was formed near Narrabeen, which lasted ten days, and a great deal of instruction and experience was gained by "A" Battery. Unfortunately, although a range for shooting was available, still it was not a range suitable for thorough instruction in shooting and observation of fire.

The openness of the ground (sea beach) on which the targets had to be placed was liable to give officers and men a false idea of the difficulties which would be met with on service in observing the effect of their fire. A still more serious drawback was, that the ground precluded movement on the part of the guns; and, to my mind, it is most essential that tactical movements should be combined with firing.

(5.) With regard to the Partially-Paid Batteries, "B" and "C," the *personnel* is all that could be desired, and men and officers are keen to learn; but under present conditions, with the paucity of parades allowed them, it is quite impossible that they should really become efficient, and I should be only conveying a false impression if I did not emphasise the fact that at present they are not efficient (through no fault of their own). Each Battery joined the abovementioned Camp for one day, and fired some competitive practice, the result of which, though indifferent, was instructive. More parades during the year, concluding with a good Camp, in a suitable country, are essential before these Batteries can be fairly reckoned on as being part of the real defensive strength of the Colony.

(6.) The horsing of these Batteries is also unsatisfactory. Probably in time of national emergency better horses may be available than are now procurable on the "hire" system. Horses of the stamp of the omnibus horses are required, not the dray species. These latter are terribly slow, generally unfit to manœuvre at the trot, usually too big for the harness allotted, difficult to control, and would be useless on service, besides being very expensive.

(7.) I think it very desirable to consider some plan of largely increasing the existing establishment of Artillery horses, and after a preliminary training keeping them out at grass till required, thus reducing the expense of "keep." At the present contract rate, each hired horse for a nine days' camp would cost about £7, making for the two batteries, at the lowest computation, about £500 a year for the supply of indifferent horses, and on the conclusion Government have nothing in the matter of horse-flesh to show for it, though the value of the horses to the owners is in many cases greatly enhanced.

(8.) The Cadet or "D" Battery is a purely Volunteer Battery, and is at present not a very satisfactory organization. I would suggest that it be termed the "Volunteer Depot Field Battery," and that no drivers be borne on the establishment. The time at the disposal of the men forming this Battery could be fully utilised at the ordinary gun drill and fire discipline, and vacancies in the Partially-Paid Batteries would be filled from it. Sending this Battery out mounted occasionally is doubtless a pleasant recreation, but it is not of any national importance; besides, none of the Officers now belonging to the Battery can by any stretch of imagination be termed horsemen.

1ST GARRISON DIVISION.

(9.) The 1st Garrison Division has now been organised into three distinct Companies, and the Officers and men have been redistributed accordingly.

(10.) The present strength of this Division, which forms the Permanent Garrison Artillery, is only 348, which is quite inadequate, including as it does, bandmen, trumpeters, artificers, &c., &c.

(11.) The present advanced state of the science of Artillery, the complicated nature of guns and mountings in use, and the large number of scientific adjuncts required in connection with the fire control of a modern coast defence fortress, necessitate a number of highly-trained men. The necessary amount of training for the more important positions cannot possibly be acquired by the Partially-Paid Troops under existing system, although there are a number of duties which can be fulfilled by men with moderate military training. The duties of gun captain, gun-layer, telephonist, range finder, dial numberers, &c.,

all

all requiring special knowledge and special training, cannot be properly fulfilled by other than men who are being perpetually trained at them. In this connection, I desire to recommend strongly that 90 extra men be added to the Permanent Artillery, also that in future the term of service of the Permanent Artillery be increased from five to seven years for the first period of limited engagement; further, that only Non-commissioned Officers, Artificers, or other specialists be re-engaged after that period.

(12.) *Conduct.*—The general conduct of the men is good. The principal serious crime is desertion, and to this, in a stationary and local Force such as this is, we shall always be liable. I consider that some of this desertion might be avoided if some scale were introduced by which a man could purchase his discharge for a reasonable sum; the present fixed sum of £20 is only a premium on this crime.

With five years' engagement, I would suggest a reduction of £4 each year; or, if engaged for seven years, a reduction of £2 the first year, and £3 a year after.

(13.) The privilege of allowing men to wear plain clothes, though popular, has not worked satisfactorily throughout. The men get into debt with tailors, bootmakers, &c., to turn out in smart mufti, although they will not spend anything to keep their uniform in a similar smart condition.

(14.) *Courses.*—Each Company has been through a Special Company Course for a fortnight under the Company Officers, concluding with competitive practice.

In this practice, No. 2 Company shot very satisfactorily, getting eight hits out of sixteen shots, and gaining a second prize.

(15.) The Long Course this year has been extended so as to last about five and a half months instead of four as in previous years. The other Colonies have been invited to send men to this Course, and Queensland, Victoria, and Western Australia have accepted such invitation.

(16.) I consider some steps should be taken to establish a Military School to improve the educational standard, and fit men, otherwise efficient, for the higher ranks of Non-commissioned Officer and Warrant Officer.

2ND GARRISON DIVISION.

(17.) The present number of parades allowed to this Partially-Paid Branch is quite insufficient to render the men efficient as Coast Artillerymen.

If the Government cannot see its way to largely increase the number of parades, I would point out that a smaller number, more highly trained, would be of far greater value than the present number, insufficiently trained.

(18.) The four Companies comprising this Division carried out competitive practice from the four 80-pounders, forming the Practice Battery. Two Companies obtained a third-class prize, getting four hits out of sixteen rounds.

GENERAL.

(19.) The office of the Officer Commanding Artillery has been re-organized from the 1st August, the principal point being the abolition of the Brigade-Major; it remains to be seen how the new organization will work.

(20.) I would like to bring to notice the recommendations in the Report of Major-General Hutton in 1896, *re* the Naval Artillery Volunteers.

(21.) Another important point is the "retirement scheme" in the same Report, at page 10. The authorities should not be allowed to lose sight of this important point.

FORTS, ARMAMENT, &c.

(22.) The principal points now under consideration are—

- i. Some improvement in the loading and firing arrangements of the 10-inch 25-ton guns at Middle Head, which at present are most unsatisfactory.
- ii. The 10-inch R.M.L. guns at South Head to be placed close together near the position of the lower one.
- iii. The construction of a battery for the three 6-inch Q.-F. guns, which are due from England, near the site of the upper 10-inch R.M.L. at South Head.
- iv. The completion of the authorised portion of cartridges and projectiles for the various guns of the defences. (This appears in a requisition for warlike stores.)
- v. The construction of a battery to take three 6-pounder Q.-F. on the site of the present 80-pounder Minefield Battery at South Head.
- vi. The supply of suitable mountings for the 6-inch Q.F. guns due from England.

(23.) All the guns now mounted, with their ammunition and stores, are in good condition and fit for service.

(24.) The mobilization stores are in good condition, and complete.

I have, &c.,

S. C. SMITH, Colonel,
Commanding Artillery.

G. A. French, Major-General,
Commanding N. S. Wales Military Forces.

Head Quarters, Sydney, 24th September, 1897.

APPENDIX D.

EXTRACTS from the Annual Report of the Principal Medical Officer for the year ending 31st December, 1896, and from a Supplementary Report from 1st January, 1897, to 30th June, 1897, on the Medical Services of the New South Wales Military Forces.

REPORT FOR 1896.

Sir,

I have the honour to forward, for the information of the General Officer Commanding the New South Wales Military Forces, the Annual Report of the Medical Services for the year ending 31st December, 1896, with a Supplementary Report from 1st January, 1897, to 30th June, 1897:—

1.—Garrison Hospital.

There were 261 admissions to the Garrison Hospital during 1896, which were contributed from the Admissions. Permanent Forces as under:—

Brigade Division, Field Artillery, A. Battery	57	N.S.W. Artillery Regiment.
1st Garrison Division Artillery, No. 1 Company	76	
" " No. 2 " 	41	
" " Depôt " 	73	
No. 3 Co. Engineers, Permanent Section... ..	6	No. 3 Co. Engineers.
Permanent Medical Staff Corps	1	P. M. S. Corps.
Permanent Staff	7	Permanent Staff.
	261	

Cases admitted for treatment were detained as follows:—

Not over				Over
1 day.	3 days.	7 days.	14 days.	14 days.
16	54	54	63	74

Total, 261.

Duration of cases in Hospital.

There were two deaths in the Garrison Hospital in 1896.

Three men were discharged from the New South Wales Artillery Regiment as "medically unfit" for further military service.

There were 129 attendances on Officers, 23 on their wives, and 39 on their children.

There were 395 attendances on "daily sick" at the Garrison Hospital, in addition to cases admitted for treatment.

This number was made up from Warrant Officers, Non-commissioned Officers, trumpeters, and men.

One hundred and twenty-four attendances on their wives, and 172 attendances on children, either at the Garrison Hospital or at their own residences or quarters within the Head-quarters District.

In addition, as in previous years, cases requiring special or surgical treatment were admitted under my care at the St. Vincent's Hospital.

The sanitary condition of Barracks and Quarters occupied by Troops is very satisfactory.

W. D. C. WILLIAMS, Surgeon-Colonel,

Principal Medical Officer.

Deaths.
"Medically unfit"
Attendance on Officers, their wives, and families.
Warrant Officers, Non-commissioned Officers, trumpeters, and men, their wives, and children.
Sanitary conditions.

SUPPLEMENTARY REPORT.

From 1st January, 1897, to 30th June, 1897.

1. Garrison Hospital.

There were 114 admissions to the Garrison Hospital during the half year, which were contributed from the Permanent and Partially-paid Forces as under:—

New South Wales Regiment Lancers	1	
Brigade Division Field Artillery, "A." Battery... ..	26	
1st Garrison Division Artillery, No. 1 Company	31	
" " No. 2 " 	27	
" " Depôt " 	23	
" " Permanent Medical Staff Corps	1	
" " Permanent Staff	1	
" " Partially-paid Engineers	2	
" " 3rd Infantry Regiment	1	
" " Medical Staff Corps	1	
	114	

Cases admitted for treatment were detained as follows:—

Not over				Over
1 day.	3 days.	7 days.	14 days.	14 days.
5	30	34	21	24

Total, 114.

Duration of cases in Hospital.

Four men were discharged from the New South Wales Artillery Regiment as "medically unfit" for further military service.

There

"Medically unfit."

Attendance on Officers, their wives and families. Warrant Officers, Non-commissioned Officers, trumpeters, and men, their wives and children.

There were 54 attendances on officers, 11 on their wives, and 45 on their children. There were 196 attendances on "daily sick" at the Garrison Hospital, in addition to cases admitted for treatment. This number was made up from Warrant Officers, Non-commissioned Officers, trumpeters, and men.

Fifty-three attendances on their wives and 72 on their children, either at the Garrison Hospital or at their own residences or quarters within the Head-quarters District.

In addition, as in previous years, cases requiring special or surgical treatment were admitted under my care into the St. Vincent's Hospital.

2. Recruits.

Permanent Services.

Ninety recruits presented themselves, of whom 70 were passed as "fit," and 20 rejected as "medically unfit" for military service. Of those accepted, 25 were re-engagements, and 3 had seen service other than the New South Wales Military Forces.

For their distribution and physical averages, see Appendix No. 1.

Partially-paid Services.

The number of recruits who presented themselves, together with all particulars, is given in Appendix No. 2.

W. D. C. WILLIAMS, Surgeon-Colonel,
Principal Medical Officer.

Medical Department, Victoria Barracks,
Sydney, 12th July, 1897.

G. A. FRENCH, Major-General,
Commanding N.S. Wales Military Forces.

Head-quarters,
Sydney, 24th September, 1897.

APPENDIX No. 1.

RECRUIT Averages, Permanent Forces, 1896.

Corps.	Presented.	Accepted.	Rejected.	Height.		Weight.		Chest Measurement.	Previous Service.	Re-engagements.
				ft.	in.	st.	lb.			
General Staff	5	5	Nil.	5	7 $\frac{2}{3}$	11	5	37 $\frac{1}{2}$	years. 5	.....
N.S.W. Artillery Regt.—										
Gunnery	145	117	28	5	9 $\frac{3}{4}$	11	2	38 $\frac{1}{2}$	4	45
Drivers	11	9	2	5	6 $\frac{1}{2}$	9	10 $\frac{1}{2}$	36 $\frac{1}{2}$	Nil.	3
Engineers—										
No. 3 Co., Permanent Section.	6	4	2	5	7 $\frac{1}{2}$	10	6	37 $\frac{1}{2}$	Nil.	1
Army Service Corps ...	1	1	Nil.	5	6 $\frac{1}{2}$	11	7	40	Nil.	Nil.
Permanent Medical Staff Corps.	2	2	Nil.	5	9 $\frac{1}{2}$	12	1 $\frac{1}{2}$	39	Nil.	2

W. D. C. WILLIAMS, Surgeon-Colonel,
Principal Medical Officer.

APPENDIX No. 2.

RECRUIT Averages, Partially-paid Forces, 1896.

Corps.	Presented.	Accepted.	Rejected.	Average—		Chest Measurement.		
				Height.	Weight.			
				ft.	in.	st.	lb.	in.
N.S.W. Lancers	119	119	Nil.	5	9 $\frac{3}{8}$	11	1 $\frac{1}{8}$	36 $\frac{3}{8}$
Mounted Rifles	129	129	Nil.	5	8 $\frac{7}{8}$	10	8 $\frac{1}{4}$	36 $\frac{1}{8}$
Brigade Division Field Artillery	38	34	4	5	6 $\frac{1}{4}$	10	2 $\frac{1}{2}$	34 $\frac{7}{8}$
2nd Garrison Division Artillery	113	109	4	5	8 $\frac{1}{8}$	10	5 $\frac{1}{2}$	35 $\frac{1}{4}$
Engineers	81	71	10	5	7 $\frac{5}{8}$	10	6 $\frac{1}{2}$	35 $\frac{7}{8}$
1st Infantry Regiment	201	175	26	5	8 $\frac{1}{8}$	10	6 $\frac{1}{4}$	35 $\frac{1}{8}$
2nd Infantry Regiment	181	157	24	5	7 $\frac{5}{8}$	10	3 $\frac{1}{2}$	35 $\frac{1}{2}$
3rd Infantry Regiment	167	161	6	5	8 $\frac{5}{8}$	10	11 $\frac{1}{8}$	35 $\frac{3}{4}$
4th Infantry Regiment	151	151	Nil.	5	8 $\frac{3}{8}$	10	10 $\frac{1}{4}$	35 $\frac{7}{8}$
Army Service Corps	20	13	7	5	8 $\frac{7}{8}$	10	11 $\frac{1}{4}$	35 $\frac{5}{8}$
Medical Staff Corps	41	33	8	5	8 $\frac{3}{8}$	10	8 $\frac{3}{4}$	35 $\frac{5}{8}$
Total	1,241	1,152	89	5	8 $\frac{1}{2}$	10	8	35 $\frac{1}{4}$

W. D. C. WILLIAMS, Surgeon-Colonel,
Principal Medical Officer.

APPENDIX No. 1 (SUPPLEMENTARY REPORT).

RECRUIT Averages, Permanent Forces, from 1st January, 1897, to 30th June, 1897.

Corps.	Presented.	Accepted.	Rejected.	Height.	Weight.	Chest Measurement.	Previous Service.	Re-engagements.
General Staff	1	Nil.	1	ft. in.	st. lb.	in.	years.	.....
N.S.W. Artillery Regt.—				.....	.....	.....	.....	.....
Gunnery	76	60	16	5 10 $\frac{1}{2}$	11 4 $\frac{1}{2}$	38 $\frac{1}{2}$	2	20
Drivers	5	4	1	5 6	10 0 $\frac{1}{2}$	36 $\frac{1}{2}$	.....	1
Engineers—								
No. 3 Company, Permanent Section.	7	5	2	5 7 $\frac{1}{2}$	10 13 $\frac{1}{2}$	37 $\frac{1}{2}$	1	3
Army Service Corps	Nil.	Nil.	Nil.	.....	.....	.....	.....	.....
Permanent Medical Staff Corps.	1	1	Nil.	5 6	10 6	37 $\frac{1}{2}$	.....	1

W. D. C. WILLIAMS, Surgeon-Colonel,
Principal Medical Officer.

APPENDIX No. 2 (SUPPLEMENTARY REPORT).

RECRUIT Averages, Partially-paid Forces, from 1st January, 1897, to 30th June, 1897.

Corps.	Presented.	Accepted.	Rejected.	Average.		
				Height.	Weight.	Chest Measurement.
N.S.W. Lancers	61	61	Nil.	ft. in.	st. lb.	in.
Mounted Rifles	70	70	Nil.	5 9 $\frac{1}{2}$	11 3	36 $\frac{1}{2}$
Brigade Division Field Artillery	13	13	Nil.	5 9 $\frac{1}{2}$	10 12 $\frac{1}{2}$	36 $\frac{3}{8}$
2nd Garrison Division Artillery	86	79	7	5 5 $\frac{7}{8}$	10 0 $\frac{1}{2}$	35 $\frac{5}{8}$
Engineers... ..	15	12	3	5 8 $\frac{1}{4}$	10 6 $\frac{1}{2}$	35 $\frac{3}{8}$
1st Infantry Regiment	37	29	8	5 7 $\frac{1}{2}$	9 12 $\frac{1}{2}$	34 $\frac{3}{4}$
2nd Infantry Regiment	111	106	5	5 7 $\frac{1}{2}$	9 13 $\frac{1}{2}$	35 $\frac{1}{2}$
3rd Infantry Regiment	78	78	Nil.	5 8	10 5 $\frac{3}{4}$	35 $\frac{1}{2}$
4th Infantry Regiment	64	64	Nil.	5 8 $\frac{1}{2}$	10 7 $\frac{1}{2}$	35 $\frac{1}{2}$
Army Service Corps	22	17	5	5 8 $\frac{1}{2}$	10 7 $\frac{1}{2}$	35 $\frac{5}{8}$
Medical Staff Corps	19	19	.....	5 8 $\frac{1}{2}$	11 3 $\frac{1}{2}$	36 $\frac{1}{2}$
Total and General Average	576	548	28	5 8 $\frac{1}{2}$	10 6 $\frac{1}{2}$	35 $\frac{1}{2}$

W. D. C. WILLIAMS, Surgeon-Colonel,
Principal Medical Officer.

APPENDIX G.

THE following Gun Practices were carried out during the year 1896 and half-year ending 30th June, 1897.

1896.

Branch of Artillery.	Division.	Ordnance fired.	No. of rounds fired.	Totals.	Total No. of rounds fired by each Division.	Remarks.	
Field Artillery	"A" Battery (Permanent) ...	9 pdr. R.M.L.....	39	39	207	Battery annual course and competition.	
	"B" and "C" Batteries (Partially-paid)	16 pdr. R.M.L.....	168	168			
	1st Division (Permanent).					378	Testing mountings, annual course of training, and competition practice.
	Competition	80 pdr. R.M.L.....	48	48			
	No. 1 Company	9" B.L.	5	186		
			6" B.L.	18			
			80 pdr. R.M.L.....	45			
	No. 2 Company	1"5" Nordenfeldt ...	118	144		
			80 pdr. R.M.L.....	50			
	2nd Division (Partially-paid).	Competition	1"5" Nordenfeldt ...	94	64		
80 pdr. R.M.L.			64				
Garrison Artillery.	No. 3 Company	10" 18-ton R.M.L....	7	35		
			1"5" Nordenfeldt ...	28			
	No. 4 Company	6" B.L.	3	75		
			10" 25-ton R.M.L....	6			
			80 pdr. R.M.L.....	38			
	No. 5 Company	1"5" Nordenfeldt ...	28	29		
8" B.L.			8				
No. 6 Company	.....	6" B.L.	21	236		
		80 pdr. R.M.L.	90				
School of Gunnery.	Officers and N.-C.O.'s Course	40 pdr. R.B.L.	25	113		
			1"5" Nordenfeldt ...	116			
	Long Course	6" B.L.	11	246		
			80 pdr. R.M.L.....	102			
			16	133			
			83				
			34	1,270			
			133				
Total number of rounds fired ...						1,270	
HALF-YEAR ENDING 30TH JUNE, 1897.							
Field Artillery	"A" Battery Permanent)	9 pdr. R.M.L.	248	248	411	Annual and experimental practice.	
	"B" and "C" Batteries (Partially-paid)	16 pdr. R.M.L.....	163	163			
	1st Division (Permanent).					74	Competition and annual training.
Competition	6" B.L.	48	48				
No. 1 Company	.....	80 pdr. R.M.L.....	26	26		
Garrison Artillery.	2nd Division (Partially-paid).				80	Competition and practice.	
	Competition	80 pdr. R.M.L.	64	64			
No. 5 Company	.....	8" B.L.	4	16		
		6" B.L.	12				
				565			
			16				
				133			
			83				
			34	1,270			
			133				
Total number of rounds fired ...						565	

G. A. FRENCH, Major-General,
Commanding N S.W. Military Forces.

Head-quarters, Sydney, 24 September, 1897.

ERRATUM.

QUESTION 4543.

Line 21, omit "*design which provides for a breakwater a little higher and a little wider,*"
and insert "*quantities.*"

Line 22, omit "*design of a low and narrow breakwater,*" and insert "*quantities.*"

1897.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

PARLIAMENTARY STANDING COMMITTEE ON
PUBLIC WORKS.

R E P O R T

TOGETHER WITH

MINUTES OF EVIDENCE, APPENDICES, AND PLANS,

RELATING TO THE

PROPOSED CONSTRUCTION

OF A

DEEPWATER HARBOUR AT PORT KEMBLA.

Presented to Parliament in accordance with the provisions of the Public Works Act,
51 Vic. No. 37.

Printed under No. 1 Report from Printing Committee, 4 May, 1897.

SYDNEY: WILLIAM APPLEGATE GULLICK, GOVERNMENT PRINTER.

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PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

CONSTRUCTION OF A DEEP-WATER HARBOUR AT PORT KEMBLA.

REPORT.

THE PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS, appointed during the first Session of the present Parliament, under the Public Works Act of 1888, 51 Vic. No. 37, the Public Works Act Amendment Act of 1889, 52 Vic. No. 26, and the Public Works (Committees' Remuneration) Act of 1889, 53 Vic. No. 11, to whom was referred the duty of considering and reporting upon "the expediency of constructing a deep-water harbour at Port Kembla," have, after due inquiry, resolved that it is expedient the proposed work be carried out by constructing the eastern breakwater only; and, in accordance with the provision of sub-section IV, of clause 13, of the Public Works Act, report their resolution to the Legislative Assembly:—

DEPARTMENTAL DESCRIPTION OF THE PROPOSED HARBOUR.

1. As placed before the Committee by the Department of Public Works, the scheme for the construction of a deep-water harbour at Port Kembla embraces two proposals—one, the building of a breakwater 2,800 feet in length—referred to in the evidence as the eastern breakwater—in a northerly direction, from Kembla Point, east of the Mount Kembla Coal Company's jetty, which would provide what is termed a sheltered coast harbour, sufficiently protected to enable vessels of all sizes to be loaded with coal; and the other, the construction of two breakwaters—the second or northern structure 3,530 feet in length—which, together, would form a close or still-water harbour suitable for the landing of cargo from, as well as the shipment of coal into, sailing vessels as well as steamers. The one breakwater would afford protection to an area of 126 acres, having a depth of 24 feet and over at low water, and the two would enclose an area of 260 acres, with 24 feet at low water and 30 feet over half the area when dredged out. In either case vessels would lie safely, for though by constructing one breakwater only there occasionally would be a certain range or swell coming in from the sea, any difficulty in loading operations from that cause would be met by holding the vessels off to buoys. It is proposed to construct the breakwaters of blocks of rough stone tipped into the sea, the height above high water to be 15 feet in the case of the eastern structure and 8 feet in that of the northern, the width at the top 16 feet, increasing to 20 feet at the outer end, and the batter or slope $1\frac{1}{2}$ to 1 on the sea face and $1\frac{1}{4}$ to 1 on the harbour side. Sixteen hundred feet of the eastern breakwater would be upon a reef. The scheme contemplates the purchase of the existing jetties at Port Kembla, and the construction of an additional jetty and a wharf, the reclamation of land, and the erection of cranes, lighthouse, signal station, &c.

OFFICIAL

OFFICIAL ESTIMATE OF COST.

2. It is estimated that the eastern breakwater could be constructed for £158,300, and the northern for £121,120. Other items in the full estimate submitted are—

Timber wharf, 1 mile long	...	...	...	...	£44,000
Ballast wall, at back	...	...	...	...	10,000
Sidings and coal lines	...	...	...	...	4,000
Dredging and reclaimed land	...	...	...	...	25,000
Coal-shipping jetty	...	...	...	...	35,000
Cranes, lighthouse, signal station and quarters, engineering and supervision...	...	...	...	...	42,580

These figures make the estimated total cost of the larger, or close harbour, scheme, exclusive of the purchase of land and private rights to existing jetties and lines, £440,000; but this estimate, as also that of constructing the eastern breakwater only, will be considerably less, if suitable stone be obtained from quarries adjacent to the site of the eastern breakwater, which, as far as an examination of the locality has gone, appears very probable. Should this stone be obtained it will mean a reduction of 9d. per ton, or a saving of £23,745 in the case of the eastern breakwater, and £22,710 in that of the northern.

REASONS FOR CONSTRUCTING THE PROPOSED HARBOUR.

3. The construction of the proposed harbour has been advocated for the following reasons:—

- (I) That a good port, safe and accessible for large vessels in all weathers, is absolutely necessary for the development of the coal trade of the district, which has been retarded and hampered for want of such a port.
- (II) That the coal of the district is coming into increased favour, and all that is necessary to enable the collieries to greatly extend the export trade is a suitable shipping depot for the whole district.
- (III) That it would induce the establishment of manufactories in the district.
- (IV) That the harbour at Wollongong is altogether inadequate to the requirements of the district and incapable of enlargement, except by an unjustifiable outlay.
- (V) That a safe harbour would also serve as a place of refuge in bad weather.

THE INQUIRY.

4. The inquiry which the Committee have carried out with reference to the proposed work is as complete as a careful consideration of all important aspects of the matter can make it, and includes a visit to the Illawarra district by a Sectional Committee. Owing to conflicting opinions a large number of witnesses presented themselves for examination, and plans other than those of the Department were submitted for consideration, thus extending the scope of the inquiry beyond the Departmental proposals. Plans and other information, supplied by the Department of Public Works, were before the Committee, with reference to harbour improvement proposals in relation to Bellambi and Wollongong.

THE DOMINANT QUESTION IN THE INQUIRY.

5. The dominating question in the inquiry for the present is that of the export of coal, although it appears probable that the construction of a good port in Illawarra would bring into existence a considerable import trade in sulphide ores, &c.

It therefore becomes necessary to consider—

- (I) The extent, quality, and value of the coal-measures in the Illawarra district.
- (II) The present means of disposal.
- (III) The present and prospective output.
- (IV) Effect of a suitable shipping port adjacent to the coal-measures.
- (V) Effect of port on coal under Crown lands and upon railway returns on
South Coast Line. Other

Other matters for consideration are—

- (vi) Import trade.
- (vii) Location of port.
- (viii) Rival sites.
- (ix) The harbour proposed to be constructed by the Illawarra Harbour and Land Corporation (Limited).
- (x) The present railway connection with Kembla.
- (xi) Zone to be defined.
- (xii) Port at Jervis Bay.
- (xiii) The outlay necessary in connection with the construction of a port at Kembla Bay, and the probable return.

I.

THE EXTENT OF THE COAL-MEASURES IN THE ILLAWARRA DISTRICT.

6. Wollongong may be regarded as holding a central position between the sites which have been suggested as suitable for the construction of a port. From Wollongong to Darling Harbour is about 50 miles by rail, and since the facilities for loading coal at the latter place are likely to be at least equal to those at any port on the southern coast, it appears probable that no great quantity of coal from Helensburgh or north of that place will be shipped from any port in Illawarra.

Nominally there are six seams in the Illawarra coal-measures, but only the upper, known locally as the Bulli seam, is at present regarded as of commercial value.

Although the Greta seam probably exists in the district, it is presumed to be at too great a depth to be worked in competition with the more easily-won coal.

Between Helensburgh and North Clifton the coal-measures are practically unexplored. Professor David and the Government Geologist state that no coal of commercial value for export purposes has been discovered south of Mount Kembla.

For the purposes of this inquiry therefore the coal-measures in Illawarra may be said to be bounded on the north by North Clifton, on the south by Mount Kembla, and are limited to the upper or Bulli seam, and within these boundaries and from this seam Professor David is of opinion that it is reasonable to expect 326,400,000 tons of coal will be won.

QUALITY OF ILLAWARRA COAL.

7. Illawarra coal is, for the manufacture of gas and for household purposes, inferior to Newcastle coal, but it is a first-class steam-generating coal, and suitable for smelting purposes.

For steaming purposes it is contended that it approaches in excellence the best Welsh coal.

It is at present used by the—Orient S.N. Co.; P. & O. S.N. Co.; Messageries M. Co.; North German Lloyds; Japan Mail Line; British India S.N. Co.; Gulf Line of Steamers; E. & A. S.S. Co.; Port Lines of Steamers; Aberdeen Line of Steamers; China Navigation Co.; Shire Line of Steamers; H.M. Navy; Canadian-Australian S.S. Co.; A.U.S.N. Co.; Melbourne S.S. Co.; Huddart, Parker, & Co.; J. Patterson & Co.; Adelaide S.S. Co.; McIlwraith McEachern; Intercolonial S.S. Co.

VALUE OF THE COAL.

8. The local value at the port of shipment of all the available Illawarra marketable coal would, at present prices, be about £100,000,000. A large proportion of this coal, it has been shown in evidence, lies in unalienated lands, and therefore would be subject to the payment of a royalty to the State.

II.

PRESENT MEANS OF DISPOSAL.

9. The present means for disposing of the coal is by local consumption, by railway transit direct to Sydney, and by shipping from jetties at Coalcliff, Bulli, Bellambi, Wollongong, and Kembla.

The quantity of coal which during the twelve months ending 30th September, 1896, left Illawarra by railway was 36,000 tons, and the cost when carried in Commissioners' trucks was approximately 2s. 9d. per ton, and 2s. if carried in owners' trucks. The freight and extent of the trade from the different shipping places will be dealt with subsequently.

III.

PRESENT AND PROSPECTIVE OUTPUT OF THE COAL MINES IN THE ILLAWARRA DISTRICT.

10. The total output of the coal mines in the Illawarra district within the previously specified area, in the year 1874, was 137,062 tons.

Since then, although at times there has been a temporary decline, the annual output has increased, and the average for the years 1891 to 1895 was 700,000 tons.

Therefore it is reasonable to estimate the output for the immediate future, with present shipping facilities, at 750,000 tons per annum, having a local value approximating a quarter of a million sterling.

The construction of a deep-water harbour with additional shipping facilities should greatly increase these figures.

It is conjectured that a large quantity of coal, at present regarded as lying too far westward from the existing pits' mouths, will, when the more accessible coal has been worked out, also find its way to the seaboard; but the limit of 5 miles laid down by Professor David appears to be sufficiently distant for the present. With reference to those areas within which the coal is regarded as inferior, or commercially valueless, later discoveries in these localities may augment the estimated extent and value of the field.

The exhaustion of the better coal may eventually force inferior coal into use; but the Committee believe it is wise to limit any definite statement to the marketable coal of the Bulli seam.

IV.

EFFECT OF A SUITABLE SHIPPING-PORT ADJACENT TO THE COAL-MEASURES.

11. The cost of carriage of coal from Illawarra to Sydney is about 2s. 9d. per ton by rail and not less than 2s. 6d. per ton by sea.

Therefore, a portion of the 2s. 6d. per ton, less nominal charges for short haulage and port dues, might be added to the price at which it could be sold were it possible to load direct at a local port, and the loss from deterioration, consequent upon extra handling, would be saved to colliery proprietors and purchasers.

It must, however, be borne in mind that a large portion of the coal raised in Illawarra will not be diverted from Port Jackson by the construction of the proposed port, because coal required for use in the metropolis for bunker purposes, or for transshipment in Sydney harbour, would still be carried by small colliers loading in the port of Wollongong, or from jetties connected with the mines; but even to these boats a secure port would be of great advantage, for during boisterous weather they could proceed to the proposed local port and load there, thus saving time and removing the uncertainty which is so inimical to trade.

It is scarcely probable that the great mail-boats, time being of supreme importance, would alter their present process of loading bunker coal in Sydney, and many of the intercolonial steamers would continue their present practice in
order

order to avoid the delay of proceeding to and returning from the local port. To some of the intercolonial steamers that now load in Sydney it would be convenient as well as economical to make the four hours run were there a secure port in Illawarra in which they could coal, and whence they could return to their berths in Port Jackson; or they might enter the port for coal during their trip, if assured of quick despatch.

The whole question is one of cost, and if the saving of at least 2s. 6d. per ton more than compensated for time lost by coaling direct at a local port this method would be adopted; but the increase of trade from this source cannot be even approximately estimated.

At present, sailing vessels of sufficient tonnage to engage in profitable foreign trade will not venture into any port in Illawarra, and insurance companies do not accept the risk.

Direct over-sea export, therefore, is possible by steamers only, and is subject to uncertainty. Relieved of the 2s. 6d. per ton freight to Sydney, and saved from the cost and deterioration consequent upon extra handling, Illawarra coal could freely compete for the foreign trade, as the selling price would be the quotation at the local port instead of at Sydney.

Competent witnesses were unanimously of opinion that if it were possible to save the freight to Sydney, Illawarra coal would obtain a much increased sale in the markets of Singapore and the East, and secure an extensive trade on the American coast.

V.

EFFECT OF PORT ON COAL UNDER CROWN LANDS AND RAILWAY.

12. Immediately west from the present workings, which are in private property, there is a great area of Crown lands containing coal.

Taking into consideration the probable thickness of the seam, there would be won per acre not less than 5,000 tons upon which the Crown would receive royalty.

It is not possible to estimate accurately the extent of land towards the west which can reasonably be thought to include areas that will eventually pay royalty, but it is considerable, and the royalty must represent a very large sum.

The Committee were informed that there are nearly 10,000 acres of accessible Crown lands between Bellambi and Kembla alone, the royalty upon which, calculated at 6d. per ton, will eventually produce a large annual revenue.

VI.

IMPORT TRADE.

13. The presence of a large quantity of easily-won coal in Illawarra has already been availed of for the establishment of smelting-works. If a safe port were constructed there can be but little doubt that sulphide ore in large quantities would be imported, and an impetus given to the development of the full resources of the district.

The site chosen for the first smelting-works is adjacent to the shore of Lake Illawarra; the distance from Sydney being 58 miles. The greater part of the cost of the carriage from Sydney would be saved if the ore could be landed at any port in the Illawarra district.

VII.

LOCATION OF PORT.

14. From the foregoing it will be seen that the extent and value of the coal-measures in Illawarra justify the Committee in recommending an expenditure to provide adequate means of shipment. The next question requiring consideration is the location of the port.

POSITION OF PORT FROM THE STANDPOINT OF THE TRADE OF 1895.

15. Taking the sum of the total output (680,000 tons) for 1895 (there not being full information for 1896) as being represented by 680, the proportionate quantity won from each mine can be thus compared:—

Austimmer represented in 1895	...	...	17
Bulli	..	...	5
Bulli Steam Coal	..	...	4
Bellambi	..	...	10
Coal Cliff	..	...	18
Corrimal	..	...	111
Mount Pleasant	..	...	69
Mount Kembla	..	...	151
Osborne-Wallsend	..	...	78
South Bulli	..	...	167
South Clifton	..	...	50
Total	...	...	680

The output for the year 1895, west and north from Bellambi in comparison with that to the south of that place was as 271 to 409.

The output west and south from Wollongong is 298 against 382 to the north.

The output west from Port Kembla is 151 against 529 to the north.

In view of the statements made with regard to the proximity of the coal to the various ports, the Committee have deemed it advisable to present the position in detail, but the amount of coal already won has little bearing on the question of port construction unless it can be demonstrated that the proportion is likely to be sustained in the anticipated increased output.

Professor David and the Government Geologist informed the Committee that the best deposit of coal in Illawarra lies south from Corrimal. North from that place, although there are considerable areas of good coal, the measures are deteriorated through faults and volcanic dykes.

The port of Bellambi lies practically east from the northern end of the best coal; Kembla about east from its southern limit. The case for Bellambi is that coal (although the measures are not so uniform) will be won north from Bellambi; but this fact is neutralised by the larger deposit of coal between Keira and Mount Kembla, which will find readier outlet towards Port Kembla.

Coal in quantity can be hauled at $\frac{1}{2}$ d. per ton per mile. The question of haulage for an extra mile or so is not, therefore, very material.

The Committee are of opinion that with regard to accessibility for the future coal-output of Illawarra the port of Wollongong occupies the first position.

Between Bellambi and Kembla there is not sufficient difference in location to be commercially appreciable, but, all other things being equal, Bellambi may be regarded as more central; upon this point, however, the evidence is contradictory.

If coal be won south from Kembla, as is confidently anticipated by some witnesses, it will improve the position of Port Kembla; but no evidence as to the existence of any deposit of commercial value for export was furnished which could justify the Committee in disregarding the evidence of Professor David and the Government Geologist.

Talavera Point, on Lake Illawarra, occupies a less favourable position than any of the other sites, being about 6 miles south from the junction with the railway of the tram lines going direct to Port Kembla, which junction is a distance of about $\frac{1}{4}$ miles to Port Kembla.

PRESENT

PRESENT RELATIVE IMPORTANCE OF SHIPPING-PLACES.

16. The quantity of coal shipped at the various ports in Illawarra during 1895 was :—

Bulli	...	...	...	...	...	5,000
Bellambi	...	...	...	...	...	178,317
Kembla	...	...	...	...	...	233,438
Wollongong	...	...	...	...	...	178,317
Total						595,072

Coalcliff has not been included, not being at present connected with the Government railway line.

It will be observed that fully twice as much coal is shipped south of Bellambi as from Bellambi and the jetties to the north, more than one-third of the total output of the district being now shipped at Port Kembla.

VIII.

CONSIDERATION OF RIVAL SITES.

17. It has already been stated that the ports of Bellambi and Wollongong are quite as well situated as, if not somewhat better than, Port Kembla with reference to the coal-measures of Illawarra.

Therefore, it becomes necessary to consider whether the extra haulage to Kembla will be justified by reason of its superiority as a shipping port.

THE PORT OF BELLAMBI.

18. It may be conceded that if Port Kembla were not in existence a fairly satisfactory port could be constructed at Bellambi; but it is necessary to consider the case comparatively. The cost of an eastern breakwater at Bellambi, according to the departmental estimate, would be £208,000, and the cost of the necessary wharfs £75,000, giving a total of £283,300. The length of the eastern breakwater would be 2,800 feet. The area of—

36 feet deep and over, at low water, would be	28 acres.
30	45
24	58
18	80
12	104

The total area bounded by the breakwater, the margin of the shore, and an east and west line drawn from the outer end of the breakwater would be 150 acres. To increase this area so as to make it equal to that of Kembla would involve a very heavy cost. The harbour is partially protected from the south by the Bellambi Reef, which has the effect of breaking the force of the seas coming from a southerly direction; but the anchorage is inferior to that at Kembla. There would be no serious danger of the silting of the harbour.

Material for the construction of the breakwater, although not obtainable in the immediate vicinity, would, in all probability, be found within a few miles. Plans prepared by a gentleman of considerable local experience were placed before the Committee. Under this proposal the site is placed some distance south from the headland selected as the root for the Departmental breakwater, and a considerable portion would be ineffective, as the end of the breakwater would be at a point almost due east from the northern jetty. Easterly seas or any seas north from east would sweep unimpeded into the northern portion of the bay, as well as into the suggested dock which it was proposed to construct in Bellambi Creek some distance north from the northern jetty, and the area protected would be somewhat less than that protected by $\frac{1}{4}$ ths of the length of the proposed Departmental breakwater. The proposal to connect the outlying reef with the main land might be viewed

viewed favourably if the Committee were of opinion that Bellambi furnished opportunities equal to Kembla for harbour construction. There would be resumption of land at Bellambi as at Kembla, with the exception of 100 feet of reservation which the Committee were informed exists on the foreshore of Bellambi Harbour.

THE PORT OF WOLLONGONG.

19. The port of Wollongong is more centrally situated than Port Kembla to the coal-measures of Illawarra, and in connection with it there is already in existence a shipping basin of a depth of about 14 feet. Coal-loading appliances have been erected, and one line of Government railway connects the main coast line with the port. Material suitable for a breakwater is not likely to be obtained within a reasonable distance; and to construct a sufficiently deep harbour would necessitate very expensive operations. Already there has been a great outlay, and the same expenditure at Wollongong as proposed at Kembla would give but one-half the harbour accommodation with far less satisfactory results.

The Wollongong Harbour Trust created by Act of Parliament on 1st October, 1889, after expending a considerable sum of money and incurring liabilities under a contract since cancelled, has been dissolved. Local feeling and interests have merged in a general agreement that all further expenditure should be incurred in giving effect to the Departmental proposal in connection with Port Kembla.

THE PORT OF KEMBLA.

20. The Bay of Kembla is protected and sheltered on the south, and partially towards the east and north-east, by the Five Islands. The protection from the south is very considerable. The southerly seas being broken by the islands do not seriously affect the southern portion of the bay in which the two existing jetties are situated.

The proposed eastern breakwater would be practically an extension northward of the headland which now protects the bay, and the result will be a capacious and secure harbour in all weathers. Without the northern breakwater it is possible that, at times, unloading may require to be temporarily suspended, but the loading of coal could be carried on without intermission. Not only is the bay better protected and sheltered in the quarter from which the worst weather is to be expected than any of the rival sites, but the bottom of the bay affords excellent holding ground.

The area of the proposed harbour having a depth of

36 feet and over,	at low water,	will be	66 acres.
30	"	"	97 "
24	"	"	126 "
20	"	"	156 "
12	"	"	178 "

At low-water mark there will be an area of 223 acres.

Kembla has a great advantage over harbours at the mouths of rivers, as there are no flood deposits to contend with. From the set of the currents as described by the Department it appears highly improbable that there will be any serious deposit of sand.

An abundant supply of stone can be obtained from the hill to the south, about half a mile from the foot of the proposed breakwater. The proximity of this stone enables a reduction of £23,745 to be made in the original estimate for the eastern breakwater.

Port Kembla as a harbour site is greatly superior to either Wollongong or Bellambi. In view of the experience afforded by Wollongong Harbour—which port no doubt provided ample accommodation for the trade at the time of its construction, but is valueless except for small coasting vessels—the fact is emphasised that a port, to be of permanent value, should be constructed not only to meet present trade requirements, but with a full recognition of the possibilities of future alterations in marine architecture.

The

The Committee are of opinion that all needed requirements can be satisfied at Kembla Bay, and although the opinion has been expressed by the Department of Works that the construction of the northern breakwater will be necessary to afford absolutely still water, there is sufficient evidence to show that such a work need not be contemplated at present.

Port Kembla is well protected by the islands and headland, and with the shelter which will be afforded by the proposed eastern breakwater, will doubtless be sufficient for many years to come. The proposed breakwater will furnish ample protection for loading operations, and it will be possible to discharge cargoes in the bay.

IX.

THE HARBOUR PROPOSED TO BE CONSTRUCTED BY THE ILLAWARRA HARBOUR AND LAND CORPORATION (LIMITED).

21. The managing director of the Illawarra Harbour and Land Corporation stated that Parliament had by their Act already practically dealt with the question submitted to this Committee, as the port proposed to be constructed under such Act was intended to provide for the coal trade of Illawarra; and it was regarded by the company as a breach of faith on the part of the Government to construct another harbour in competition with that projected by them. This contention ignores the comprehensive works designed by the Wollongong Harbour Trust, and is quite untenable, although the Engineer-in-Chief thought that had a good harbour been constructed at Lake Illawarra, Port Kembla might not have been required. It then became necessary to inquire as to the transactions of the company and the progress which has been made towards the fulfilment of their undertaking.

HISTORY OF THE ILLAWARRA HARBOUR AND LAND CORPORATION.

22. It appears that this corporation was formed about the year 1888. In 1890 an Act was passed by Parliament empowering the company to construct a harbour at Lake Illawarra, and conferring other rights. In 1895 an extension of time was granted under an Act which specified that the proposed works must be completed by the 20th December, 1897, but that if £10,000 were deposited in the Treasury by that date, an extension of one year would be granted in which to complete the work.

A brief statement of the transactions of the Illawarra Harbour and Land Company will not be out of place.

The corporation owns the Lake Lands Estate and a large coal-mining property on Dapto Creek.

These properties (representing £90,000), with the concession under the Act, in the first instance, formed the total assets of the company.

They have expended £39,000 on a railway from Talawera Point to their coal property, and about £3,000 on works and surveys in connection with the harbour, of which amount £1,200 was spent in the partial erection of a tie-bank near Windang Island.

The railway, which has been constructed for a distance of $7\frac{1}{2}$ miles to their coal property, would be a useful work if the coal obtained there were of commercial value. The Committee, however, are definitely assured by Professor David and the Government Geologist that the coal is not suitable for export, and it is conjectured that it would be more profitable to a company engaged in smelting to use the well-tested Bulli seam than to endeavour to smelt with the inferior coal of Dapto Creek. This is an important factor in connection with the enterprise for opening the lake entrance and dredging a deep channel to Talawera Point.

If the evidence given by the Engineer-in-Chief for Public Works be correct, that "it will take five to seven years to construct a harbour at Lake Illawarra," the construction of a railway to Talawera Point might well have been delayed till the completion of the harbour scheme. Loss of interest on the capital invested in its construction, and also the great deterioration consequent upon exposure to the weather for

for a number of years, would have been avoided, had the construction of the harbour preceded, as it should have done, the building of the railway, but this latter work became indispensable in order to save the company's Act of Parliament from lapsing.

The smelting works now being erected near Lake Illawarra are substantial, and the foundation of a hopeful enterprise appears to have been laid. The managing director of the company claims that the corporation is entitled to special consideration, as it is owing to the instrumentality of his company that these works have been erected.

The expenditure, however, of but £1,200 on harbour works during a period of six years out of the proposed cost, £177,060, and the carrying out of the project being dependent upon the flotation of bonds in London, do not inspire confidence in the assurance by the company's engineer and contractor that the work can be carried out within the time specified in the company's Act of Parliament, viz., by December, 1898; the Engineer-in-Chief for Public Works informed the Committee that from five to seven years would be necessary, and that the cost would be not less than £280,000.

Apart from the untenable assumption by the corporation of an obligation by the Government not to construct a rival port, the Committee regard the success of the corporation's enterprise as doubtful. This, in conjunction with the fact of the great delay in carrying out the corporation's harbour works, which apparently stagnated until the Government made the present proposal, prevents the Committee from recommending any delay in dealing with the proposal referred to them by Parliament, and they feel constrained in considering the question of a good port for Illawarra to disregard the corporation's contention, and to base their recommendations solely upon the respective merits of the sites inspected.

X.

THE PRESENT RAILWAY CONNECTION WITH KEMBLA.

23. The distance from the main South Coast railway line to Kembla is about 4 miles. The Southern Coal Company has constructed a line with a 4-ft. 8½-in. gauge from their jetty to the Government railway, and there is also in existence a line on the same gauge from the Kembla jetty to the South Coast line. The construction of the proposed line of railway *via* the Mount Keira line and along the coast, following the eastern side of Tom Thumb Lagoon, would effect a saving of about 2 miles; but it becomes a question for consideration whether such a saving in haulage would justify the carrying out of this line at present.

The coal to be shipped at Port Kembla from all the mines at present being worked in the Illawarra district, with the exception of Mount Kembla, would probably be carried by this railway. The cost of the line is estimated to be under £20,000. The time for commencing its construction may be left to the Government as a matter for their consideration.

It is probable that the Committee would have recommended the construction of a line by another route, turning off to the south of Wollongong station, and following either the east or west margin of the Tom Thumb Lagoon; but the difficulties likely to be experienced in removing the heavy grade to the north of the Wollongong station would probably more than counterbalance any advantages to be gained by adopting that route.

XI.

WAY-LEAVE THROUGH THE WENTWORTH ESTATE.

24. The Mount Kembla and the Southern Coal companies have the right of hauling coal over the lines constructed through the Wentworth Estate for a period of fifty years on payment of a way-leave of ½d. increasing to 1d. per ton.

It may be wise not to interfere with this right, in view of compensation claims, but those portions of the Mount Kembla and Southern companies' railway lines lying within the boundaries of the land proposed to be resumed should be acquired by the State.

The Committee are of opinion that delivery of the coal coming by these lines could be taken on the boundary of the resumed land, and the agreement with regard to way-leave would then remain unimpaired. This and the questions incidental to resumption of jetties and alteration or duplication of railway lines in connection with the port should be left to the Government to be dealt with as the breakwater progresses.

XII.

RESUMPTION OF LAND.

25. Sufficient land should be resumed to secure the stone required for the construction of the port, to provide hereafter space for all shunting operations and approaches to the jetties and wharves, and for the erection of the necessary buildings, and to furnish an elevated site for a signal station.

The area defined on the map herewith, and embracing 660 acres—subject to alteration as investigation in detail may render necessary—will be sufficient for all these purposes. It would be possible to have resumed isolated blocks, and thus to have covered the quarry sites and signal station, but in each instance roads of access would require to be provided, which might create claims for severance.

In the opinion of the Committee it will be wiser to have the resumed lands in one block.

The land in question is inferior in quality for grazing. The water frontage is valuable for coal jetties only, which cannot be erected without State authority.

Taking into consideration the betterment to the residue of the estate by the construction of a port at Kembla, the cost of resumption should not be very great.

XIII.

PROFITS FROM THE PORT.

26. Apart from the railways and jetties the Committee were informed by those at present engaged in the coal-mining industry that 4d. per ton would not be an unreasonable charge for the benefit afforded by the construction of the eastern breakwater, and one for which they would be freely recompensed by the extension of trade. The total yearly income from this charge upon the moderate estimate of 500,000 tons would be £8,333, which represents at $3\frac{1}{2}$ per cent. a capital of £270,000.

The total cost of construction of the port, resumptions, and all works incidental thereto, should not exceed £200,000.

It will be seen that without taking into account any import trade such as sulphide and other ores for the smelting works now, or hereafter to be, established, Port Kembla should be self-supporting from the amount which will be earned from the shipment of coal alone.

As the port develops it is probable it will be necessary to have pilots' and boatmen's quarters, buoys, and other mooring appliances which constitute a continuous annual cost in all harbours; but the increase in the trade which justifies their being provided will also furnish revenue from which the cost of them may be met.

XIV.

PORT AT JERVIS BAY.

27. Jervis Bay is a capacious natural port, distant about 17 miles from the present railway terminus. Evidence was given concerning the existence of coal, iron ore, and low-grade ores within a reasonable distance, but as Jervis Bay is 60 miles

miles from the centre of the coal-measures at present being worked, it could not be availed of by the Illawarra Colliery proprietors, whose coal is carried by collier to Sydney for 2s. 6d. per ton, and by rail for about 3s. per ton. At present rates, as laid down by the Commissioners for Railways, there is no probability of any appreciable quantity of coal north of Kembla being forwarded to Jervis Bay as a port of shipment.

XV.

FINDING OF THE COMMITTEE WITH REGARD TO THE NECESSITY OF A PORT IN THE ILLAWARRA DISTRICT.

30. The Committee are of opinion that—

- (i) The Illawarra coal-measures are of sufficient extent and value to justify the construction of a safe port.
- (ii) Such a port would materially increase the output of the collieries, thus providing remunerative occupation for a large number of miners and surface hands. It would be an advantage to the vessels engaged in local trade; benefit steamers employed in intercolonial trade, and assist, by lessening the freight of ores, the operations of any smelting-works which may be established; and it would stimulate the foreign trade of the Illawarra district.
- (iii) Eventually a revenue in royalty will be derived from coal mined on Crown lands.
- (iv) Port Kembla is the most suitable and convenient site for the construction of a deep-water harbour, and the revenue from the port should cover interest on outlay as well as maintenance.
- (v) The land resumption recommended may be made without eventual loss to the State.

RESOLUTION PASSED BY THE COMMITTEE.

31. The following extract from the Committee's Minutes of Proceedings of 4th and 5th February, 1897, shows the resolution passed and the division upon it:—

Mr. Lee moved,—

“That, in the opinion of the Committee, it is expedient the proposed Construction of a Deep-water Harbour at Port Kembla, referred to the Committee by the Legislative Assembly, be carried out by constructing the eastern breakwater only.”

The motion was seconded by Mr. Fegan, and passed on the following division:—

Ayes, 9.

Mr. Ewing,
Mr. Humphery,
Mr. Hoskins,
Mr. Roberts,
Mr. Trickett,
Mr. O'Connor,
Mr. Clarke,
Mr. Lee,
Mr. Fegan.

Noes, 4.

Mr. Hassall,
Mr. Black,
Mr. Wright,
Mr. Farnell.

THEOS. EWING,
Chairman.

Office of the Parliamentary Standing Committee on Public Works,
Sydney, 10 February, 1897.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

MINUTES OF EVIDENCE.

CONSTRUCTION OF A DEEP-WATER HARBOUR AT PORT KEMBLA.

WEDNESDAY, 28 OCTOBER, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.

The Hon. JAMES HOSKINS.

The Hon. CHARLES JAMES ROBERTS, C.M.G.

The Hon. WILLIAM JOSEPH TRICKETT.

The Hon. DANIEL O'CONNOR.

HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.

JOHN LIONEL FEGAN, Esq.

THOMAS HENRY HASPALL, Esq.

GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee proceeded to consider the proposed Construction of a Deep-water Harbour at Port Kembla.

Robert R. P. Hickson, Esq., Under Secretary for Public Works and Commissioner for Roads, sworn, and examined:—

1. *Chairman.*] Do you desire to make a statement with regard to this proposal? Yes, I have prepared a statement for the information of the Committee which, with their permission, I will read. It is as follows:— R. R. P.
Hickson, Esq.

Proposed Deep-water Harbour for the Illawarra District.

28 Oct., 1896.

So far as can be ascertained from available papers, the earliest action taken towards constructing a harbour for the Illawarra District was during the Government of Sir George Gipps, when a small basin, or boat harbour, was excavated at Wollongong by prison labour.

In July, 1858, during the Governor-Generalship of Sir William Denison, a petition was presented by the inhabitants of Wollongong and the northern portion of the district, asking for a better harbour, and the late Mr. Moriarty, then Engineer-in-Chief for Harbours and Rivers, was instructed to prepare plans and report on the best way to provide suitable shipping accommodation. Mr. Moriarty's report was laid on the Table of the House, and ordered to be printed, 16th February, 1859. In it he recommended the construction of an inner basin and breakwater, and estimated the cost at £26,892.

The papers disclose that the size of the basin first proposed was subsequently much enlarged when it was found to be needed for coal-shipping.

On the Estimates for 1860 a loan vote for £26,892 for Improvements to Wollongong Harbour was taken, and the works were started.

In the same year we find Messrs. Robson & Co. applying to Parliament and obtaining an Act, intitled "Mount Keira Tramroad Act of 1860," dated 23rd August, 1860, authorising them to construct a tramway from the Mount Keira Coal-mine to Wollongong Harbour.

In the year 1862 two Bills for colliery railways in this district were passed by the Legislature, both dated 17th December, 1862, 26 Vic., the first known as "Taylor and Walker's Railway Act." This Act empowered the South Bulli Company to construct a railway from their colliery to "the projected public dock or harbour works at Bellambi Harbour."

The second Act was known as the "Mount Pleasant Tramway Act of 1862," 26 Vic., and authorised the construction of a tramway from Mount Pleasant to the harbour at Wollongong. This tramway was subsequently purchased and is now owned by the Government.

About the same time that the construction of Wollongong Harbour was asked for, the papers disclose that there was a claim for a rival harbour at Bellambi, and Mr. Moriarty submitted a design for a harbour at Bellambi with a report dated 20th July, 1859. He recommended a small basin, with an island breakwater to protect it. The survey then prepared is a valuable record, showing that no change of any consequence has taken place in the bay.

The first coal-shipping appliances at Wollongong were apparently laid down by private enterprise, for the Government did not commence to erect staiths or sidings till the year 1865.

The construction of the Belmore Basin, or inner harbour of Wollongong, was proceeded with and completed about the year 1868, although expenditure on the construction of a breakwater, new and larger coal staiths, cranes, &c., was almost continuous up to the formation of the Wollongong Harbour Trust.

This Trust was called into existence on 1st October, 1889, by the "Wollongong Harbour Trust Act of 1889," 53 Vic. No. 19: "An Act to provide for the improvement, management, and regulation of the Port of Wollongong and certain portions of the Tom Thumb Lagoon, and for other purposes connected therewith."

Soon after its formation the Trust invited the late Sir John Coode to furnish a design and estimate for an outer harbour, and on the 13th January, 1891, he forwarded his report and estimate, together with three sets of drawings to illustrate his scheme.

R. R. P.
Hickson, Esq.
23 Oct., 1896.

The area enclosed within the breakwaters proposed by Sir John Coode was as follows:—		
Area at low water		107 acres.
Area with depth of 6 feet and over		91 „
" 12 " 		31 „
" 18 " 		69 „
" 24 " 		48 „
" 30 " 		23 „
Estimated cost:—		
East breakwater, 2,400 feet long		£345,500
North " 2,550 " 		191,600
Total		£537,100

This estimate, it will be observed, included no portion of the "internal works," which were designed by Sir John Coode on an extensive scale.

In a subsequent report, dated 17th June, 1891, estimates and plans for the internal works are supplied as follows:—

Southern coaling depôt, three jetties, including cranes, hydraulic machinery, railway sidings, &c., each £152,200	£456,600
Seven acres of reclaimed land and formation	32,300
Western coaling depôt, three jetties, including cranes, hydraulic machinery, railway sidings, &c., each £152,000	456,000
Twenty-six acres of reclamation and formation	73,000
Ballast quay.....	78,600
Removal of portion of Fairy Reef	19,800
	<hr/>
	1,116,300
Breakwater works as before	537,100
	<hr/>
Total estimate	£1,653,400

It was never intended that the whole of this large scheme for internal works should be proceeded with at once, but Sir John Coode recommended that the reclamation and one only of the southern jetties should be first carried out, and then added to as the trade developed.

Early in 1892 the Trust applied to the Government for power to borrow a sum of money to enable a commencement being made with the works, and the Colonial Treasurer referred the matter to the then Engineer-in-Chief for Harbour and Rivers (Mr. Darley) for report on the scheme and its probable financial prospects. The report, which is with the papers, dealt fully with the question, and as the financial portion of it deals with a subject that must necessarily be seriously considered when investigating any scheme for a southern coast harbour, it is desirable to here quote the following these extracts:—

"The next question is, —Will the probable future trade of the port pay the interest on this debt, which may be taken as one and three-quarter millions sterling? To do so at 4 per cent. would require a net annual revenue of £70,000. It is quite clear that the present trade from the whole of the southern coal-fields would not pay this interest, and as it is hard to say what the trade is likely to develop to, the best way to look at the matter is to see what trade would be necessary to raise such a net revenue.

"At Newcastle the trade is taxed 4d. per ton for shipping. Assume that the rate charged at Wollongong might be as high as 6d. per ton—and this is, I think, the maximum that the owners are likely to pay—at least one-third this sum, or (say) 2d. per ton, would have to be deducted for port and shipping charges, which would include cost of working and maintenance of all the hydraulic plant and cranes, salaries of officers, wharfingers, and general port maintenance charges, dredging, &c. This would leave but 4d. per ton net income, at which rate to collect £70,000 would require an output of 4,200,000 tons. I do not think the most sanguine advocate for the improvement of the port of Wollongong can anticipate such a trade as this, seeing that the whole output of all the northern and southern mines taken together only amounted to 3,691,000 tons for the year 1891 (see Report of Department of Mines). The total output from all the southern mines for 1891 only amounted to 828,933 tons, of which quantity only 155,335 tons were shipped from Wollongong Harbour, the balance being shipped from the numerous coast jetties at Port Kembla, Bellambi, Bulli, Coal Cliff, and North Illawarra, and some going by rail direct to Sydney.

"I do not think it at all probable that the port of Wollongong, if improved and made a really safe harbour, can count upon drawing all the southern trade there. Some will undoubtedly go direct to Sydney by rail, and a large quantity will continue to be shipped from private jetties, which in many cases are close to the collieries, the proprietors thereby saving the expense of long haulage, &c.

"I therefore think that the utmost trade likely to be drawn to Wollongong for many years to come will not exceed 750,000 tons, or (say) five times the present output. Taking only 3d. per ton net profit on this quantity, as the expenses would be proportionately heavier on the smaller output, the proceeds would amount to £9,375, which would represent 4 per cent. interest on £234,375. This, it seems to me, is the greatest amount of capital which could be expended with any prospect of a return of interest, and seeing the opposition that is certain to be met with by railway carriage and private shipping jetties as already referred to, I have very great doubts whether the Wollongong trade will ever reach these figures, even if the port is made a safe one for shipping.

"I am aware some revenue has been derived from wharfage dues, rents, and pilotage, which I have not before taken credit for, but I think the whole of these collections may be left out of the question, as the cost of maintaining the lighthouse, crane repairs, tug maintenance, rocket apparatus, &c., &c., has about absorbed all the collections thus made, and I do not think that, with the railway in opposition, it will be reasonable to look for any very large additional revenue from this source. . . . "I am satisfied that I have taken the most liberal view of the possible trade to be drawn to Wollongong, seeing the opposition that must always be met with from the numerous private shipping places along the coast. In this respect, Wollongong is most unfortunately situated as compared with Newcastle, where the bulk of the northern coal trade must always be centred, there being no other place adjacent where coal can be shipped to interfere with the trade of the port.

"I regret, therefore, to have to conclude with the opinion that there is no prospect whatever of the trade of the port of Wollongong ever being able to pay interest on the cost of constructing an outer harbour, even on the modification of Sir John Coode's plan."

Authority to raise a large loan not being granted, the Trust let a contract for the execution of a smaller scheme to improve the shipping accommodation, and the contractor had completed a considerable portion of the contract when, for various reasons, it was considered necessary to cancel the contract and thus stop the work.

The Wollongong Harbour Trust was shortly after this dissolved by proclamation in the *Government Gazette*, No. 804, dated 2nd December, 1895.

Prior to the formation of the Harbour Trust the Government had expended in construction, maintenance, and management of Wollongong Harbour, shipping appliances, such as staiths and cranes, jetties, lighthouse, quarters, dredging, &c., the total sum of £116,090 9s. 5d.

The Trust during the period of its existence expended a further sum of about £25,950, but left outstanding liabilities to the extent of probably some £15,000, or in all the sum of about £41,000 may be added to the first-named sum, making the total expenditure at Wollongong to date about £157,000.

The next step towards obtaining a south coast harbour was taken by a private company, who obtained an Act, intitled the "Illawarra Harbour and Land Corporation Act of 1890." This company has in view the opening of Lake Illawarra, by constructing certain breakwaters and training walls at the entrance, and dredging a deep-water channel across the lake, and forming a shipping place on the western shore of the lake. The time originally granted by Parliament for commencing the work having been exceeded without any progress being made, an amending Act, intitled "The Illawarra Harbour and Land Corporation Act Amendment Act of 1895," was passed, which extends the time for completing the harbour works to 20th December, 1898, and the time for completing the first railway to 20th December, 1896.

The railway has been completed, but the harbour works have not yet been started. The cost of forming a suitable shipping harbour in Lake Illawarra—opening the entrance, dredging, &c.—is estimated by the engineer to the company at about £140,000.

Almost

Almost concurrent with the partial abandonment of Sir John Coode's large scheme by the Wollongong Trust, the question of providing a large, deep-water harbour for the Illawarra coal trade was prominently brought forward, for on the 6th December, 1894, a deputation, representing the Bellambi Harbour Committee, waited upon the Minister for Public Works to urge the construction of a breakwater at Bellambi.

R. R. P.
Hickson, Esq.
28 Oct., 1896.

Mr. Young then promised that he would obtain a report from the Engineer-in-Chief for Harbours and Rivers; and, subsequently, on the representations of Mr. Nicholson, M.P., he approved of an examination being also made of Port Kembla, and Mr. Darley was instructed to report upon that place as well.

Shortly afterwards, viz., in February, 1895, as the result of a meeting held at Wollongong of the supporters of the rival claims of Wollongong, Bellambi, and Port Kembla, a further deputation waited upon Mr. Young, and requested that an officer might be appointed to report on the most suitable site for the harbour. They stated that the advocates of the various sites had agreed to leave the decision of the matter in the hands of the Department.

The reasons which have been urged in favour of the construction of the proposed harbour are as follow:—

- “(i) That a good and central shipping port, safe and accessible for large vessels in all weathers, is absolutely necessary for the development of the coal trade of the district, which has been retarded and hampered for want of such a port.
- “(ii) That the coal of the district is coming into increased favour, and all that is necessary to enable the collieries to compete with the northern district in the export trade is a central shipping depot for the whole district.
- “(iii) That it would induce the establishment of other manufactories in the district.
- “(iv) That the present harbour at Wollongong is altogether inadequate to the requirements of the district.
- “(v) That a harbour, if constructed, will also serve as a harbour of refuge for vessels driven away from Sydney by stress of weather.”

The surveys necessary in order to enable a report to be made were then undertaken, and on the 26th of November, 1895, Mr. Carleton, the Principal Assistant Engineer for Harbours and Rivers, submitted a preliminary report which showed, from an engineering and nautical point of view, Port Kembla was by far the best site. He stated that an expenditure of £158,300 at that place would construct a breakwater which would protect an area of 126 acres, having a depth of 24 feet and over at low water, or a cost of £1,256 per acre; while at Wollongong it would cost £193,875 to give an area similar in depth of only 54 acres, or £3,405 per acre; and at Bellambi it would cost £208,300 to give 58 acres, or a cost of £3,557 per acre. He stated that the surveys showed that the anchorage at Port Kembla was better than at Bellambi or Wollongong, and that it was also sheltered from the south and south-east by the Five Islands. He pointed out that the coal already shipped at Port Kembla at the companies' jetties was very much in excess of the Wollongong output, and greater than the shipments from Bellambi; and assuming that the output at Port Kembla, if a harbour were constructed there, would reach the output estimated for Wollongong when the works at that place were completed according to Sir John Coode's scheme, viz., 750,000 tons, a revenue of 3d. per ton would pay interest on the outlay. He estimated the cost of the works at the three places as follows:—

<i>Port Kembla.</i>		
Cost of breakwater.....	£158,300	
Purchase of existing jetties, construction of additional jetties, and loading appliances	75,000	
	£233,300	
<i>Bellambi.</i>		
Cost of breakwater	£208,300	
Wharfs, &c.	75,000	
	£283,300	
<i>Wollongong.</i>		
Cost of breakwater	£193,875	
Wharfs, &c.	75,000	
	£268,875	

In submitting this report, I (being then Engineer-in-Chief for Public Works) pointed out that although Port Kembla was no doubt the best site for a harbour, from an engineering and nautical point of view, I was not in a position to say whether it was the best situated as regard the collieries, and I thought this was a matter which would be better inquired into by the Public Works Committee, and it was then decided to refer the matter to that body. I also pointed out that, in view of the powers which had been given to a private company to construct a harbour at Lake Illawarra, it was a matter for consideration whether a large expenditure should be entered upon to compete with that company.

Mr. Darley, who has since succeeded me, has also submitted a report on the matter. He concurs in the selection of Port Kembla as a harbour site in preference to Bellambi or Wollongong, but he points out that it is situated wholly on private property, and that a large resumption of land would be required, not only in connection with the harbour, but to gain access thereto, and that the purchase of existing rights to railways and jetties to abolish any monopoly would be a costly matter.

A report obtained from Mr. Deane, Engineer-in-Chief for Railway Construction, as to the best route for connecting Port Kembla with the main South Coast railway system, shows that this would be best effected by constructing a light line from Port Wollongong in extension of the branch line from Mount Keira, crossing Tom Thumb's Lagoon, the cost of which is estimated at £14,613, exclusive of land.

The following figures relating to the shipment of coal from the district have been furnished by the Customs authorities at Wollongong:—

	Northern Jetties, Bellambi, and Bulli.	Port Kembla.	Belmore Basin, Wollongong.	Total.
	Tons.	Tons.	Tons.	Tons.
1894	168,372	185,792	156,419	509,983
1895	175,506	220,388	153,981	549,875
1896 to 30th April	69,120	80,975	50,499	200,594

According to the report of the Department of Mines, the output of coal from the mines in the southern district during 1894 and 1895 was as follows:—

	Quantity	Value.
1894	863,125 tons.....	£225,258.
1895.....	910,124 „	239,035.

In submitting designs for Port Kembla, Wollongong, and Bellambi, Mr. Darley points out they may be termed sheltered coast harbours, as distinguished from close, or still-water harbours. In the former there must always be more or less swell when there is any sea running outside. For shipping coal or minerals this is not always seriously objectionable, as a vessel can be held off to buoys whilst being loaded from shoots, but for landing goods any swell at a wharf makes it a difficult matter. Should it be decided to construct a harbour at Port Kembla, or any other of the possible sites on the South Coast, as submitted to the Committee, there is nothing to prevent a second breakwater being constructed hereafter, and thus converting it into a close or still water harbour, although the cost of doing so may vary in each case.

A design and estimate for such a harbour at Port Kembla has been prepared, and can be laid before the Committee. The northern breakwater, in this case being in a more sheltered position, is not made so high or heavy as is necessary for the eastern breakwater.

The

THURSDAY, 29 OCTOBER, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.

The Hon. JAMES HOSKINS.

The Hon. CHARLES JAMES ROBERTS, C.M.G.

The Hon. WILLIAM JOSEPH TRICKETT.

The Hon. DANIEL O'CONNOR.

HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.

JOHN LIONEL FEGAN, Esq.

THOMAS HENRY HASSALL, Esq.

GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

Cecil West Darley, Esq., Engineer-in-Chief for Public Works, Department of Public Works, sworn, and examined:—

8. *Chairman.*] I understand that the engineering aspect of this case has been left to you;—I presume that most of the information before the Committee was prepared by you? I wrote the statement which was handed in by Mr. Hickson yesterday, because I was originally instructed that I should have to open the case. Some slight alterations may have been made in it; but the statement before the Committee was, at all events, based upon what I wrote.

C. W. Darley,
Esq.

29 Oct., 1896.

9. Have you taken into consideration the commercial aspect of the case more than as it is mentioned in that statement? No; I have not gone into the commercial aspect of the case at all.

10. Nor into the question of compensation? No; I have dealt with the matter simply from the engineering point of view. I have considered simply the comparative advantages of different harbour sites and the comparative cost of making them available.

11. Did you take into consideration the location of the coal measures? I looked into that matter; but I found that it would be a very difficult question to deal with. I consulted one or two gentlemen whom I looked upon as authorities on the subject, and the general conclusion to which I came was that Port Kembla was as central a place for a harbour as any. I understood that the collieries near Bellambi are worked out to a greater extent than the collieries further south. I gathered that the largest part of the coal-bed lay to the south.

12. Did you take into consideration the competition which would be offered by the Illawarra railway? I did not go into the commercial aspect of the case at all. I was simply called upon to have surveys made, and to report upon the various places available.

13. In order that we may have a comparative idea of the size of the proposed harbour and the amount of trade that would be carried on in it, can you give us information in regard to the size of some of the ports of the world? Kingstown Harbour has an area of 250 acres; the Madras Harbour, which is not yet completed, will have an area of 220 acres; Peterhead Harbour, which is really a harbour of refuge, has an area of 340 acres; and Ymuden, which is the harbour leading to Amsterdam, has an area of 250 acres. Of course, the trade of places like Liverpool and London is done upon a comparatively very small area of water; but the circumstances there are entirely different. The area of Port Kembla, when the breakwaters are completed, will be 260 acres, with a minimum depth of 24 feet of water.

14. Of that area how much will have a depth of over 24 feet? 131 acres will have a depth of 30 feet and over, and 96 acres will have a depth of 36 feet and over. When the scheme was originally proposed, all that was asked for was some shelter to the steamers shipping coal at the port, and a scheme providing simply what is termed a shelter harbour was prepared. After talking the matter over with different gentlemen likely to be interested in the place, and particularly Mr. Howell, the manager of the Smelting Company of Australia, I came to the conclusion that if there were anything like the business done which they expect at their works, there will be a large import trade in the district. I think there is every prospect of such a trade springing up, and in such an event, a sheltered harbour would not be sufficient. Of course a certain amount of shipping takes place at Port Kembla now, notwithstanding the unprotected nature of the place, and a single breakwater would enable that shipping to be carried on much more easily and almost continuously. But when you have to land cargo, you require quiet water, so that the ship may lie right alongside the wharfs. You cannot land goods conveniently and cheaply in a comparatively open harbour, though you can shoot coal into vessels which are held off from the jetties by buoys. There are places in the Bay of Biscay, and at Guatemala, where they load into vessels in comparatively rough water; but they could not conveniently land goods there. I have prepared a scheme, a plan of which is before the Committee, for making an enclosed harbour at Port Kembla, so that both inward and outward shipping may be conducted conveniently and safely. The following statements show a comparison between the cost of making an open harbour at Port Kembla, Wollongong, and Bellambi, with the respective areas of sheltered water, and between the cost of making a closed harbour, with similar information as to areas enclosed:—

With one Breakwater.

HARBOUR FOR ILLAWARRA DISTRICT, SOUTH COAST, NEW SOUTH WALES.

COMPARISON OF COST OF BREAKWATERS AND AREAS OF HARBOURS.

Items.	Port Kembla.			Wollongong.			Bellambi.		
	feet.	feet.	feet.	feet.	feet.	feet.	feet.	feet.	feet.
Length of breakwater	2,800	2,200	1,600	2,400	2,000	1,600	2,800	2,200	1,600
Weight of stone in breakwater	633,200	391,000	217,700	735,500	579,900	420,900	833,200	571,100	322,800
Cost at 5s. per ton	£158,300	£97,750	£54,425	£183,875	£144,975	£105,225	£208,300	£142,775	£80,700
Distance westerly from end of breakwater to shore	3,740	3,750	3,600	2,625	2,620	2,490	3,570	3,390	3,010
Area of harbour:—	acres.	acres.	acres.	acres.	acres.	acres.	acres.	acres.	acres.
36 feet deep and over at low-water ..	66	38	13	13	10	6	28	17	4
30 " " " " ..	97	60	28	26	21	14	45	27	9
24 " " " " ..	126	85	47	54	42	27	58	36	14
18 " " " " ..	156	113	71	75	58	40	80	51	25
12 " " " " ..	178	134	90	94	74	54	104	66	34
At low-water mark	223	173	125	127	103	78	150	102	58

With

33. There are ports in which an enormous trade is done upon less than 100 acres of water? Yes; the trade is carried on in docks in many places. That is so in London; but there you have many miles of sheltered water in the Thames before you come up to the docks, and it is the same with Liverpool.
34. Is there any competing port north of Bellambi, say at Bulli or Coalcliff? No.
35. What competing ports are there to the south;—will Lake Illawarra compete? A company has the right to make a harbour there by opening the entrance to the lake. The time for the completion of the work is December, 1898.
36. Has any work been done there? Nothing to speak of. A small bit of a bank has been made approaching the breakwater, and nothing has been done since.
37. Do you know the details of the scheme? Yes. The company propose to construct a northern and a southern breakwater, so as to fix the entrance to the lake a little north of Windang Island. The entrance will then be largely under the shelter of the island. Inside the lake they propose to dredge a channel right across to Talawera Point. The present average depth of the lake is 10 feet.
38. Do you know what expenditure is necessary to complete that work? I have lately taken out an estimate for myself, but I have not made it known. The engineers informed me that the company have let a contract for the construction of the harbour for about £140,000.
39. Are you able to inform the Committee what it will cost to keep the mouth of the lake permanently open? I think that if the breakwaters are constructed as proposed, the scour that will be created will be sufficient to maintain a permanently deep entrance.
40. What depth will there be between the two dykes? At present the depth varies from nothing to 19 feet; but there is nothing to prevent a scour taking place to a depth of 24 feet and more.
41. What is the width of water between the dykes? 400 feet.
42. Is that enough? It is perhaps rather narrow; but I may mention that Sir John Coode proposed to have an entrance only 290 feet wide to Lake Macquarie. That struck me as altogether too narrow, and the width was increased to 400 feet at my suggestion.
43. You believe that the flow of water will be sufficient to keep the channel open? Yes; the scour will be very great.
44. The dykes are not to be connected with Windang Island;—they will run out to sea north of the island? Yes.
45. If these works be carried out, will the lake be accessible in almost any weather? I think so, if tug-boats are used; of course, no large ship will attempt to sail in.
46. The entrance would not be so good as that you propose at Port Kembla? No, not nearly.
47. Do you think it is possible to do the necessary work at Lake Illawarra for £140,000? I hardly like to speak upon the point; but I have a letter from the engineers saying that the contract has been let for that amount. I am informed that dredging is included.
48. Do you regard Lake Illawarra as a strong competitor with the proposed Government port? If the Lake Illawarra scheme is carried out it would be impossible for any other scheme to pay expenses. There is not enough traffic there to support two harbours. If the contractors start now, I think they could complete the work within the time allowed by the Act, and then there would be nothing to justify the Government in opening another harbour.
49. *Mr. Humphrey.*] How many acres of harbour would the expenditure of £140,000 at Lake Illawarra make available? It is only proposed to make a channel across the lake leading up to a dock. There is to be no harbour area.
50. *Chairman.*] Can Kiama be a competitor to the proposed harbour? No.
51. Could Shellharbour or Gerringong? No.
52. Or Shoalhaven? No.
53. What about Jervis Bay? Jervis Bay could be made a good harbour.
54. But it is too far down the coast? Yes.
55. Do you know anything about the coal-measures at the back of Jervis Bay? I do not. I have here a statement of the distances along the coast, measured from Sydney:—

Distances, South Coast of New South Wales.

Sailing distances, in nautical miles, from Sydney Heads to—

Botany Bay	...	...	12 miles	Jervis Bay	...	...	82 miles
Port Macking	...	...	17½ "	Ulladulla	...	...	103 "
Coal Cliff	...	...	31 "	Bateman's Bay	...	...	129 "
Bulli	...	...	36 "	Moruya River	...	...	139 "
Bellambi	...	...	37 "	Montagu Island	...	...	155½ "
Wollongong	...	...	41 "	Tathra, Bega River	...	...	186 "
Port Kembla	...	...	44 "	Eden, Twofold Bay	...	...	208 "
Lake Illawarra	...	...	49 "	Green Cape	...	...	217 "
Kiama	...	...	56 "	Cape Howe	...	...	232 "
Shoalhaven River	...	...	69 "				

56. Have you the railway distances? No; I will furnish that information.
57. Do you regard Jervis Bay as a safe port? With proper lighthouse arrangements it could be made a very safe port.
58. Is it a good port inside? A very good port.
59. The difficulties you have to contend with in the work of this kind proposed are the currents and the strength of the waves? Yes.
60. How does the current run at Port Kembla? There is a littoral current, travelling south, a little way off the headland, but in Port Kembla Bay, as in most bays which open to the north, there is a northerly current washing round the bay. That current is not so marked at Port Kembla as at Byron Bay, because as you come south you are more under shelter of the headlands; but still it is very marked, and I feel sure that it would prevent any silting of the harbour. The tendency is for the current to split, and go west and north.
61. If there were only one breakwater, would it not have a tendency to trip up the current and bring into existence a strong set round the bay to the north west? It would tend to increase the scour; the current

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current would set to the north. Wollongong, for instance, has never filled up at all. The sand-spit at the mouth of Tom Thumb Creek affords a good indication of the way in which the current acts upon that part of the coast. North-easterly weather would have a tendency to bring sand in; but the normal tendency of the current would be to keep sand out of the bay.

62. You have about 4 miles of sandy beach between Port Kembla and Wollongong? About that.

63. Does the diagram before the Committee show the entrance to Tom Thumb Creek as it is at present? The survey was made a year ago. I cannot say that the condition of the creek at the present time is exactly as is shown on the map.

64. With a northern breakwater there would be no danger of silting? None whatever. The breakwaters will go out into deep water, beyond the limits of bottom disturbance.

65. The remarks you have made about Port Kembla with regard to the likelihood of silting would apply to Wollongong and to Bellambi? Yes.

66. Do you like the straight breakwater devised for Wollongong by Sir John Coode? I think he had to make it straight because of the reef.

67. How do you propose to make the proposed breakwater at Port Kembla? I have not had sufficient time to sufficiently explore the district yet. I know that rock can be obtained in different places, and at present I am having a shaft sunk on a hill close to the eastern breakwater. There we have struck some very good diorite. I have given a sample of it to the Government Geologist for him to report upon. It is a horn-blende diorite, and we are now 12 feet into hard stone. The hill is south from the breakwater.

68. Does there appear to be a large amount of this stone? Well, it is only about a fortnight ago that I got authority from the Minister to go on with this scheme, and to send men down to explore for stone. I have had the country examined, however, and I know of two or three possible sites.

69. No place could be more satisfactory than where you have your bore, providing that the stone is good? Yes, and so far it promises very well. The hill is about 100 feet above high water, and we struck rock very close to the surface. Before the inquiry ceases I hope to be able to bring in a report upon the various quarries in the district.

70. Where would you get the stone for Bellambi? I think we could get stone in the ranges, near the Bulli Pass. The estimate before the Committee allows for a considerable amount of haulage.

71. Then are we to infer that the work may be carried out more cheaply than the estimate? If we can get this stone from the hill to which I have alluded, it will make a considerable difference in the estimate. I based my estimate upon the cost of getting stone west of Unianderra.

72. That would mean a haulage of 8 or 10 miles? The estimate was based upon a haulage of 10 or 12 miles.

73. Would you save 5d. per ton if the place you speak of turned out to be satisfactory? We would save from 9d. to 1s. a ton.

74. How many tons will be required for the eastern breakwater? 633,200 tons.

75. So that the saving would come to between £30,000 and £40,000? Yes.

76. Before comparing Port Kembla with Bellambi, it would be fair to ascertain whether a similar reduction could not be made there? I will have a closer examination made at Bellambi. With regard to the breakwater at Port Kembla, I propose to carry the eastern breakwater about 15 feet above high water, and the northern breakwater about 7½ feet above high water. The breakwaters will be 16 feet wide at the top, and will have a batter of 1½ to 1 on the sea face, and I have allowed for a batter of 1½ to 1 on the harbour face, though the slope there may average 1 to 1.

77. The eastern breakwater runs out along the reef for a considerable distance? The first 1,600 feet would be on a reef. The depth increases from nothing to 30 feet.

78. What is the depth 800 feet from the shore? Twenty-three feet.

79. What is it 400 feet from the shore? Sixteen feet, and 100 feet out it is 6 feet.

80. How far is it from the end of the reef to the end of the breakwater? 800 feet. The depth at the end of the breakwater would be about 49 feet.

81. Is there a sandy bottom there? Yes.

82. Would the jetties now existing at Port Kembla interfere with your design for a closed port? No. I propose to use the wharfs along the shore for inward shipping. The coal would be loaded from the jetties.

83. Would you have more jetties running out? Yes, that is what I would recommend.

84. I suppose there is plenty of room? Yes.

85. Is the Port Kembla jetty in a good state of preservation? I cannot say.

86. What is the tonnage of the largest boats that have loaded there? Some large ships have been there; but I cannot give you their names. In my estimate for a closed harbour, I have taken no notice of the existing jetties, though I have put down £35,000 for the erection of a new coal-shipping jetty with a number of shoots.

87. Would there be any objection to first-class boats going to an open port? I daresay the insurance companies would fix a certain rate for such ports, but I think they would allow vessels to go to them. Where there was a closed harbour, vessels could go at the lowest harbour rates.

88. *Mr. Trickett.*] What would be the object of constructing the eastern breakwater first? To keep out the heavy weather.

89. I thought the place was comparatively sheltered on the south? Yes; but there is not enough shelter to keep big seas from rolling round the bay.

90. *Chairman.*] About seven-tenths of the gales come from the south and south-east? Yes.

91. Although the coast-line is some protection, it is not a complete protection to this place? It is some protection, and will make the work of constructing the breakwater easier, but it does not render a breakwater unnecessary.

92. *Mr. Trickett.*] Will the port be available in heavy weather before the northern breakwater is constructed? Yes, because you do not get very heavy seas from the north-east. Even now the jetties are fairly well sheltered from a north-easter.

93. *Chairman.*] It is essential that the southern breakwater be carried out first? Yes.

94. Would you consider it wise to put the first part of the northern breakwater upon piles to allow of a sweep of the current? No. I think the current will always trend to the north.

95. Will there be any danger of heavy seas rolling in at the entrance to the harbour? No; the waves will spread out immediately they enter the harbour.

96. This place will be different from Newcastle where there is a narrow neck? Yes. The seas running in will spread out like a fan. C. W. Darley, Esq.

97. *Mr. Trickett.*] There will be no necessity for wave-traps? No.

98. *Chairman.*] Have you taken into consideration the competition of private jetties? My impression is that the companies owning private jetties at Bellambi, Bulli, and Clifton will use those jetties in fine weather. Some of them have their own steamers. I think there will be great difficulty in concentrating the whole of the trade permanently at one port. Of course, the larger class of vessels will not readily be induced to go to these exposed outlying jetties; but a great amount of trade is now done at Bellambi and Bulli, and I do not think we shall be able to draw it away.

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99. Can you give us any idea as to what it costs these companies to maintain their jetties? No.

100. What is the life of a jetty? With reasonable management, about thirty years.

101. Is the borer bad on the south coast? Turpentine piles stand fairly well in salt-water; but in a bay, where there is not much sand travelling, sheathed piles can be used.

102. Are the existing jetties constructed of turpentine? I think that they have unsheathed turpentine piles.

103. Will there be any concrete work in connection with the breakwaters? No. They will be like the breakwaters at Newcastle and on the northern rivers.

104. There will be no large blocks of concrete at the ends? No; but I will pick out some large stones for the heads of the breakwaters.

105. Is any work being done at Wollongong now? No.

106. Does the little red mark on the plan of Wollongong Harbour indicate the work that has been already done? Yes.

FRIDAY, 30 OCTOBER, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.

The Hon. JAMES HOSKINS.

The Hon. CHARLES JAMES ROBERTS, C.M.G.

The Hon. WILLIAM JOSEPH TRICKETT.

The Hon. DANIEL O'CONNOR.

HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.

JOHN LIONEL FEGAN, Esq.

THOMAS HENRY HASSALL, Esq.

GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

Cecil West Darley, Esq., Engineer-in-Chief for Public Works, Department of Public Works, sworn, and further examined:—

107. *Chairman.*] Do you produce a plan showing the harbour works at the entrance to the Gippsland Lakes? I produce a set of maps which I got from the Director-General of Public Works a few years ago. They show Sir John Coode's design for the work, with an entrance of 250 feet. C. W. Darley, Esq.

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108. *Mr. Lee.*] Do you wish to supplement the evidence you gave yesterday? There were two questions asked yesterday which I can answer to-day. Mr. Wright asked a question with regard to dredging Lake Illawarra. The estimated cost of dredging 100 acres of Lake Illawarra to a depth of 24 feet at low water, the average present depth being taken at 10 feet, at the rate of 3d. per ton would be £38,115. I was also asked a question with regard to the distance by railway to certain points. The distance by rail from Sydney to Nowra is 92 miles 32 chains. The distance of the proposed line from Nowra to Jervis Bay is 18 miles 46 chains, making a total distance from Sydney to Jervis Bay of 110 miles 78 chains.

109. *Mr. Hoskins.*] With regard to dredging 100 acres, will that apply to continuous dredging or would it be only the first cost of dredging? That is the estimated cost of dredging; it does not include maintenance.

110. *Chairman.*] With regard to Trial Bay, would it be possible to let the Committee know what the present buildings have cost? I can supply the Committee with that information. However, the present buildings there were put up on a much more costly scale than they would have been if we had known the class of prisoners that have since been sent there. Originally those buildings were put up with stone cells, for long-sentenced prisoners, and it is a stone prison. That purpose, however, has been abandoned. The cells are never shut and the prisoners sleep in huts in the yard. The original scheme was to have an ordinary convict establishment there for long-sentence prisoners. I have no hesitation in saying that the work now proposed at Port Kembla can be carried out much more cheaply for the country with free labour than with convict labour.

111. *Mr. Humphery.*] What is the total area of Lake Illawarra? 9,000 acres, that is the water area.

112. *Mr. Lee.*] Are we to understand that Port Kembla has been decided upon by the Department as the most suitable place on the South Coast to spend money upon in order to make it a sheltered harbour? Yes.

113. The Department does not propose it now as a harbour of refuge? No, you can hardly say that it is wanted as a harbour of refuge.

114. Do you propose it solely for the purpose of giving an outlet to the trade which has gradually developed on the South Coast? Yes, that is the real object.

115. Have you taken into consideration whether the mines are so situated that they could be profitably connected by railway with the proposed port? I think so. It is quite as convenient to the coal-field as any other port. The coal reaches south of Port Kembla. The field is known to exist very much south of Port Kembla.

116. Is it anticipated that if the port be constructed it will attract most of the coal traffic so far as the deep-water trade is concerned? There is no doubt it will.

117. Is it supposed to do that? Yes, that is what is hoped.

118. For the simple reason that it would afford accommodation for large sea-going ships? Yes.

119. At the present time are sailing vessels loaded in the open roadstead with a great deal of risk? Yes, in some weather they run considerable risk. In fine weather they can go there safely enough. At present I do not think any sailing vessels do go there, only steamers.

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120. Will your proposed works enable sailing vessels to lie in there? Undoubtedly, with perfect safety.
121. In the event of severe gales from the south-east and south, will they be able to lie with safety at the pier if the proposed works are carried out? Quite safely.
122. Will there be a range there? Yes, if it is only an open harbour—that is, if there is no second breakwater.
123. I am speaking of the proposal now before the Committee? There will be a certain amount of range especially in easterly weather.
124. Would that not somewhat imperil the safety of sailing vessels lying at the pier? No, they would haul off to the buoys. There would be only a swell. Once the place became established as a port of any size, there would necessarily be a tug-boat there.
125. What would be its condition in all weathers, and could sailing vessels, as well as steamers, go there with safety? Yes; for coal shipping, sailing vessels could go there safely and load.
126. You know that a large quantity of coal is conveyed by sailing vessels, and that of the total tonnage of Newcastle at least one-half consists of sailing vessels? Yes.
127. Is it reasonable to suppose that if there is an over-sea traffic in southern coal it will be largely conducted by sailing vessels? Yes; very likely.
128. Would it be safe for those vessels? Yes; with a breakwater there, ships could safely load—that is, under the original proposal.
129. If the time came when the work could be carried out in its entirety and a regular harbour made, would it be safe for any craft in any weather? Yes.
130. With reference to your statement the other day that there would be no justification for the construction of a harbour at Port Kembla and another at Lake Illawarra, would you kindly explain how the public requirements could be met if we were confined to Lake Illawarra, which it is proposed to open up in order to carry on the company's own business? I do not understand that the proposal is to carry out that work for one coal company. I understand that it is a harbour company. They would not be catering for their own coal, I presume they would cater for the whole district.
131. Has not the harbour company become incorporated with the mineral company? I think not. I understand that the mineral company is a distinct one, and that it simply bought a portion of the harbour company's estate. I know nothing of the working of the companies; but I understand that the Smelting Company of Australia is quite distinct from the harbour company. The harbour company would cater for the district. That is what they aim at, I believe.
132. First of all, admitting that they carried out their work according to their Act, would they be able to give accommodation sufficient to secure the traffic which would otherwise go to Port Kembla? They could offer such competition that it would be impossible for Port Kembla to earn interest on the outlay. There is no doubt that they could offer such competition that there would be nothing to warrant the Government in constructing a second harbour.
133. Is one of the chief reasons for incurring the outlay the desire to give proper accommodation to enable this large traffic to be carried on? I presume that the company, in their own interests, would cater for that, and would enlarge their works as the trade grew. There is nothing to stop them from going on dredging, in order to increase the basin area. They are not tied to any limits in the lake.
134. In order to obtain a basin area sufficiently large to carry all the coal traffic that will be concentrated at that point, how many years would it take to carry out the work? Not necessarily many years. Every year you could dredge a considerable area to provide for extra ships.
135. Does not the coal business require a lot of shipping, and would not a lot of ships have to wait to get their cargoes? Yes; of course the company would aim at giving them quick despatch.
136. Do you think it would be possible for the Illawarra Company to make a harbour sufficiently large to accommodate the shipping required to carry on the coal traffic? Quite so. It is only a matter of expense.
137. That is to say, if it is in their interest to do so; it is possible from an engineering point of view? Yes, it is quite feasible.
138. That being feasible under private enterprise, do you favour the idea of the Government taking up this work at Port Kembla? Not if the Illawarra Company opened up Lake Illawarra. I would say that there would be nothing to justify the Government constructing a second harbour. The company have only two years to complete their scheme, unless Parliament grants the company an extension. If they fail to complete the harbour, or to comply with the Act, and it is decided that a harbour is to be made there, my recommendation to the Government is to make one at Port Kembla in preference to Lake Illawarra.
139. You advise the Government to wait in order to see the result of the operations of the Lake Illawarra Company? I have expressed that view before in reports to the Government. It seems to me to be necessary that the Government should wait for a short time. It would be impossible for the company to comply with its Act unless it made a start very soon. If they do not start within six months, it would be impossible to comply with the Act. The Act only gives them up to the 20th December, 1898, to complete the work; that will be very little over two years. Even with an enormous amount of energy it would be as much as they could do to carry out the work in the time.
140. If they set to work in six months, would they have time to comply with their Act? Yes, if they commenced in a month or two. Their Act only compels them to make a harbour 15 feet deep. If they make an entrance so that a ship drawing 15 feet can pass in they will have complied with their Act. The Act does not state that they shall have jetties and all that sort of thing. I believe it is the intention of the company to make the entrance 24 feet deep, but they need only make it 15 feet. They can take as long a time as they like after the 20th December, 1898, to do the other work, but unless they start work within a very few months it will be practically impossible for them to comply with their Act. On the 20th December, 1898, their Act lapses.
141. Is it not possible for them to make a start early in 1898, and then come down to Parliament as they did previously, and ask for an extension? That is a matter of policy. If the country becomes involved in another harbour scheme, I doubt whether Parliament would grant an extension.
142. How would it affect your policy in this Departmental proposal? My idea is that if the Government decide to enter upon this harbour scheme the company's Act should not be extended. It should be allowed to lapse and the Government should enter upon the work as a national one.
143. That is to say, that if they do not proceed at once, the Government should consider that the company does not intend to carry out the work and the Government should proceed with the construction of Port Kembla? Yes.

144. Do you strongly advise the Government to wait a few months to see what action the company will take? Yes, that seems to me to be necessary. If the Government started this work the company might put them in a very awkward position by completing their harbour; but I think two or three months ought to set those doubts at rest. This proposal has been going on for years with regard to Lake Illawarra. Every time I see the company's engineers I am told that in a week's time they expect to get a telegram from England telling them to go on with the work.
145. Supposing we find that, in consequence of the action taken by your Department at present, the Illawarra Company, seeing their scheme in danger, might set to work within the next few months;—under those circumstances, would you recommend that the Government await results before proceeding further? I think that would be necessary. The Government should stay action as far as entering upon actual construction is concerned for at least three months. After that I think the Government might give a final decision. If the Illawarra Company's work is not started within three months, I do not think it will be possible for them to complete it within the time.
146. If they do not start to work in a proper manner within that time, must it be taken that they do not intend to comply with their Act? I think so. They would require to start and carry out the work with very great energy in order to comply with the Act.
147. You could not carry out your breakwater in two years? No.
148. The point will then arise, even supposing they are willing to make Lake Illawarra a port, and the Government allow them to ship from there, will that meet the commercial necessities of the coal proprietors on the southern coast? I think it will do fairly well. It would involve a little further carriage.
149. *Chairman.*] Can you make a definite statement as to what that further carriage will be, taking it for granted that the coal is north of Unanderra? I will supply it.
150. *Mr. Lee.*] Do I understand that the Department has proposed this work with the view of imposing a charge which it is estimated will pay the annual interest on the outlay? Yes.
151. In other words, the work has not been proposed merely for the benefit of the community without making a charge? We will try to make the work self-supporting.
152. I see that Mr. Hickson in his evidence states that 3d. per ton on 750,000 tons would pay interest on the outlay;—do you know whether there is any provision for maintenance in that amount? That does not include anything for maintenance.
153. Would maintenance be a material item in connection with the breakwaters? I do not think so. Then a large import trade is also expected which would bring in a revenue.
154. Do you think that there will be an import trade if the entire scheme is not carried out? No; you would have to carry out the whole scheme in order to establish an import trade.
155. Supposing it is found desirable to carry out this work at Port Kembla, and that the Illawarra Harbour works are practically put on one side, so that this would be the port for the coast, would you recommend the Government to undertake for the present the construction of the breakwater only, or would you advise them to undertake the complete scheme for the harbour? I would commence with the breakwater, and watch if there was a tendency for the trade to develop. That would not interfere with the construction of the whole work. I would prepare everything for the construction of the whole work, but for the time being I would only proceed with the eastern breakwater.
156. If this breakwater be carried out, will it necessitate any dredging? No; if the breakwater only is made.
157. Will there be sufficient water to enable all the traffic to be carried on without any costly dredging? Yes.
158. Will dredging only be necessary in consequence of putting wharfs there? Yes; in order to increase the area. Of course we will perform the dredging and reclaim the land at the back by the one operation.
159. Have you any idea as to how much land will have to be resumed and for what it will have to be resumed? The matter of resumption ought to be looked into with a little care; but I would recommend a very liberal resumption.
160. For what purpose? To give plenty of room for offices and buildings and in order to allow the Government to reap the benefit of some of the expenditure. I do not see why the Government should have to incur all this expenditure in order to enhance the value of private land.
161. As far as your Department is concerned, would it be necessary to make some slight resumption for office purposes, and possibly for railway extension? Yes; you would have to make considerable resumption for railway sidings and approaches to the jetties and wharfs. That would necessitate 300 or 400 acres at least.
162. If it became necessary to lay out a township there, that would be a matter for the Department of Lands to deal with, and they would have power to exercise their right to resume land; but that would not affect your Department, and would not affect the cost of this proposal? Yes.
163. Therefore, the resumption would have to be made in connection with this work? Immediately in connection with the work only a limited area would be required.
164. Would a portion of it be re-sold? Yes.
165. Might a considerable profit be expected upon that? I think it is only right that the Government should resume a liberal area, and get a profit on the improved value. After it was ascertained what the Government required for carrying on the works, the balance could be sold.
166. Will there be any necessity to erect a lighthouse on the breakwater? There will be a leading light on the breakwater, and a lighthouse on the headland. That is included in the item of £75,000 in the estimate submitted to the Committee. The whole thing will only amount to £2,000 or £3,000.
167. Will the same light answer all purposes if the harbour works are carried out in their entirety? Yes.
168. Has this preliminary portion of the work been advised as portion of the whole? Yes.
169. Can it be carried out at any time, or be deviated from, if necessary? The whole thing could be laid out as one scheme, and then be carried out by degrees.
170. *Mr. Wright.*] What is the set of the current into the bay? There is very little current in the bay. Whatever there is is westerly and northerly. It sweeps round the bay from the east.
171. Is there any possibility of the breakwater acting as a catch? I think not. The tendency of the breakwater would, perhaps, be to slightly increase the scour to the west and north.

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172. Are there two currents—an outlying current and an inlying current? The inlying current is due to a disturbance of the littoral current. It is caught in some bays, and it gets a reverse action.
173. What is your past experience of breakwaters acting against the southerly set—for instance at Nobbys? At Nobbys we do not get the littoral current; that is thrown off by Port Stephens. There is an outside northerly current at Newcastle. It is created there in quite a different way to what it is at Port Kembla; but it is of the same nature. The littoral current passes down the coast by Port Stephens. The direction of the current draws the water out of the Newcastle Bight, and it makes a current which goes north and east.
174. Is that current assisted also by the flow of the Hunter River? Yes; but in flood times all drift in the water from the Hunter takes a northerly set—north to north-east—out of the harbour.
175. At Trial Bay, have you any experience of the effect of the breakwater? There the current is decidedly like what it will probably be at Port Kembla—that is, west and north.
176. Is there any sign of sand-drift coming in? No.
177. Are we justified in concluding that the construction of the breakwater will not accumulate sand, and make the water shallow? I do not think there is any risk of that.
178. If the breakwater were constructed, and the jetties extended, could vessels lie there in all weathers? Almost in all weather, I think.
179. Could they in south-east gales? I think so.
180. Do you think they would have good holding ground there? Yes.
181. Is there any doubt about the holding ground for ships? Everyone I have spoken to has assured me that there is very good holding ground.
182. Could ships haul out from the jetties and hold to their anchors? Yes. People of long experience there have told me that they have known ships to ride out strong gales and hold on to their anchors the whole time.
183. Do you know the output of coal in the Illawarra district at the present time? The output for 1895 was 910,000 tons.
184. Do you contend that the output from this port would be largely increased? I think so without doubt, because sailing vessels would go there and take coal, which they are debarred from doing now.
185. Is Port Kembla the most central point which you could select for shipping coal? It seems the most central for the southern coal-field, because the coal-field is being developed. I have been informed by mining experts that there are indications of the field being worked out further north, except in some of the deeper mines. They are meeting with a lot of burnt coal.
186. Is that in the Bulli district? Yes.
187. In the event of the construction of this breakwater, do you not think that the people at Bulli and Coalcliff will prefer to ship the coal in ordinary weather at their own wharfs, instead of sending it down to Port Kembla? Yes, that is the case as long as the wharf's last. The question will be whether it is cheaper to construct another jetty or to send the coal to this port. We must anticipate that they will use their own jetties as far as they can in fine weather. After the jetties are worn out, I think it is likely that they will send their coal to the new port, knowing that there is a certainty of shipping it, and that they can develop a larger trade by getting larger ships there.
188. Do you think that if the output of coal be quadrupled there will be enough revenue to pay interest on the cost of constructing a railway? I do. Between the coal revenue and the import trade, I think sufficient revenue will be obtained. I feel very sanguine about the growth of an import trade there.
189. Shall we derive any benefit from an import trade; for instance, do we charge anything at Byron Bay, Wollongong, or Kiama? There is no import trade along the coast.
190. We get no revenue? No; there is only coastal trade. Those places are only outlets for local produce. But if there is a large amount of goods brought into the place, there is no reason why they should not pay a considerable amount for wharfage.
191. You do not contemplate that with a breakwater you could make anything like a still-water harbour of this place? Not with one breakwater; but it will be a sheltered harbour.
192. With an opening of 800 feet, do you think you could succeed in producing a still-water harbour with a double breakwater? Yes; it would be quite still water.
193. Do you think that with two breakwaters you would break any sea? The only sea that would enter would be from the north-east, and that would be only a chopping sea. On account of the shape of the breakwaters the sea will spread out on entering the port.
194. Do you think that the sea would be broken before it got any distance inside? Yes; it would not reach the shipping.
195. To make it a perfect port, do you think both breakwaters are required? Yes.
196. Do you advise the construction of one breakwater at first in order to see how it will answer? Yes.
197. If the result of that justifies additional expenditure, do you propose to make it a perfect harbour? Yes, if the trade develops. If there is every evidence of an import trade being developed, I would recommend the construction of the second breakwater.
198. What amount of land would be reclaimed under the double breakwater scheme? I will furnish particulars later on. All the land is low-lying, and we should have to raise it. There is one question which I might answer. I was asked yesterday if I knew of any large steamer which had entered the port. I received a communication by mail this morning informing me that the steamer "Indrani" visited the port last week. She is a vessel of 4,994 tons register. She entered Port Kembla with 6,400 tons of cobalt and nickel ore on board. She loaded 1,200 tons of bunker coal. The statement furnished to me did not give her draught, but I have calculated it at 28 feet 6 inches. She is a large vessel, 412 feet long, 48 feet beam, and 32 feet deep. She took in coal from the Southern Coal Company's jetty at Port Kembla, and sailed direct for Glasgow.

Hugh McLachlan, Esq., Secretary to the Railway Commissioners, sworn, and examined:—

- H. McLachlan, Esq.
30 Oct., 1896.
199. *Chairman.*] Are you prepared with any information respecting the work under the consideration of the Committee? The Commissioners only heard of the matter to-day, and I have not had an opportunity of speaking to them at length on the subject. I mentioned to them briefly that the Committee would be likely to want some information, and they said they would not like to go into it until they knew something more about the scheme. At present they are quite unaware of what is proposed. They would like to have some details of the scheme. I will be prepared to give some evidence on a future date.

TUESDAY, 3 NOVEMBER, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.

The Hon. JAMES HOSKINS.

The Hon. CHARLES JAMES ROBERTS, C.M.G.

The Hon. WILLIAM JOSEPH TRICKETT.

The Hon. DANIEL O'CONNOR.

HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.

JOHN LIONEL TEGAN, Esq.

THOMAS HENRY HASSALL, Esq.

GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

Cecil West Darley, Esq., Engineer-in-Chief for Public Works, Department of Public Works, sworn, and further examined:—

200. *Chairman.*] Have you anything to add to your former evidence? I have gone into the calculation again, and I find that the exact area of Lake Illawarra is 9,040 acres. The area of Jervis Bay is 27,253 acres. The area to be reclaimed at Port Kembla, as shown on the map by a tinting of red, is 33 acres, though, as there is a good deal of low-lying ground back from the shore, we could go on reclaiming to a much greater extent. The amount spent upon buildings, &c., at Trial Bay is £56,347 15s. 3d. C. W. Darley,
Esq.
3 Nov., 1896.
201. On completion of the harbour works there there will be no further use for these buildings? No.
202. *Mr. Hassall.*] Would the breakwater at Bellambi run out along what is known as the inner reef, or would it be outside it? The breakwater would be constructed along the line of reef.
203. How far does the reef run out? About 800 feet.
204. Does not the inner reef run out for a distance of something like 1,800 feet? There is a small island a little to the east, and a rocky bottom all the way across.
205. What depth is the reef below the surface? About 28 feet at the furthest point from shore.
206. I have been informed that for some distance it is only 4 feet 6 inches below the water? No; at a very short distance from shore you get a depth of 10 feet, and the depth increases as you go out.
207. Was the survey shown on the map prepared for Mr. Carleton's report? No; it was prepared under my instructions about fifteen months ago. Bellambi and Port Kembla were surveyed about the same time.
208. Is Port Kembla better sheltered than Bellambi? Yes; it is better sheltered naturally.
209. *Mr. Roberts.*] Were you instructed to prepare plans for a harbour for the shipment of coal or for a harbour of refuge? For a harbour for the shipment of coal.
210. I suppose Jervis Bay would fulfil the requirements of a harbour of refuge? Yes; fairly well.
211. If the proposed works at Lake Illawarra were carried out, would you consider this scheme necessary? No; I do not think anything would warrant the Government in making a second harbour on the south coast.
212. Lake Illawarra, if improved, would meet the requirements of the south coast for many years to come? Yes.
213. What period has to elapse before the proposed works at Lake Illawarra must be completed? They must be completed by the 20th December, 1898, if the powers given under the Act are to be saved.
214. Have the necessary works been commenced yet? A small bit of wall leading to the breakwater was commenced, but the work was stopped, and nothing has been done since.
215. Is it regarded as impossible that the proposed works can be completed within the time named? If they were started now, and proceeded with very energetically, I do not know that they would not be completed to the extent named in the Act—to give an entrance 15 feet deep—within the prescribed time.
216. Then is it not premature to consider a scheme of the kind before the Committee;—what prompted the Government to submit this scheme? Local pressure was brought to bear, I presume. I have, on two or three occasions, pointed out the difficulty of deciding upon any scheme before it was definitely known what would be done at Lake Illawarra. Of course, even if the Committee reported favourably upon the scheme before them, it would be eight or nine months before the money necessary to carry it out could be voted by Parliament, and in that time something definite will be known in regard to the Lake Illawarra scheme.
217. Do you regard the construction of two breakwaters as absolutely necessary at Port Kembla to provide for the shipment of coal? No, one breakwater would give a very good shelter if the place were to be used only for the shipment of coal.
218. Then you would recommend the eastern breakwater? Yes.
219. It would cost about half the estimate for the whole work? Yes.
220. Have you personally inspected these different harbours? Yes.
221. You had no hesitation in deciding upon Port Kembla? None at all.
222. *Mr. Black.*] Are you aware if the Illawarra Land Corporation have sufficient money to carry out their harbour project? I do not know anything about that; but I presume that if they had the money they would start the work.
223. Have you heard it reported that they are trying to raise the money elsewhere? It has been reported that they are trying to raise the money.
224. Should they fail the scheme will lapse? Yes.
225. In that case could the smelting works on Lake Illawarra be connected by railway with Port Kembla? Yes. The connection would be a very easy one to make.
226. Have you made any examination of Jervis Bay in connection with this proposal? No.
227. Why was Jervis Bay not thought of? Because it is too far away. It would be quite 50 miles further south.
228. And an extension of the present South Coast railway would be necessary to connect the southern coal-field with Jervis Bay? Yes.
229. *Mr. Hoskins.*] How long will it take to carry out the proposed works at Port Kembla once they are commenced? Do you mean the whole scheme or only one breakwater?
230. The whole scheme? From three and a half to four years.
231. You recommend that the work should not be proceeded with until it is seen whether the Illawarra Land Corporation will carry out their project? Yes.

- C. W. Darley, Esq.
3 Nov., 1896.
232. In that case the public will not have the advantage of a harbour at Port Kembla for the next six or seven years? Yes. This scheme might be commenced within three months, because if the Illawarra Land Corporation are not then hard at work upon their scheme, they may be considered to have abandoned it.
233. *Mr. Humphery.*] Is it not a condition that the Land Corporation must lodge £10,000 with the Government by the 20th December, 1897? Yes.
234. And the work must be finished within a year from that date? Yes.
235. So that it can be ascertained at any rate by the 20th December of next year whether the corporation intends going on? Yes. I might explain that the public can use the Kembla Harbour in its present unprotected state, and every six months, if the works are gone on with, will make it more protected. The public will not have to wait until the whole scheme is completed, in order to derive the benefit anticipated from it.
236. *Mr. Hoskins.*] If the work were only half done, could the place be used as a harbour for loading coal? Undoubtedly. There is a fair amount of coal shipped from there now. Within a year or eighteen months of the starting of the works, a very fair amount of protection would be afforded to shipping there.
237. *Mr. Humphery.*] At the present time, under favourable conditions, ships of 4,000 and 5,000 tons can load at Port Kembla? Yes. Some large ships were there last week.
238. *Mr. Hoskins.*] Would there be any great difficulty in connecting the smelting works on Lake Illawarra with Port Kembla by railway? I think that it would be perfectly easy to make a direct line from the site of the smelting works to Port Kembla, but the Engineer-in-Chief for Railway Construction could give you more information upon that point.
239. What is the distance? I think a good line could be got within 5½ miles.
240. *Mr. Humphery.*] As a matter of fact, these smelting works are connected with Port Kembla now? Yes, though in a somewhat roundabout fashion. The distance by rail now is about 12 miles.
241. *Mr. Fegan.*] Did you give evidence before the Select Committee which inquired into the Illawarra Land Corporation Bill? Yes, on the 11th December, 1889. I was chiefly asked about the wording of the Act. I went to protect Government interests.
242. You did not give any opinion as to the advisability of allowing a private company to take up the frontage to Lake Illawarra? No.
243. As a rule, is not your opinion asked where a private company is likely to come into competition with Government wharfs and so on? It might be, if the private company were interfering with the vested interests of the Government; but here the Government had no vested interests.
244. Your evidence seems to be that there is no room for a private scheme and a Government scheme? There is not room enough for both.
245. Do you think the corporation will carry out the work in the prescribed time? It will be very difficult to carry it out now.
246. Do you think that the Government should hold its hand until the prescribed time elapses? The Government need not wait more than three months.

Hugh McLachlan, Esq., Secretary to the Railway Commissioners, sworn, and further examined:—

- H
McLachlan,
Esq.
3 Nov., 1896.
247. *Chairman.*] Have you any statement to make? No; but I am ready to give any information that may be required from me.
248. *Mr. Wright.*] What are the rates for hauling coal to Newcastle? The coal brought to Newcastle is practically all carried in owners' trucks. We have a shunting charge of 6d. per ton for a couple of collieries which are near the harbour. For collieries within from 1 to 4 miles of Newcastle the rate is 9d. per ton; within 4 to 7 miles, 10d.; and within from 7 to 10 miles, 11d. a ton. Those are the rates that generally apply, and they include the cost of the crane service.
249. Have you any rate for coal carried 24 miles? Yes, 1s. 5d. per ton, including the crane service.
250. What distance is the Metropolitan Company's coal-mine from Sydney? Twenty-nine miles.
251. What do you charge to bring coal to Sydney from there? Two shillings a ton. They use our waggons.
252. What do you reckon as the charge for waggons? There is no fixed scale. The charge depends upon circumstances.
253. Then how are the rates arrived at? To some extent in an arbitrary way. It is considered what the traffic will bear, and what would be a fair charge to make upon it.
254. Is 5d. a ton a fair charge to make for the use of coal waggons? Yes, I think so.
255. In the case of waggons coming from the Metropolitan Coal Company's mine, that would be 4s. 2d. a trip? Yes.
256. How many trips would they make? I do not think they would make more than one a day.
257. What do these trucks cost? I think about £150; but I have not the figures with me. If we had a regular traffic all through the week it would be different.
258. But the traffic from the southern lines is the same as the Newcastle traffic? Yes, the coal traffic is always fluctuating.
259. Would the Newcastle rates apply to any other district? They never have been applied to any other district.
260. Has the Department of Railways anything to do with the coal coming from the southern district? The coal from the Clifton and Metropolitan Company's mines is carried in our waggons to Darling Harbour, and we also bring a small amount of the Corrimal Company's coal to Sydney. They, however, generally run with their own engines and trucks to Port Kembla, paying ¼d. per ton per mile as a way-leave or royalty for running over our lines.
261. Is not the coal shipped at Wollongong carried there in waggons belonging to the mines? Most of the coal shipped at Wollongong comes from Mount Keira. That company uses its own engines and rolling stock, and runs over part of our lines. A quantity of coal is shipped at Wollongong from Corrimal, though most of their coal goes to Port Kembla. In the year ending 20th September last, 105,000 tons of coal were carried to Port Kembla from Corrimal.
262. In the event of Port Kembla being made a harbour, I suppose the Railway Commissioners would find cranes and make all arrangements for the shipment of coal there? That will all depend upon the action taken by the Government.

263. If they did so, I suppose the same rates would apply as apply at Newcastle? I think so.
264. What distances are the various southern mines from Sydney? The Austinmer mine comes in between 39 and 40 miles from Sydney, the Bulli mine between 41 and 42 miles, the Bellambi mine between 43 and 44 miles, Corrimal 45 miles, Mount Keira and Mount Pleasant between 47 and 48 miles, and Mount Kembla and the Southern Company's mines 50 miles.
265. That is the furthest distance south from Sydney at which they are working coal? Yes.
266. What distance are the stone-quarries from Sydney? It is about 60 miles to Bombo.
267. What is the distance from Port Kembla by rail to Nowra? 41 miles on the main line.
268. What is the distance by the surveyed route from Nowra to Jervis Bay? About 18 or 20 miles.
269. That would make the distance from Port Kembla to Jervis Bay about 60 miles? Yes, something like that.
270. Will you have a return prepared showing the rates of haulage for coal from the various southern mines? Yes.
271. *Mr. Roberts.*] If large quantities of coal were shipped at Port Kembla, would it seriously decrease the revenue of the Department of Railways? I do not think so. At the present time we get none of the coal which would go to Port Kembla. It must be remembered, that the various companies on the south coast have most of them their own jetties at which they can ship their coal for nothing, and the question is, would they be ready to pay to have their coal shipped at a Government wharf at Port Kembla? Then, too, it must be remembered that if there were a very large traffic to Port Kembla we could not work it on a single line.
272. None of the coal that would be shipped at Port Kembla now goes to Sydney by rail? 75,000 tons out of every 100,000 tons shipped at Darling Harbour come from the Helensburgh mine, and no doubt that coal would continue to come to Sydney. Last year we got 27,000 tons from the South Clifton mine, but practically the Metropolitan Company's mine is the one that sends to Sydney.
273. Would it not be possible for the Commissioners to get more of the trade by making branch lines? There are already branch lines running directly from the pit's mouth to the various shipping places upon the coast, and, except in rough weather, I think coal would always be shipped at the private jetties. The Commissioners own a branch line running to Wollongong, over which the Mount Keira coal is sent, but we only get a $\frac{1}{2}$ d. a ton for that coal.
274. Does that leave much profit? They are working the line themselves with their own rolling-stock.
275. That is the only Government branch line down there? Yes.
276. Which mine is furthest south from Sydney? The Southern Coal Company's mine and Mount Kembla—they are close together.
277. What is charged for the carriage of coal from Helensburgh to Sydney? Two shillings a ton in truck-loads. That includes shipment. Last year we carried over 74,000 tons. The charge is nearly 1d. per ton per mile.
278. *Mr. Black.*] If all the southern coal companies are provided with jetties of their own, it is fair to assume that they would not use the proposed harbour at Port Kembla, except in rough weather? Yes, or when they wished to load coal into some large vessel which could not lie alongside their jetties.
279. So that the proposed harbour works would only benefit the collieries in their immediate neighbourhood? Yes, though the Corrimal coal goes there to a large extent.
280. Do you think the Government is justified in making an expensive harbour to benefit only a few persons? I do not know anything of the local considerations; but I do not think there is any prospect of the work paying.
281. *Mr. Humphery.*] Would it not be practicable for other collieries to use the proposed harbour in order to load large ocean-going vessels? Yes, they might use it for that purpose.
282. When you spoke of shipping coal at their own jetties, you meant into the small colliers which come to Sydney? Yes.
283. If the proposed scheme were carried out, Port Kembla would be very much in the same position as Newcastle. The object of the work is to create a perfectly safe harbour there. Viewing the matter from that standpoint, do you think that the Commissioners would derive an appreciable return from the carriage of coal to Port Kembla from the various collieries now shipping at their own jetties? Personally, I cannot see how the project can ever pay. I am not very sanguine that there would be any big increase in the traffic over our line.
284. At the present time the Illawarra Smelting Works contemplate obtaining coal from their own collieries to the west? I have seen that stated.
285. But it is probable that their ore, instead of coming by rail to Sydney, will be landed at Port Kembla? That is if Lake Illawarra is not opened up.
286. I am putting my question on that assumption;—would the unloading of ore at Port Kembla interfere very materially with the present earnings of the railway in regard to the carriage of ore from Sydney? At present no ore is being sent from Sydney.
287. Well, we will say the prospects of the railway? Of course, we would get more gross revenue and more profit, if there were any profit to be obtained at all, by carrying minerals from Darling Harbour instead of from Port Kembla. It is difficult, however, to say what would be the better for us. For the short haul from Port Kembla we might be able to charge a rate which would pay us better than a rate for the haulage from Darling Harbour. I understand that only low-grade ores are to be sent, so that I imagine a very low rate would have to be imposed.
288. Have the Commissioners quoted any rate? I do not think that they have quoted anything lower than their present charges. They have a rate of $\frac{1}{2}$ d. per ton per mile; but that is not intended to meet a case like this. The ordinary charge would be about 5s. 3d. a ton, or a little over 1d. a mile.
289. As a matter of fact, anything less than $\frac{1}{2}$ d. per ton would not pay expenses, unless you had back carriage? No; or unless we had a very heavy traffic which we could work quickly.
290. According to the last report of the Commissioners, the average earnings of the railways are about $1\frac{1}{2}$ d. per mile? $1\frac{1}{4}$ d. per mile.
291. Is there any class of traffic which you could carry for $\frac{1}{2}$ d. per mile without back haulage? I do not think there would be any profit in such a rate. Of course, we carry grain and flour and other things at a lower rate.
292. Could you carry grain and flour at the present rates if you had no back carriage? I do not think there would be any profit in it.

H.
McLachlan,
Esq.
3 Nov., 1890.

- H. McLaughlan, Esq.
3 Nov., 1896.
293. What quantity of coal did you bring to Sydney last year from the southern mines? 74,000 tons from the Metropolitan Company's mine, and 27,000 tons from the South Clifton mine.
294. And what was the rate? 2s. 6d. a ton from the latter place.
295. What would be the rate from South Clifton to Port Kembla? About 1s. 8d. a ton.
296. That is a difference of 10d. a ton? Yes, though there would not be that saving.
297. Is the South Clifton coal conveyed in the Commissioners' trucks? Yes.
298. If there were a great deal of traffic to Port Kembla it would be necessary to duplicate part of the Illawarra line? Yes; say, from Bulli. Of course, we have the line duplicated as far as Waterfall now.
299. Are there any heavy cuttings or costly tunnels between Bulli and Port Kembla? No.
300. The line is nearly level? Yes.
301. What would be the cost of duplication? I would put it down, roughly, at about £50,000; but, of course, it is an engineering question.
302. *Chairman.*] How much coal could you take over a single line in a day? That would depend upon the facilities for crossing and other circumstances. They speak about handling 300,000 or 400,000 tons.
303. You think a duplication of the line would be necessary? Yes. I may add that estimates prepared before hand are very misleading. Just before the Commissioners took office very strong pressure was put upon the Government to obtain the resumption of a branch line leading to Wollongong Harbour. All sorts of estimates were given as to the probable traffic upon that line, but, as a matter of fact, there is no more traffic upon it now than there was when we took it over.
304. How much coal is taken over that line? 85,000 tons were carried last year. Of that quantity, 63,000 tons came from Mount Keira, but they only pay us $\frac{1}{2}$ d. per ton for the way-leave.
305. How much did the line cost the Government? We paid £7,500 for it, and we have spent about £2,000 in making a loop. Altogether it has cost about £10,000, and the total earnings are about £200 a year.
306. *Mr. Trickett*] If the proposed harbour were constructed, would it result in a gain or a loss to the railway system of the Colony? If we had to pay interest upon the cost of construction I think it would result in a loss.
307. Is very much coal brought to Sydney from below Clifton? No; practically none.
308. All the coal from collieries further south is shipped at Wollongong and the various jetties, and brought to Sydney by sailing vessel or steamer? Yes.
309. Does most of the coal coming to Sydney from Newcastle come by steamer or does it come by train? It comes by sea.
310. If the proposed port were constructed, most of the southern coal would come to Sydney by sea? Yes, as it does now.
311. *Mr. Clarke*] I suppose very little coal comes from Helensburgh since they have lost the railway contract? The mine is not so brisk now, but we did not consider that coal in our returns. We took delivery of it at the collieries.
312. Do you think that the construction of the proposed harbour will not benefit the railway? I do not think it will be any great gain.
313. I suppose the only traffic to the proposed port would be coal? Yes.
314. Do you think Bellambi and the other collieries would send their coal to Port Kembla? No; I think they would continue to use their own jetties.
315. *Mr. Lee.*] Have you been consulted by the Department of Public Works as to the probable cost of cranes for the proposed harbour? Not to my knowledge.
316. If a coal trade of 1,000,000 tons per annum were carried on at Port Kembla, would the erection of cranes be necessary? I do not know what appliances they have at Port Kembla now; but if there were 1,000,000 tons of coal to be handled they would require extensive arrangements.
317. Do you know the cost of these cranes? No.
318. The Commissioners have control of the cranes in Newcastle? Yes.
319. You are aware that it is intended to concentrate the coal traffic at Port Kembla as much as possible? Yes; I understand so.
320. If the various private lines on the south coast were resumed, I suppose you would be chargeable with their capital cost? Yes.
321. Are they of a temporary character? I have not been over them, but I think they are fairly substantial.
322. Are you aware whether they carry leasing rights or anything of that kind? No.
323. *Chairman.*] Can you tell me how much is paid for hauling, and how much is paid for shipping the coal at Newcastle? Some time ago, when a calculation was made, it was considered that 5d. per ton would pay interest upon the cost of sidings, cranes, and everything connected with the appliances necessary for the shipment of coal at Newcastle, together with the wages of the persons employed. Of course, if only a small quantity were shipped, the cost might be much larger. At Newcastle we ship practically 2,000,000 tons a year. With a small quantity there would be a certain saving in sidings and in general appliances; but the cost would probably be greater per ton.
324. Do you think it would be possible to load coal at Port Kembla for less than 5d. a ton? No; I think the cost would probably be larger than that.
325. In Newcastle, for distances up to about 7 miles, you charge about 1d. a ton for haulage, but for greater distances you charge less? Yes. Beyond a certain distance the basis of the rates is $\frac{1}{4}$ d. a ton per mile.
326. Why did you abandon the zone system at Newcastle? It has not been abandoned, though the zones are altered from time to time to meet circumstances.
327. What is the objection to putting all the mines in the same zone? The mine-owners nearer the port think they ought to get some advantage over others further away, and, of course, it costs us more to haul 7 miles than to haul 1 mile.
328. The policy that obtains in Newcastle would be likely to obtain at Port Kembla if the proposed harbour were constructed? Yes.
329. *Mr. Humphery.*] What is the greatest distance from which you bring coal by rail to Newcastle? Greta, which is about 32 miles from Newcastle.
330. What is the next colliery? East Greta is 22 miles from Newcastle.

331. Is much coal brought more than 20 miles? A considerable quantity is brought more than 20 miles.
 332. *Mr. Fegan.*] What is the distance from the Metropolitan Colliery to Port Kembla? About 26 miles.
 333. And from South Clifton to Port Kembla? About 20 miles.
 334. So that it would pay the railways as well to take that coal to Port Kembla as to take it to Sydney? 3
 We would get about the same rate; but I think that coal would always go to Sydney.
 335. What does the Hetton Colliery pay? Sixpence per ton. It is within a mile of Newcastle.
 336. Is the southern coal trade on the increase, or on the decrease? Recently it has been on the increase.
 337. That is chiefly because of the Newcastle strike? Yes, I believe so.
 338. Why does not the Government charge the Keira Company a higher rate for running on the Wollongong line? The rate was fixed by Act of Parliament when that line was resumed by the Government.
 339. Have you represented to the Minister that the present rate does not pay? No.
 340. Do you not think that something should be done in the matter? I do not know what the views of the Commissioners are, but I do not think it would be equitable to alter the Act?

H.
McLachlan,
Esq.
Nov., 1895.

WEDNESDAY, 4 NOVEMBER, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.	HENRY CLARKE, Esq.
The Hon. JAMES HOSKINS.	CHARLES ALFRED LEE, Esq.
The Hon. CHARLES JAMES ROBERTS, C.M.G.	JOHN LIONEL FEGAN, Esq.
The Hon. WILLIAM JOSEPH TRICKETT.	THOMAS HENRY HASSALL, Esq.
The Hon. DANIEL O'CONNOR.	GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

David McCulloch, Esq., Statistical Clerk, Department of Mines, sworn, and examined:—

341. *Chairman.*] I understand that you have brought a statement showing the output of the southern collieries for some time back? Yes; I have here a statement showing their output from the 1st January, 1891, to the 31st December, 1895. It is as follows:—

D.
McCulloch,
Esq.
4 Nov., 1896.

STATEMENT showing the output from the Southern Collieries from the 1st January, 1891, to 31st December, 1895.

Name of Colliery.	Locality.	Output in Tons.	Value.
1891.			
Metropolitan.....	Helensburgh	76,511	£ 28,116 0 0
Coal Cliff	Clifton	19,746	9,009 0 0
North Illawarra	North Bulli	24,207	13,500 0 0
Bulli	Bulli	76,741	22,039 0 0
Bellambi	"	98,000	49,000 0 0
South Bulli	South Bulli	132,140	35,430 10 0
Corrimal	Wollongong.....	60,845	18,253 10 0
Mount Pleasant	"	184	73 12 0
" (new pit)	"	68,199	27,279 12 0
Osborne Wallsend	"	87,136	24,317 18 0
Mount Kembla.....	"	165,081	78,161 10 0
South Clifton	"	20,143	4,841 0 0
Total.....		828,933	310,421 12 0
1892.			
Metropolitan.....	Helensburgh	155,093	46,650 0 0
Coal Cliff	Clifton	4,000	1,825 0 0
Austinmer	North Bulli.....	913	388 0 6
Bulli	Bulli	44,247	14,824 1 0
South Bulli	"	140,774	37,900 0 0
Bellambi.....	South Bulli	112,694	52,111 5 3
Corrimal.....	Wollongong.....	63,548	19,064 8 0
Mount Pleasant	"	68,532	23,002 11 0
Osborne Wallsend	"	75,050	21,000 0 0
Mount Kembla.....	"	177,269	57,463 0 0
South Clifton.....	"	70,000	17,500 0 0
Bull Pass	Bulli	8,819	4,733 9 6
Total.....		920,960	296,461 15 3
1893.			
Metropolitan.....	Helensburgh	194,512	58,900 8 0
Coal Cliff	Clifton	17,632	4,552 6 0
Austinmer	North Bulli.....	9,794	3,917 12 0
South Bulli	Bulli	147,559	38,164 5 6
Bellambi.....	South Bulli	42,716	11,450 0 0
Corrimal.....	Wollongong.....	94,820	22,499 16 0
Mount Pleasant	"	70,547	23,389 10 0
Osborne Wallsend	"	83,788	20,695 6 0
Mount Kembla.....	"	156,992	45,722 5 0
South Clifton	"	50,000	12,500 0 0
Bull Pass	"	6,052	1,647 18 0
Total.....		874,412	243,439 6 6

D.
McCulloch,
Esq.
4 Nov., 1896.

Name of Colliery.	Locality.	Output in Tons	Value.
1894.			
Austimmer	North Bulli	15,223	£ 6,091 4 0
Bulli	Bulli	5,480	656 0 0
Bulli Pass	"	4,193	1,088 1 0
Bellambi	South Bulli	37,000	8,955 0 0
Coal Cliff	Clifton	23,699	5,940 14 0
Corrimal	Wollongong	118,116	29,237 17 0
Mount Pleasant	"	69,271	20,847 1 0
Mount Kembla	"	127,155	32,382 7 0
Metropolitan	Helensburgh	183,041	55,000 19 8
Osborne Wallsend	Wollongong	77,593	19,740 6 0
South Bulli	Bulli	124,147	29,388 3 0
South Clifton	Wollongong	78,200	15,950 0 0
Total		863,123	225,257 12 8
1895.			
Austimmer	North Bulli	16,842	5,894 14 0
Bulli	Bulli	5,000	1,500 0 0
Bull Steam Coal	"	3,900	840 0 0
Bellambi	Bellambi	9,824	2,766 3 0
Coal Cliff	Clifton	18,100	4,006 4 3
Corrimal	Corrimal	111,583	33,474 18 0
Mount Pleasant	Wollongong	69,253	20,830 15 0
Mount Kembla	Mount Kembla	151,258	39,028 1 0
Metropolitan	Helensburgh	228,341 1/2	64,255 0 0
Osborne Wallsend	Wollongong	78,652	18,573 9 0
South Bulli	Bellambi	167,370	36,966 3 0
South Clifton	South Clifton	50,000	10,900 0 0
Total		910,123 1/2	239,035 7 3

ABSTRACT.

	Tons.	£	s.	d.
1891	828,933	310,421	10	0
1892	920,960	296,461	15	3
1893	874,412	243,439	6	6
1894	863,123	225,257	12	8
1895	910,123	239,035	7	3
4,397,551		1,314,615	11	8

342. Is that all the information you have with respect to this matter? Yes. This year the output may be a little greater, owing to the strike which occurred at Newcastle. We do not get the returns until the end of each year. The figures are supplied by the coal-mine proprietors on forms which we send to them.

John Harper, Esq., Goods Superintendent, Department of Railways, sworn, and examined:—

J. Harper,
Esq.
4 Nov., 1896.

343. *Chairman.*] I presume that you have discussed this proposal with the Secretary for Railways and with the Commissioners? Yes.

344. *Mr. Fegan.*] Are you acquainted with the scheme? I know nothing about its details.

345. Have you brought the statements which were promised by Mr. McLachlan yesterday? Yes. I have here a statement showing the quantity of coal and coke carried to Newcastle for the year ended 30th June, 1895, hauled in owners' trucks by Commissioners' engine, crane charges being included on all coal shipped from Bullock Island:—

Colliery from.	Tons.	Colliery from.	Tons.
Carried 1 mile—		10 to 12 miles—	
Wickham and Bullock Island	222,417	Northern Extended	35,024
1 to 4 miles—		Pacific Co-operative	89,594
A. A. Company	1,599	Young Wallsend	124,618
Hetton	201,487		
Ferndale	5,042	14 to 17 miles—	
Lambton Company	136,869	Northumberland Company	1,177
	344,977	Seaham Colliery	88,117
4 to 7 miles—		West Wallsend	57,901
Burwood No. 3	69,272		147,195
Co-operative	146,399	17 to 20 miles—	
East Lambton Colliery	1,320	East Martland	108
Elmore Vale	10,106		
Newcastle Coal Company	222,693	Over 20 miles—	
Purified Coal Company	14,459	Dulwick Siding, 56 miles	1,983
Sneddon's	25,670	Blackwall, 55 miles	1,118
South New Lambton	41,039	Rix's Creek, 53 miles	7,000
Wallsend Company	332,611	Greta Colliery, 32 miles	59,887
Waratah Company	39,595	Anvil Creek, 31 miles	1,938
West Burwood Company	327	Denton Park, 24 miles	4,166
	904,100	East Greta, 22 miles	68,603
7 to 10 miles—		Font Hill, 21 miles	2,191
Dudley Company			146,876
Minni	244,097		
South Wallsend	33,904		
	278,001		

SUMMARY.

	Rate per ton. s. d.	Tons.
1 mile	0 6	222,417
1 to 4 miles	0 9	344,977
4 to 7 ,,	0 10	904,100
7 to 10 ,,	0 11	278,001
10 to 12 ,,	1 0	124,618
14 to 17 ,,	1 2	147,195
17 to 20 ,,	1 3	108
Over 20 ,, Average rate, about.....	2 0	146,876
		2,168,292

J. Harper,
Esq.
4 Nov., 1896.

I have also a further statement based upon similar lines showing what the rates would be under certain conditions on the Illawarra line. It is as follows:—

RATES for Carriage of Coal, Illawarra Line.

Carried in Commissioners' trucks.		Carried in Owner's trucks.	
1 to 10 miles	1s. 3d. per ton.	Over 1 mile	6d. per ton.
11 to 12 ,,	1s. 4d. ,,	1 to 4 miles	9d. ,,
13 to 14 ,,	1s. 5d. ,,	4 to 7 ,,	10d. ,,
15 ,,	1s. 6d. ,,	7 to 10 ,,	11d. ,,
16 ,,	1s. 8d. ,,	10 to 12 ,,	1s. ,,
17 ,,	1s. 9d. ,,	12 to 14 ,,	1s. 1d. ,,
18 ,,	1s. 10d. ,,	14 to 17 ,,	1s. 2d. ,,
19 ,,	1s. 11d. ,,	17 to 20 ,,	1s. 3d. ,,
20 ,,	2s. ,,	20 to 23 ,,	1s. 4d. ,,
30 ,,	2s. ,,	23 to 26 ,,	1s. 5d. ,,
31 to 40 ,,	2s. 6d. ,,	26 to 29 ,,	1s. 7d. ,,
41 to 48 ,,	2s. 9d. ,,	29 to 32 ,,	1s. 8d. ,,
49 to 56 ,,	3s. ,,	*32 to 35 ,,	1s. 9d. ,,

These rates are for when the coal is shipped. Small coal allowed 20 per cent. reduction.

* Distance between 35 and 56 $\frac{1}{2}$ d. per ton per mile in addition to the rate for 35 miles. Small coal allowed 20 per cent. reduction.

346. According to your figures, the rate of haulage over the 30 miles when the Commissioners' trucks are used is 2s. a ton, and when the owner's trucks are used, 1s. 8d.—a difference of 4d. Does it pay the Commissioners to let out their waggons at 4d. a ton for 30 miles? I presume it does; if it did not they would not have fixed the rate.

347. What do you charge for your waggons in the northern district? The charge is precisely the same in both districts, but in the northern district almost the whole of the coal is carried in owners' trucks; we have only about 100 waggons in the northern district.

348. What colliery uses them? They are spare waggons which we send wherever they are required.

349. Would the construction of a harbour at Port Kembla interfere with coal coming to Sydney from the southern district? I can scarcely say; so much depends upon the circumstances; freight does not govern the thing exclusively. I fancy that large passenger boats like the P. and O. steamers would continue to coal in Sydney under any circumstances; but it is very hard to say what the big ocean tramps would do.

350. Would it make any difference to the railways if the coal from the Metropolitan and Coalcliff mines were taken to Port Kembla instead of to Sydney? I do not think it would affect them materially. Only a very small quantity of coal is sent to Sydney from those mines. We only carried 74,000 tons altogether during the year ending September last.

351. Are you acquainted with the Lake Illawarra scheme? Only generally—from what I have read in the press.

352. Have you seen the railway which the Illawarra Land Corporation have constructed? Yes.

353. Is not that line partly under the supervision of the Commissioners? It has been passed by the Commissioners as fit to carry their rolling stock.

354. Do you think there would be room for a harbour at Port Kembla, and another harbour at Lake Illawarra? I should not think so, considering that the total output of the southern collieries is not much more than 750,000 tons per annum.

355. But it is increasing year by year? I do not think it is. According to the figures in the "Wealth and Progress" the output in 1894 was 70,000 tons less than the output of 1882.

356. But if you compare the output of 1894 with the output of 1885 you will see that great strides have been made? The output almost doubled in that time, but in the interval the South Clifton and other collieries have come into existence. Their coal has been largely used for locomotive purposes.

357. Is it probable that an increase in production will continue? That would be impossible for me to say.

358. Is it not a fact that during the recent Newcastle strike a number of vessels which would have loaded at the southern collieries were driven away by bad weather;—if the conditions had been more favourable there, would it not have been a greater output? Well, the favourable conditions then meant the continuance of the strike at Newcastle, which I would not like to anticipate as an occurrence of the future.

359. There was no strike at Newcastle in 1893 to interfere with the coal trade there? I could not say.

360. On comparing the output for 1893 with that for 1891, I find that there was a large increase in the production of coal in the southern district? That may be accounted for by the working of the Metropolitan Company's mine. We have no figures as to the output of the different collieries which would enable us to challenge any statements as to the total output.

361. The Railway Commissioners have charge of the loading appliances at the port of Newcastle? Yes.

362. You would think that they would be consulted in reference to the shipping arrangements at the proposed harbour at Port Kembla? I should expect that they would be. As a matter of fact, if the scheme were approved of by the Committee, the Commissioners would have to be consulted in regard to any railway arrangements.

363. Besides coal what other traffic is there that would be likely to affect the proposed harbour? I do not

Coke conveyed from Mount Kembla to the undermentioned stations for the twelve months ended 30th September, 1896:—

	tons	cwt.	qr.
Darling Harbour	493	17	0
Eveleigh	193	0	2
Auburn	11	2	2
Bungendore	2,610	15	3
Goulburn	12	15	2
Piper's Flat	2,456	12	0
Berry	4	5	1
Dapto	1	13	0
Total	5,784	1	2

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381. In your opinion, would a harbour at Port Kembla serve the district better than a harbour at any other place on the coast? I would not be prepared to say that.
382. Do you think the companies owning private jetties would send their coal to Port Kembla to be shipped? I do not think so, except under certain conditions. If a large ship were prepared to take in bunker-coal at Port Kembla at a rate which would suit any particular colliery, no doubt the coal would be sent there; but the coasters would probably continue to take their supplies from the jetties. The Mount Keira line was acquired by the Government on strong recommendations which were made before the Commissioners took office. It was spoken of as essential to have a connection with the coast at Wollongong. The only collieries that have used that line, however, have been the Corrimal colliery, which has used it to a small extent, and the Mount Keira colliery, to the proprietors of which the line originally belonged.
383. Have you any knowledge of the country between the Government line and the proposed port? I only know it generally.
384. You cannot tell us whom the property belongs to? No.
385. You would not expect any traffic from the northern Illawarra collieries to Port Kembla? No.
386. Do you think the Corrimal coal would go there? Yes, it goes there now.
387. Would the Mount Pleasant coal go there? No. The Mount Pleasant and the Keira coal would continue to go to Wollongong.
388. That leaves only the Southern Company's coal and the Mount Kembla coal? Yes.
389. And any traffic that may be developed by the opening up of mines further south? Yes.
390. Though, in regard to the latter traffic, it would probably go to Lake Illawarra, if a harbour were made there? Yes.
391. *Mr. Roberts.*] Does it appear to you that if a harbour is to be made on the south coast, Port Kembla is the place where most traffic would go? I do not think that the private companies that own jetties would cease to use them. The figures which I have put before the Committee indicate that Corrimal is the most northerly mine from which coal is taken to Port Kembla, though part of that coal goes to Wollongong. The only other collieries that I think would send to Port Kembla are Mount Kembla and the Southern Coal Company's colliery.
392. How far is it from Corrimal to Port Kembla? It is 6 miles to the junction of the Mount Kembla line with the Government line, and 10 miles to Port Kembla.
393. What would be the cost of sending coal from Corrimal to Port Kembla, including shipping? That would depend upon the length of the connection between the Government line and Port Kembla. If the coal were hauled in the Commissioners' trucks, and by the Commissioners' engines, the cost would be 1s. 3d. a ton, whether the distance was 7 or 10 miles. If the coal were hauled in owners' trucks, the rate would be 10d. for 7 miles and 11d. for 10 miles.
394. Is there any mine from which coal is carried 56 miles by rail? Yes; Dulwick Siding is 56 miles from Newcastle. Blackwall is 55 miles, and Rix's Creek is 53 miles. The rates are charged according to the zone in which the colliery is situated. I have here a list of the distances of the Illawarra coal-mines from Sydney. The North Illawarra mine, Austinmer, is 40 miles from Sydney; the Bulli mine is 43 miles; South Bulli, 45 miles; Corrimal, 46 miles; Mount Pleasant and Mount Keira 49 miles; Mount Kembla, the Australian Coal Co.'s mine, and the Southern Coal Co.'s mine 52 miles. Those are the mileages on the Government railway.
395. Have you any figures to show the probable revenue that would be obtained by the Department of Railways in the event of the construction of the proposed harbour? No, I cannot give you any information on that point.
396. *Mr. Lee.*] Can you tell us what amount of coal is obtained annually at Corrimal, Mount Kembla, and the Southern Coal Co.'s mine? No, we have no means of knowing how much coal is sent over private lines. I gave the Committee the figures in regard to the Corrimal coal.
397. *Mr. Wright.*] Have you any knowledge of the Illawarra district? No special knowledge of it.
398. I suppose you cannot tell us anything more about the coal-mines there than we have in evidence? No.
399. Are you in a position to speak as to the commercial prospects of the district apart from the coal? Well, the district is a comparatively limited one. Its mineral and dairying resources are all it has to rely upon.
400. Can you give the Committee any information as to the volume of traffic from Sydney down to Illawarra? It is really a quantity which you can scarcely reckon with. The best traffic—that is, the traffic upon which the highest rates should be put—is, and I suppose always will be, carried by the steamers. The volume of traffic carried by the railway is very small, apart from the passenger traffic and the dairy produce. I do not think that the imports of the district would have much effect upon the trade of the proposed port.
401. If wharfage were charged, the revenue obtained would not go very far to meet the interest on the cost of construction? No. And if high wharfage rates were charged the traffic would be sent back to the railway. I cannot conceive of any direct importation to any port on the south coast.
402. You cannot see that there is any traffic apart from the coal traffic to justify the construction of a harbour there? No.
403. Do you think that a very large traffic is likely to be developed in this district? It is very hard to say

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- say what development may take place in the district in connection with the treatment of ores, and so on.
404. What distance is Bulli from Sydney? Forty-one and a half miles.
405. And from Port Kembla? Fourteen miles.
406. Do you think ships would go down to Port Kembla to take in coal—that is, big ships, which might have to employ tugs to move them from the wharf—when they could have it brought to them by train? I consider it very doubtful. I also doubt if the Bulli Company would send its coal to Port Kembla.
407. Would there be any danger of competition between the proposed harbour and the railway? I do not think so. I think we have reached the bounds of competition.
408. You do not take a very hopeful view of the prospects of the proposed port? No.
409. You do not see any mercantile advantage in it, except for the shipment of coal? No.
410. Do you attach much importance to its value as a port for the shipment of coal? I daresay it would be comparatively valuable for the use of large ships.
411. Do you think it would be worth £300,000? I have not gone into that question.
412. *Chairman.*] Do you know what is the actual cost of shipping coal? No; and I do not think that the contractors have discovered that yet.
413. It has been put down at 5d. a ton? It depends upon what charges are included.
414. *Mr. Black.*] Are there any collieries south of the Southern Coal Co.'s mine? No; though of course the coal-bearing strata extend further south.
415. *Chairman.*] Your combined charge for carrying and shipping is 6d. per ton for a distance of a mile? Yes; we pay 1½d. to the contractor for handling the coal, and then there are all the terminal charges.
416. What is the actual cost of shipping? I could not tell you; but I take it that the rate fixed by the Commissioners covers the whole cost. As a matter of fact, we get no more service from waggons which are used to haul coal 1 mile than from waggons which are used to haul coal for 10 or 15 miles.
417. What becomes of the Illawarra coal at present? It is used greatly for bunker coal.
418. A large proportion of it is brought up to Sydney and then lightered over the ship's side into ocean-going vessels? Yes.
419. Do you know what that costs? No.
420. A good port at Illawarra would save that expense in many cases? Yes.
421. The rate for coal from Unanderra to Sydney would be 3s. a ton? Yes.
422. If that coal could be put into the ships at Illawarra, there would be so much saved? No, because certain charges would have to be paid for the delivery of the coal from Unanderra to the port. The saving effected would be the difference between the cost of putting coal into a vessel at Illawarra and the cost of hauling the coal to Sydney and shipping it there. Then, too, the cost of taking a vessel to Port Kembla would have to be considered, and a comparison made with the cost of lighterage.
423. The saving would be the cost of conveying the coal from Illawarra to Sydney? Yes, less the cost of taking it to Port Kembla.
424. It is useless labour to carry coal 40 miles when you need only carry it 8 miles? Yes; and on the other hand, it might be shown that if there were no obligation to pay interest upon the capital cost of 40 miles of railway, the rate would be less than 3s. a ton. If in one Government work the cost of construction is not considered, neither should it be in another Government work, that is, if you want to make a comparison.
425. I suppose your rates on the Illawarra line have been fixed in recognition of the fact that there is sea competition? Well, the same rates apply on the northern line.
426. If it were possible by shipping the whole of the coal output of Illawarra at a port on the south coast to save 2s. 6d. a ton in freight, the total gain would be something like £190,000? It is impossible to say what the net gain would be from a port on the south coast, because there are so many other circumstances to be taken into consideration. As a matter of arithmetic, no doubt the calculation is correct.
427. You doubt if the proposed harbour, when constructed, would get a considerable portion of the trade of Illawarra? Yes, that is my personal opinion.
428. *Mr. Humphery.*] It is your view that even if a safe harbour, such as is proposed, were constructed on the south coast, a large portion of the coal produced in the district would be shipped from the present small jetties, though a considerable quantity might be placed on board ocean-going vessels at the proposed port? Yes.
429. There will always be a large demand for southern coal in Sydney? Yes. That is the evidence of our figures.
430. Is it probable that the total output will ever be shipped at Port Kembla? No.
431. Since the smelting company established themselves at Lake Illawarra, has there been a large increase in the railway traffic? Nothing very marked.
432. Assuming that the expectations of the company are realised, would it be necessary for you to make other provision than now exists for the traffic? No, because I understand that the ore is to be brought to Lake Illawarra by sea.
433. But we have been told that the harbour works at Lake Illawarra may not be completed for some time, and that in the interval the ore will be sent to Sydney, and brought from there by rail;—in that case would it be necessary to make further provision for the traffic? No, I do not think so, because that traffic will only be temporary. If it became permanent the question of duplicating the line would have to be considered. We have arranged rates with the company for the temporary conveyance of the ore. The company has given us certain figures which they expect to work up to.
434. If those figures are realised, there will be a considerable increase in the traffic on the Illawarra line? Yes.
435. *Mr. Hoskins.*] Would not that necessitate the duplication of the line? If the anticipations of the company were realised, we should have to duplicate parts of the line; but not necessarily the whole length.
436. What is the largest-sized vessel that can be unloaded at Wollongong? I have no idea.
437. If a vessel of 500 tons could be unloaded there, there would be no great difficulty in conveying the ore from Wollongong to Lake Illawarra? No; but if there were a large quantity of it, portions of the line would have to be duplicated.
438. If the harbour works cannot be completed for two or three years, cannot the smelting company have their ore unloaded at Wollongong? I think the ore will be brought round in large vessels, and the more economical plan would then be to have it discharged at Darling Harbour, and sent from there direct to Lake Illawarra.

TUESDAY, 10 NOVEMBER, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.

The Hon. JAMES HOSKINS.

The Hon. CHARLES JAMES ROBERTS, C.M.G.

The Hon. WILLIAM JOSEPH TRICKETT.

The Hon. DANIEL O'CONNOR.

HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.

JOHN LIONEL FEGAN, Esq.

THOMAS HENRY HASSALL, Esq.

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

George Skelton Yuill, Esq. (Messrs. G. S. Yuill & Co, Limited), sworn, and examined:—

439. *Mr. Humphery.*] I believe you have a statement to make to the Committee? Perhaps if I make a statement it may help to shorten the inquiry. My view is that there is no immediate need for the construction of the proposed northern breakwater at Port Kembla. Our experience is that loading there is very rarely interrupted except by bad weather from the south. The eastern breakwater would protect us from this, and also from any easterly gales. There is no need for increased coal-loading facilities. The two jetties now being utilised for this purpose are capable of loading at the rate of 400 tons per hour each at a pinch; but taking half this quantity, say 400 tons per hour between the two, we have a loading capacity of over 3,000 tons per day of eight hours, or 900,000 tons per annum. When the port reaches this amount of coal export, it will be time enough to increase the coal-loading facilities. A small expenditure will be necessary to fit the present jetty appliances for discharging work. The Illawarra smelting works will, I believe, treat some 200,000 tons of Broken Hill ores, and for this purpose may have to import, besides the ores, a very large quantity of flux. If, as is to be hoped, their operations prove successful, then the probability is that the industry will be largely increased, especially in view of the fact that, being in close proximity to the coal and seaboard, the district is peculiarly adapted for industries of this character. The sites round about the port are eminently suitable for such industries, and, unlike the land further back, are of comparatively little value for dairying or agricultural purposes. It has been stated that the proposed harbour would compete with the Lake Illawarra scheme, but, as a matter of fact Port Kembla in its present condition would do so. The trouble in connection with the Lake Illawarra Scheme is that there is this natural port in close proximity. Lake Illawarra will never annex the coal trade that now goes to Port Kembla, and if the port is made a closed harbour it will not only retain its present steamer trade; but also secure a sailing ship trade and a general discharging trade, in which case there will be no need for a second harbour on the South Coast. Another difficulty which occurs to a non-expert is the difficulty of keeping clear in a sea way a channel 30 feet deep, and the great cargo carriers of the present day, the vessels which take away 7,000 and 8,000 tons of dead weight require quite that depth when allowance is made for the swell of the sea. The trade of Port Kembla is at present confined to steamer trade to intercolonial and over sea ports. One of the developments which would naturally follow the improvement of Port Kembla would be a sailing ship trade to over-sea ports. At present the place is not recognised by the underwriters as a risk for sailing ships; but if it were improved by the construction of the eastern breakwater a sailing ship trade would spring up which one might hope would in time approach the sailing ship trade at Newcastle. It is recognised by all who have to do with steamships that the Newcastle and southern coals are totally different in quality. The southern coal is sought by ocean going steamers for bunker purposes. It is preferred to Newcastle coal on account of its steaming qualities and because of its closer stowage. It stows about 40 feet to 45 feet of Newcastle coal. Therefore, we may consider that there is no real competition between the two classes of coal. The southern coal has been sought after for export to Singapore and the eastern ports, which may be said to be coal depôts for the great ocean lines which cross the world. Recently the Japanese coal has cut it out; but it is rumoured that the Japanese Government are getting somewhat alarmed at the rapid depletion of their coal measures and have some view of moderating the exportation, in which case the southern coal trade will again look up. But in any case cheaper loading facilities would bring the southern coal into competition with the Japanese coal, and would result in a very largely increased trade. The third development and source of revenue which would result from the improvement of Port Kembla is, I consider, the discharging trade which would follow. I have already referred to the Illawarra smelting works and their probable development. We hear too of possible developments in the iron industry, and of suggested works for treating ores brought from New Caledonia. To my mind the district in the neighbourhood of Port Kembla, which is close to the sea-board, and has a plentiful coal supply, is the most advantageous site for the construction of large treating works. Port Kembla would then require facilities for the discharging and loading of cargo.

440. *Mr. Hoskins.*] They have no limestone in the district of which you are speaking? No. I have already suggested that the fluxes will have to be brought over sea, and therefore a harbour for discharging cargo will be necessary. Another source of revenue will be the general harbour work which naturally follows increased population. It has been pointed out that the land round Port Kembla is in the hands of private holders. At the present time, however, that land is of very little value. It is sour land, and worth nothing to speak of, and it seems to me that the Government would make a very handsome profit by at once resuming the land, and selling it in town lots after the completion of the harbour works.

441. *Mr. Hassall.*] Do you think it essential that a safe harbour should be provided on the south coast? I think such a harbour would be an immense advantage to the district.

442. In the event of Port Kembla being improved, would the colliery proprietors to the north send all their coal there, or would they continue to ship it from their own jetties? If they were sending to Sydney they would ship at their own jetties; if they were sending oversea they would ship at Port Kembla.

443. If a vessel came for a big cargo of coal it would be shipped at Port Kembla? Yes.

444. Port Kembla is not recognised by the underwriters as a safe port? Not for sailing vessels. They take the risk with steamers. Steamers go there regularly.

445.

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G. S. Yuill,
Esq.
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445. Do ocean steamers go there? Yes. Some of the largest steamers that come to the Colony have loaded there. 7,000 tons of coal have been loaded there in one shipment. The following vessels have loaded there: The "Armidale," 5,000 tons; the "Barmen," 4,000 tons; the "Gulf of Mexico," 4,500 tons; the "Gulf of Lyons," 4,000 tons; the "Gulf of Bothnia," 5,000 tons; the "Gulf of Anend," 4,000 tons; the "Sonneburg," 7,000 tons; the "Stassfurt," 5,000 tons; the "Indrani," 7,500 tons; the "Echuca," 4,000 tons; and the "Port Phillip," 4,000 tons. Besides these there have been the ordinary coasting vessels.

446. The vessels you named have had no difficulty in loading at the port? None whatever.

447. They can go there in any state of the tide? Yes. It is a very good roadstead.

448. And fairly safe? Yes, with an excellent holding ground—a beautiful blue clay.

449. You say that the Illawarra coal is preferred to the Newcastle coal for bunker purposes? Yes. All the mail boats which trade here, both foreign and English, take nothing else.

450. How do the prices compare? They do not ask the Newcastle companies to tender. They will not take Newcastle coal.

451. They can take the Illawarra coal without any great trouble? Yes.

452. Do they take Port Kembla coal or coal from collieries further north? A great deal of coal comes down to Port Kembla from collieries further north. Half the coal shipped at Port Kembla comes from collieries lying on this side of Wollongong.

453. What collieries would those be? Chiefly Corrimal and Bulli.

454. Does coal go to Port Kembla from as far north as Coalcliff of Bellambi? No. I do not think the Bellambi mine is getting out much coal just now. The great difficulty with all these mines is that they have no waggons for running over the Government lines. The railway arrangements do not permit them to send to Port Kembla.

455. Are there no arrangements whereby the Commissioners will provide rolling stock? Yes; but the rates are prohibitive. They are far above the Newcastle rates, or the rate for coal going towards Sydney. Besides, sometimes the Government waggons will not fit the screening appliances.

456. In the event of the harbour being improved, either a separate line, or different rolling stock would be necessary? The line and the rolling stock are all right, but the screens would have to be lifted a bit. That would not cost very much, but the mine owners do not care to go to any trouble now, because at the present time the railway rates are prohibitive.

457. Are we to understand that the Japanese coal is going out of favour? I did not say that. I said that it was reported that the Japanese Government were alarmed at the depletion of their coal supplies.

458. You think there is a good probability of the eastern trade coming back to Illawarra? That is the indication. Of course if the rumour were correct, a very large trade would spring up.

459. Do you think that a more central position than Port Kembla could be obtained for the South Coast district? I think that Port Kembla is the very best place for a harbour there. The top coal seam—the Bulli seam—is getting exhausted as you go north, while the lower seams get better as you go south. Port Kembla is midway between both. A mine is being opened up now on the range due west of Port Kembla to supply the smelting works, and we know that coal exists a good deal further south than that.

460. Has the land been tried any great distance further south? The coal has not been opened up, because it is not required.

461. Do you think Lake Illawarra will ever be a harbour for the use of large ocean going vessels? That is more a matter for experts. I do not see how the scheme can be a financial success, because of the close proximity of Port Kembla. Steamers will always go to a free port rather than to one where they have to pay dues.

462. Now they can go to Port Kembla practically with safety and can load there almost whenever they like? Yes, and they do.

463. Do you think the expenditure of a large sum of money would be justifiable to improve what is a good natural port? I think the construction of the eastern breakwater would be a very great improvement. The port could then be used for discharging and loading sailing vessels. It is said that the smelting works will take about 250,000 tons of ore and flux a year.

464. Will they not bring it to Lake Illawarra so as to get it delivered as closely as possible to their works? It would not pay to make Lake Illawarra a harbour simply for that trade. They can very easily bring the stuff from Port Kembla. There is a railway between the two places now.

465. Do you think it necessary to carry out the eastern breakwater 2,800 feet? For loading and discharging sailing ships I should think it would be desirable to carry it out as far as possible.

466. But you think the northern breakwater unnecessary? As the trade of the port increases, it may be a good thing to make the northern breakwater, but you have to see your way to make it pay first.

467. Do you know on what tenure the jetties at Port Kembla are held? No; but they would have to be resumed.

468. In the event of the proposed improvements being carried out, the Government would have to resume the jetties at Port Kembla, together with the land surrounding the port? Yes.

469. Have you any idea of the value of that land? It is of very little value.

470. Its value is small either for agricultural or grazing purposes? I do not think it is used at all.

471. You think it would be desirable to resume this land before operations are commenced? It would be advantageous to do so, otherwise the Government would be enhancing its value by their own expenditure.

472. *Mr. Roberts.*] Would Port Kembla be a more convenient place for a harbour than either Wollongong or Bellambi? I dislike both Wollongong and Bellambi, because of the rocky nature of the bottom there. At Port Kembla you have excellent holding ground—2 or 3 feet of sand, and then solid blue clay.

473. But Port Kembla could be made still deeper if necessary? Yes.

474. Do the steamers which you have mentioned go regularly to Port Kembla to load coal? The steamers I mention are over-sea vessels, which only come occasionally. The "Indrani" loaded at Port Kembla last year, and she loaded there again the other day.

475. Would the intercolonial boats be likely to load coal at Port Kembla, if the harbour were improved? A great deal of coal is loaded into intercolonial boats there now.

476. That is, when the weather is suitable? Yes; but the weather is rarely otherwise.

477. Do you think that the development of the coal trade of the district is being retarded through the want of a safe and accessible harbour? I think so.

478. Is it more with a view to enable sailing-vessels to go to Port Kembla, that you would like to see the proposed works carried out? Yes, and to enable discharging operations to be carried on there.
479. What cargo would be likely to be discharged at Port Kembla besides the ore for the smelting company? I do not know of anything that would come in large quantities.
480. But the inwards traffic would develop as population increased? Yes; it would develop with the requirements of the district.
481. Can you tell the Committee what a steam-ship saves by loading at Port Kembla instead of in Sydney Harbour? 2s. 6d. per ton, at the very least. The freight is 2s. 6d. per ton, though they generally charge 3s. a ton.
482. *Chairman.*] What class of boats would it suit to coal at Port Kembla? That is a difficult question to answer. As a general rule, the coasting steamers cannot spare the time to go away from Sydney to coal. The New Zealand boats might go around to Port Kembla. They occasionally go to Newcastle now for their coal.
483. How much coal would a New Zealand boat take? They might take 1,200 tons; but those boats come in the category of coal-carrying boats, because coal forms a large part of their cargo. It would not pay a passenger-vessel to go to either Newcastle or Port Kembla simply for bunker-coal.
484. You do not think it likely that many of the intercolonial passenger boats would coal at Port Kembla? No; they would have no time to go there specially for coal, and they could not call at a coaling port with passengers on board.
485. Do you think that if the eastern breakwater were made a larger number of intercolonial vessels would coal at Port Kembla than coal there now? I do not know that there would be any great increase in the colonial trade. That trade is steadily increasing now.
486. *Mr. Roberts.*] Where would you expect the increase to come from? From the exportation of coal by steamers and sailing ships over sea. The great business of the port of Newcastle is the loading of sailing ships.
487. You think that if Port Kembla had anything like the facilities of Newcastle she would get a fair share of that trade? Not a share of the Newcastle trade. The coal that would be sent from Port Kembla would be coal for bunker purposes. Newcastle coal is used to feed locomotives, and for purposes of that kind.
488. Where would the Illawarra coal be sent to? Singapore, Hongkong, Manilla, San Francisco and, in fact, all over the world.
489. Have you any idea as to what quantity of ore would be discharged at Port Kembla? I think it is estimated that the smelting company will take 200,000 tons a year.
490. Would that ore come principally from Broken Hill? It would all come from Broken Hill.
491. Do you look upon Wollongong Harbour as inadequate for the requirements of the district? Certainly.
492. Do you regard Jarvis Bay as out of the question? Yes; it is too far from the coal-bearing land.
493. Is it regarded as a useful harbour of refuge? It is very rarely that a steamer goes there.
494. Would Port Kembla be of any service as a harbour of refuge if the eastern breakwater were constructed? Well, steamers can generally look after themselves. I do not know that they want very much of that sort of thing.
495. You do not think that it would be worth while to construct a breakwater there merely to provide a harbour of refuge? I do not think so.
496. At the present time it is not safe for sailing ships to go to Port Kembla? No.
497. How much per ton could the Government charge steamers going to Port Kembla if the proposed breakwater were constructed? I think 6d. a ton.
498. Is that what is now charged at Newcastle? I believe so. There is a consolidated rate at Newcastle.
499. Would that rate compare favourably with the rates you are in the habit of paying at other ports? I think so.
500. From what mines would the coal go to Port Kembla if the proposed works were carried out? Well, at the present time about 250,000 tons of coal are shipped from Port Kembla in the year. The jetties there are not used half the time, because they can only load steamers.
501. Do you know if new mines would be opened up if the proposed works were carried out? Well, there is a new mine being opened up now—the mine I have already referred to.
502. Do you think the Bellambi jetty would be used if the proposed harbour were constructed? Yes.
503. From how far north does coal now come to Port Kembla? The Corrimal Pit supplies most of the coal shipped at Port Kembla; but coal has been taken from as far north as Bulli. Mount Kembla and Corrimal supply most of the coal.
504. What is the distance between Bellambi and Port Kembla by sea? I should think about 10 or 11 miles.
505. Is the Bulli jetty largely used? It is used for the shipment of Bulli coal.
506. Would that coal come to Port Kembla if the proposed works were carried out? It would come down to load sailing ships. The whole district would supply coal to load sailing ships. The southern district at the present time has a steamer trade which is probably as good as the Newcastle steamer trade; but it has no foreign sailing-ship trade.
507. It is the sailing-ship trade that you wish to develop? That is where I would expect a great development.
508. You say that that trade can only be developed by the construction of the eastern breakwater? Yes, or by the making of some other harbour.
509. You look upon Port Kembla as the best site for such a harbour? Yes.
510. *Mr. O'Connor.*] Whatever may be the natural advantages of Port Kembla, the place would be much more secure if the proposed harbour works were carried out? Certainly.
511. Upon the occurrence of bad weather it is impossible for the steamers to remain at any of these southern coaling places? Yes.
512. In your judgment Port Kembla would be the best place for a south coast harbour? Yes.
513. *Mr. Hoskins.*] Do you think that the smelting works at Dapto could be managed as advantageously and as profitably if the flux and ore required for treatment were discharged at Port Kembla as if it were discharged at Lake Illawarra? Well, the smelting works are situated right alongside Lake Illawarra; but the haulage from Port Kembla would be very little.

- G. S. Yuill,
Esq.
10 Nov., 1896.
514. What work has been done with a view to making Lake Illawarra available as a shipping place? I do not know. I am not in a position to give you any information on the subject.
515. Can you tell us how long it would take to carry out the scheme if they set vigorously to work? No; that is an engineering question. I should think it would take a long time.
516. Do you think the operations of the smelting company should be inconvenienced by any delay in carrying out the Lake Illawarra scheme? The smelting company would not be much inconvenienced. They would only have to pay a little more for the carriage of their ore from Sydney.
517. Do you mean to say that ore would be taken to Sydney instead of being discharged at Port Kembla? At the present time there are no appliances for discharging ships at Port Kembla.
518. Do you consider that by the construction of the proposed eastern breakwater a sufficient area of water would be enclosed to enable sailing vessels to be loaded and unloaded and moved about with facility at Port Kembla? I think so.
519. Do you think it necessary to make a second breakwater there in order to entirely protect vessels from the swell of the ocean? It would be an advantage; but there is the question of expense to be considered. In commercial transactions we always cut things as fine as possible to start with.
520. Do you think it would be advisable for the Government to incur expenditure in offering additional facilities for the loading and unloading of vessels at Port Kembla? I think so.
521. If the Illawarra Harbour scheme were carried out, and if Port Kembla was improved, where would you prefer to send a vessel to? To Port Kembla.
522. *Mr. Humphrey.*] Do you say that the construction of the proposed eastern breakwater would give all the protection necessary for sailing ships? I think that one breakwater would be quite enough to start with.
523. Do you think that you could ensure sailing vessels going there if there were only one breakwater? I think so.
524. Would it be possible for oversea sailing vessels to discharge and load at Port Kembla without the northern breakwater? I think so.
525. Therefore, at present you would not recommend the expenditure of more money than was necessary in order to construct the eastern breakwater? I do not think I would recommend the construction of the northern breakwater unless the dues received were sufficient to pay interest upon the expenditure.
526. Do you think it desirable to construct the whole of the proposed eastern breakwater, or only part of it? I think the further you carried it out the better.
527. You do not think the proposed work too extensive? No.
528. Do you think that interest could be paid upon an expenditure of £158,000? Yes.
529. Until the opening of Lake Illawarra or the improvement of Port Kembla the ore and flux required by the Illawarra Smelting Co. must be discharged at Sydney, and conveyed thence by train? Yes.
530. That is a great advantage to the Railway Commissioners? It assists the railway revenue.
531. If that ore were discharged at Port Kembla the railway returns would be lessened? Yes; but they would gain in the increase of the coal traffic to Port Kembla. The whole of the traffic from the mines north of Port Kembla would come over the Government line.
532. The only steamers that now call at Port Kembla are steamers employed in the export trade? Yes.
533. Would there be any change in this condition of things if Port Kembla were improved? It is hard to say; but it is probable that there would not be a great deal of change. A great many of the steamers which do their bunkering in Sydney could not afford to call at Port Kembla.
534. Did the Orient boats ever go down there for coal? No. They could have done so; but we could never be certain of the weather beforehand, and we had to make our arrangements a year ahead.
535. Do steamers go to Newcastle for bunker coal? I do not think so.
536. If the Lake Illawarra scheme is carried out, will not the coal obtained at the new mine to which you referred be shipped at Talawera Point? I suppose it will.
537. It is not desirable to have two harbours close together? No. Port Kembla is a natural port, and the Illawarra Harbour scheme will not take the steamer trade from Port Kembla, whereas if Port Kembla be improved it will get the steamer trade and the sailing-ship trade too.
538. If the Illawarra Harbour scheme fails, the only suitable harbour on the south coast will be Port Kembla? Yes.
539. Is it desirable to proceed with the improvement of Port Kembla before we know whether the Illawarra scheme will be carried out? I do not think it would be commercially desirable to carry out the Illawarra scheme with Port Kembla right alongside.
540. You are of opinion that Port Kembla is a better harbour site than Lake Illawarra? I think so, especially as it is partly a natural harbour.
541. The land around Port Kembla is of very little value, and would only be rendered valuable by the construction of the proposed harbour works? Yes.
542. That land is owned by the Wentworth family? Yes.
543. Are there any other owners? I do not think so.
544. Are not the proprietors of the jetties lessees of the Wentworth trustees? They have to pay royalty to the trustees. I think they pay so much per ton.
545. Do you think there would be a large trade developed by the back loading with coal of vessels bringing ore from Port Pirie? I do not think there would be much development of the trade, because a great deal of coal is carried to South Australia now. Some of the steamers take a certain quantity of Newcastle coal, and then call in at Port Kembla to complete their loading. The coal trade may develop with an increase of mining operations at Broken Hill.
546. The Broken Hill ores will not all come to Lake Illawarra? No.
547. Do you consider that the trade of the place will give a return upon the expenditure necessary to afford facilities for it? Yes.
548. *Mr. Trickett.*] Besides the 6d. per ton harbour dues to which you refer, would not pilotage and light dues have to be paid? Yes; but they would not come to a great deal.
549. Would there have to be a tug service at a place like Port Kembla? I do not think so.
550. With regard to what you said about the Japanese coal trade, I suppose that is only a rumour? Yes.
551. You do not make it a very strong feature of your argument? No

552. The estimated cost of improving Port Kembla is about £240,000. Interest on that at 4 per cent. would be £9,600. To produce that return by means of tonnage dues of 6d. on the ton you would require a trade of 384,000 tons? Yes. The present export trade of the port is 250,000 tons.

G. S. Yuill,
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553. Is all that coal sent oversea? It is all used for bunker purposes. Some of it is sent up to Sydney, and some of it goes oversea, and to the other colonies. 134,434 tons of coal were shipped at Port Kembla during the first six months of this year. Last year 227,357 tons of coal were shipped there.

554. Steamers loading there now keep up steam all the time? Yes.

555. It is rather risky work? Yes.

556. Do you think that coal will be sent from Bellambi and Bulli to be loaded at Port Kembla for foreign trade? Yes; that is being done now to some extent.

557. If they could get plenty of tonnage, the coal-mine proprietors might be induced to send more coal to Port Kembla? Yes, especially if the sailing-ship trade developed.

558. *Mr. Clarke.*] Do steamers carrying coal as cargo to intercolonial ports call at Port Kembla? Yes.

559. Many of them? Yes.

560. It would not pay steamers to call there simply for their bunker coal? It sometimes pays cargo boats to do so; but not generally passenger boats.

561. The Union Company's boats generally go to Newcastle for coal? Yes; but they take half a cargo of coal there.

562. Would not the same thing be done with regard to Port Kembla? Yes. The "Innamineka" goes down there now. She takes in half a cargo of coal, and then comes back to Sydney for the rest of her cargo, and for passengers.

563. What is the distance from Port Kembla to the Illawarra smelting works? Very little; but I cannot tell you the exact distance.

564. In the event of the Illawarra Harbour scheme not being carried out, ore could be landed at Port Kembla, and carried by rail to the proposed smelting works? Yes; if the harbour were improved.

565. Is not most of the coal sent from Newcastle taken away by sailing ship? About half the coal is taken by steamers and half by sailing ships.

566. Do you think it would be advisable to make the proposed eastern breakwater in order to enable sailing vessels to load at Port Kembla? Yes; I think it would be advisable to make both breakwaters if necessary.

567. If Port Kembla were improved, would coal-mine proprietors continue to use the other southern jetties? I think so. The rates over the Government line would always be more than it would cost them to ship at their own jetties.

568. *Mr. Egan.*] What coal does the Gulf line of steamers take? From Port Kembla mostly Corral coal, I think.

569. Are you sure that they do not take Metropolitan Company's coal? Quite certain.

570. Has it not been usual for those steamers to load coal at Woolloomooloo Bay and Darling Harbour and to take the Metropolitan Company's coal? Yes.

571. Why have they discontinued that practice? They have gone to Port Kembla only when they have been chartered to take coal from there.

572. The change has nothing to do with the firing of coal cargoes? I do not think so.

573. Can they load at Port Kembla in all weathers? No; sometimes they cannot load.

574. I believe that a large number of vessels which went there at the time of the Newcastle strike had to come away because they could not load within the specified time? I have not heard of that. There may have been occasional delays of a day or two. Vessels are frequently stopped from loading because of the rough weather.

575. They cannot unload at Port Kembla? No.

576. Was not the large output of southern coal last year the result of the Newcastle strike? That may have contributed towards it.

577. Can you tell us why the trade for the first half of this year was proportionately greater than the trade of last year? The southern coal is preferred by steamship owners for bunker purposes.

578. On account of its cheapness? No; but because it is better, and stows better.

579. What is the price at the present time? Six shillings and sixpence is supposed to be the ruling price. The price of Newcastle coal is about the same.

580. What prospect has Port Kembla of paying? I think the development of trade there would make the place pay.

581. You said that very few steamships are loaded at Newcastle;—can you supply the Committee with information which would support that assertion? I referred to oversea steamers, and I have no doubt that the statistics of the Newcastle Custom House would support what I say. I did not refer to the intercolonial steamers.

582. I suppose you know that a great deal of coal goes from Newcastle to San Francisco? Yes; but I do not know two steamers that have loaded coal for San Francisco within the last ten years.

583. Or for Valparaiso? I do not know a steamer that has loaded coal for Valparaiso.

584. Does much coal go to Melbourne from the southern district? A good deal.

585. Can you tell us how much? No; but I can get you that information.

586. Do you not think that the people of the southern district would be very much handicapped, as compared with the people of the northern and western coal districts, if they had to pay port dues and pilotage and light charges? I do not think they would be handicapped at all if they had a sailing-ship trade.

587. You rely upon a trade which does not exist at the present time to make this harbour pay? Yes, a trade which would result in the development of the district and the importation of ores.

588. Would the construction of the eastern breakwater make any material difference, so far as the creation of a safe harbour at Port Kembla was concerned? I think so.

589. What is the difference in the insurance charges between loading at Sydney and loading at Port Kembla? There is no difference.

590. Would the majority of people be satisfied with the construction of the eastern breakwater? That is a matter for the sailing-ship owners and the underwriters to settle.

591. I suppose that if the Government had to purchase the land surrounding Port Kembla it would have to pay a very high price for it? It would only be a matter of valuation.

- G. S. Yuill, Esq.
10 Nov., 1896.
592. You consider that the people on the South Coast have as much right to a harbour as the people on other parts of the coast? Yes.
593. *Chairman.*] Is there any other port on the South Coast besides Port Kembla where oversea trade can be done? There is no port where it is done now.
594. If the proposed eastern breakwater were constructed, would all the oversea trade of the southern district be done at Port Kembla? It is all done at Port Kembla now.
595. Therefore it is reasonable to infer that if Port Kembla were improved it would still be done there? Yes.
596. What is the difference to a coalfield between having a port at which boats can load regularly and a port which can be only used intermittently? That is a very difficult question to answer. I have known of a boat going to Port Kembla twice, and having been unable to load there. Of course that throws out the whole work of the coal-mine. It is impossible to say what the loss to the mine-owner is, but it is very heavy, and there is also the loss to the steamer.
597. Would it be worth 3d. a ton to the mine-owners to have the proposed eastern breakwater carried out? I should think it would be worth a great deal more. Where you have the sailing-ship trade, you can go on loading all the time, because whenever there are no steamers waiting you can load into the sailing-ships. Where there are no sailing ships, however, you are idle a great part of the time. I consider that it would be worth more than 3d. a ton to mine-owners to be certain that vessels would be able to load when they said they were coming.
598. What does it cost to ship coal once it is on a jetty? I should think 1½d. or 2d. a ton; but I can get you the information.
599. Will the underwriters insure a sailing boat going to the South Coast? No.
600. Will they allow any steamer to go alongside the jetties at Port Kembla? Any steamer that does not draw too much water.
601. A steamer drawing 25 feet? Yes. Steamers have been there which draw 27 feet. Port Kembla is recognised as one of the ports of call. I do not know whether oversea underwriters charge the owners at home more for allowing ships to go there; but our underwriters do not charge a penny more.
602. Would the underwriters allow a boat like the "Oruba" to go there? I think so. It is a safe place for any steamer so long as the weather is ordinarily favourable.
603. What is the cost of shipping coal? The cost of shipping coal at Port Kembla varies from 1½d. to 2d. per ton.
604. What would be the value of an eastern breakwater to the mines under present circumstances? Rough weather along the coast means an entire stoppage of loading at all the mines on the South Coast. Sometimes southerly gales may continue for days, and on occasions they follow each other so as to create vexatious interruption to the trade. Every day's stoppage of the mines caused thereby means a loss to all concerned, except, perhaps, the salaried officers. The men lose their wages, the owners lose the standing expenses of the mine, besides any profit on their operations, and in too many cases they lose good business, because sometimes steamers cannot wait indefinitely for favourable weather, and suit themselves otherwise. If the steamers have no option but to wait, there is also the daily demurrage loss to them. The prospect of such demurrage always weighs as a handicap with owners against taking southern loading under the present circumstances. It is difficult to place an absolute valuation upon all these various losses, but it must be, in the aggregate, serious for all concerned in the southern coal trade, and consequently also for the district.

WEDNESDAY, 11 NOVEMBER, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.	}	HENRY CLARKE, Esq.
The Hon. JAMES HOSKINS.		CHARLES ALFRED LEE, Esq.
The Hon. CHARLES JAMES ROBERTS, C.M.G.		JOHN LIONEL FEGAN, Esq.
The Hon. WILLIAM JOSEPH TRICKETT.		THOMAS HENRY HASSALL, Esq.
The Hon. DANIEL O'CONNOR.		GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

Archibald Campbell, Esq., M.P., sworn, and examined:—

- A. Campbell, Esq., M.P.
11 Nov., 1896.
605. *Chairman.*] Do you desire to make a statement to the Committee? Yes. It appears to me that the starting point in connection with this matter is one of population. There are fully 20,000 people directly or indirectly concerned in this scheme, that is, in a local sense, and altogether apart from the national aspect of the case. From Helensburgh to Ulladulla, and right round in the direction of Robertson and Wingecarribee, almost to Moss Vale, there are, I should think, 25,000 people, more or less, all of whom are interested in this scheme; but, as I prefer to be under rather than over the mark, I will put the number down as 20,000.
606. Do you include the people at Helensburgh? The people at Helensburgh are not so much interested as the people further south; but the proposed harbour would be of advantage to them. They would use it to a certain extent though I believe that in all probability the greater part of the Metropolitan Colliery Company's coal will always go to Darling Harbour. As, however, the grade to Port Kembla is better than the grade to Sydney, it is not unlikely that a good deal of that coal will go to Port Kembla. The only up grade going towards Port Kembla is a pinch of 1 in 40 between Stanwell Park and Clifton.
607. *Mr. Roberts.*] How do the distances compare? Helensburgh is 29 miles from Darling Harbour, and the 51-mile peg on the Illawarra railway is just opposite Port Kembla, so that Helensburgh is rather nearer to Port Kembla than to Darling Harbour.
608. *Mr. Humphery.*] How far is Port Kembla from the Illawarra Railway? Four miles at present; but the Department of Railways propose to make a connection which will considerably shorten the distance. It has

has been recommended that a deviation should be made leaving the main line on the north side of Wollongong, and proceeding down by what is called the Mount Keira line, which was resumed by the Government some years ago at a cost of £7,000, and thence over almost dead level country from Belmore basin to Port Kembla. Such a deviation would cut off a very considerable curve from the coast, that the Illawarra line makes by going in the direction of Unanderra.

609. *Mr. Roberts.*] Would it be a fair thing to call the distance 25 miles? Yes, I should think that would be about it. On the Loan Estimates which have just been passed, there is a vote for certain expenditure which has been required ever since the first settlement of the district to construct a road *via* the Macquarie Pass, to connect the high lands with the low lands. While the people of the high lands are almost within gunshot distance of the people of the low lands the steepness of the mountains has kept them almost as much apart hitherto as if they were living in different countries. When the proposed road is made, the people of Robertson will be able to come direct down to the coast, as they should have been enabled to do years ago, and the produce they will bring will help to increase the harbour traffic. The road I speak of will run from the head of the Macquarie River to Robertson. Between that very populous and fertile locality and what is called the Jamberoo Mountain road there is a mountain range running from 700 or 800 feet to 1,300 feet high. The people on the northern side of that range have been cut off from the Jamberoo route almost as effectually as they would have been if that route had been as far south as Shoalhaven. This new road, however, will enable them to bring their produce—and they grow large quantities of potatoes and other things—down into the Illawarra district. That will mean a very large traffic. I make this explanation in order to render clear my reference to the upland people when speaking of the number of persons concerned in the proposed scheme.

610. Do you expect that any produce will be shipped at Port Kembla? There could not be a large population settled there, and a large coal trade, without trade in other things springing up. Illawarra is a very fertile district, and is capable of producing almost anything. It is not, as is unfortunately the case with many other districts in this Colony, a place where there are abundant mineral deposits, but where the land is of very little use for agricultural purposes. In Illawarra it is the very reverse of this, and many persons who own valuable plots near coal-mines regret that they are unable to turn their land to a profit in an agricultural sense. However, the profits of coal-mining more than compensate them for that. I have with me some diagrams prepared by the Department of Railways, which show the grades upon the Illawarra line.

611. In your opinion, the line from Helensburgh to Port Kembla being 4 miles shorter than the line from Helensburgh to Sydney, and the grade being better going south, the Helensburgh coal will find its way to Port Kembla? Well, the distance you may regard as practically the same, and I believe that most of that coal will always go to Darling Harbour; but, considering the steep grades that there are against traffic going towards Sydney, I think it is likely that some of the coal will, like water, seek the lower level, and go to Port Kembla. The favourable grades which exist going south may induce some of the coal to go from Helensburgh to Port Kembla. At this juncture I might, perhaps, read the following letter which was sent by several of the southern colliery proprietors to myself and other Members representing the south coast district:—

To Messrs. Nicholson, Archibald and Alexander Campbell, Morton, Milliard, Clarke, and Wood, Esqrs., M.S.L.A. for the Southern Electorates.

Gentlemen,

Sydney, 1 October, 1896.

For many years the southern, or Illawarra collieries, as well as the general trade of that district, have suffered severely from the want of a properly-protected harbour, at which deep-sea or ocean-going vessels could load and discharge cargoes.

Of late years, on account of the changes in our trade, the want of such a harbour has caused great loss and inconvenience to the district.

At present we are deprived from doing a very large coal export trade with foreign markets on this account.

The competition of foreign mines has of late become so keen that we are totally unable to compete in many important markets, compelled as we at present are to convey our coal at great expense to Sydney Harbour, and there to discharge it into ocean-going vessels,—this not only destroys the condition of our coal, but the expense of conveyance, of discharging and re-loading the same is prohibitory.

About two years ago, on the failure of Wollongong Harbour to afford the desired facilities, the combined interests of Illawarra met, and agreed to make a joint representation to the Minister for Works to have particular surveys, and a report made by his accredited officers, of the various sites proposed for a harbour.

The plans and report of the Engineer-in-Chief for Harbours and Rivers have now been in the possession of the Government for many months, but nothing, so far as we are aware, has been done.

In view of the great increase of trade that would assuredly come to the southern collieries, and the impetus it would give to the erection of works and manufactories in the district, that would employ large numbers of workmen; if protection to shipping were provided—were as colliery owners, and otherwise largely interested in the development and prosperity of the district, trust that you will exert all the influence you possess with the Ministers to have this all-important question of a harbour for the South at once submitted to the Public Works Committee for their consideration and report.

The matter is, we assure you, of extreme urgency to the coal-owners, miners, merchants, and inhabitants generally of the important district that it will so greatly benefit.

We remain, &c.,

E. VICKERY, Coal Cliff Colliery.

JAMES R. M. ROBERTSON, South Bulli Colliery.

HERBERT JEFFERSON, Manager, Metropolitan Coal Co., Ltd.

JOSEPH VICKERY, Mount Kembla Coal Co., Ltd.

J. H. BRACKENBURY, Sec., Southern Coal Co. of N.S.W., Ltd.

CHARLES J. BYRNES, Mt. Pleasant Coal and Iron Co., Ltd.

H. Y. OSBORNE MACCABE (Attorney for FRANK OSBORNE), Osborne Wallsend Colliery.

Mr. Jefferson's signature goes to show that the Metropolitan Colliery is to some extent interested in this matter.

612. Are all the southern colliery proprietors represented by the signatures which you have read? The South Clifton Colliery is not represented, neither is the Bulli Colliery, which is owned, I believe, by Mr. Adams of Consultation celebrity. I believe that the names I have read are the names of those who compose the Southern Coal Owners Association. Leaving out the Metropolitan Colliery there are eleven collieries in the South Coast district, all of which are within range of the proposed port and would be able to get to it on a down grade of railway. Fully £1,000,000 must have been expended in connection with these eleven collieries, in buying the various properties, in opening the mines, in making tramways and obtaining rolling stock, and in procuring all the appliances necessary to the working of those concerns.

613. During what period? I suppose it is forty years since the first colliery—the Mount Keira Colliery—was opened. In the early days of the coal trade, the hope of the district for a port was centred

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centred in Wollongong, and the Government was urged time after time to carry out harbour works there to afford facilities for the shipment of coal. After many years, what is called the Belmore Basin was constructed there; but it has proved a poor substitute for a harbour. Previous to the construction of the Belmore Basin a coal-mine was opened and partly worked at Woonoona, and there being then no Government railway in existence, there was no alternative but to erect a jetty at Bellambi. Had a Government railway been in existence then as now, doubtless the trade of the district would have been concentrated at Wollongong, but in the absence of such line, and inasmuch as the seashore was easily reached, a good deal of coal was shipped from Bellambi.

614. *Mr. Humphery.*] Was not the Bellambi jetty swept away? I think it rotted away. After the people of the district found that the accommodation at Wollongong was inadequate, and that only small instalments could be obtained from the Government for the purpose of enlarging the harbour, they turned their attention to the question of railway communication. Eventually, the Illawarra railway was constructed, but the heavy grades have practically prevented coal from the southern district going to Sydney. The rates charged for haulage have also proved an obstacle to any development of the coal trade by means of the railway. The next step taken was for the establishment of a Harbour Trust. The same difficulty existed on the south coast that presented itself at Newcastle. For twenty or twenty-five years only small sums of money were voted for the improvement of the harbour, and consequently the Government officers in charge of the place were prevented from carrying out any very large works. On one occasion, £60,000 was voted for expenditure at Wollongong, and with that amount the present basin was practically constructed. The people of Wollongong, seeing that there was no hope for the improvement of the harbour by the expenditure of small sums upon it, asked for the creation of a harbour trust, hoping that such a trust would be able to raise money by the issue of debentures with which to carry out larger works. The trust was formed, and they thought that they had better follow the lines which the Government had been following in dealing with the harbours of the country, and they accordingly instructed Sir John Coode to design a harbour for Wollongong. Sir John Coode thereupon made a design for a very elaborate scheme. I should mention that from the formation of the trust Mr. McMillan, who, as the Colonial Treasurer of the day was the Ministerial head of the trust, invited the members of the trust to come to Sydney for a consultation, and he gave them to understand that he would endeavour to have passed through Parliament any amendment of the Act which, in their opinion, might be required to enlarge their powers and to give facilities for carrying out the work entrusted to them. By these promises and representations the Commissioners were induced to go much further than they would otherwise have gone, because they considered that they had the Government of the country at their back in regard to any change or alteration that might be required in the law, and they were also given to understand that they would get assistance from Mr. McMillan in floating a loan. Moreover, when they required an engineer they obtained a pupil of Sir John Coode. The only money they had to work with, however, was an endowment of £5,000 a year, the proceeds of dues at 3d. per ton upon coal, and a little money obtained from wharfage rates. They had to pay out of this the whole expenses of the harbour, including the dredge service, the pilot service, and the making good of any damage that might be done to the coal-staiths or the basin. The whole cost of maintaining the harbour, which had previously devolved upon the Government, was thrust upon the Harbour Commissioners, and in this way fully £3,000 out of an income of £5,000 per annum was swallowed up. Consequently the trust had only about £2,000 per annum to expend in any way.

614½. *Mr. Roberts.*] How much per annum did they collect in dues? I do not remember, but it was not a very large amount.

615. Were you a member of the trust? Yes; I was a member of the trust all through.

616. *Mr. Wright.*] About 80,000 tons of coal are shipped from Wollongong every year? Yes, about that. Either the year before the trust was created, or two years before, £9,000 had been voted for expenditure upon harbour improvements at Wollongong. Of this amount £3,600 remained unexpended when the trust came into existence. It will thus be seen that towards the first year's endowment of £5,000 to the Trust the Government actually had £3,600 in hand in the unexpended balance mentioned, thus reducing the real cost to the Treasury of the first year's endowment to £1,400, instead of £5,000, as otherwise would appear. A great deal has been said to the effect that money was squandered by the Wollongong Harbour Trust; but those who make such remarks know nothing of the real facts of the case. For fully a year before the trust came into existence, and practically ever since—a period of about eight years—the port of Wollongong has cost the Government practically nothing. The only vote granted in that time was one which was passed the other day for an expenditure of £1,000 to repair the breakwater.

617. *Mr. Roberts.*] The total expenditure of Wollongong up to date is estimated by the Government at about £157,000 altogether? I suppose in that estimate the estimate of liabilities includes the claim submitted by Mr. Hungerford. During the time that the trust was in existence tens of thousands of pounds were spent upon harbour works in other places. As Wollongong stands next to Newcastle, so far as the importance of its trade is concerned, it is reasonable to suppose that a very large amount would have been voted for the improvement of the Wollongong Harbour had it not been for the existence of the trust. In all probability £100,000 would have been voted for that purpose within the period referred to. If there were no trust in existence, no Government could have resisted the just claims of the Illawarra district for such expenditure. But instead of £100,000 being granted, the only money expended was the £25,000 paid to the harbour trust, and the greater part of that money went to pay for the ordinary maintenance of the port, which would otherwise have had to be borne by the Government. There is a population of over 3,000 at Wollongong, but after the harbour trust failed to be successful they became tired of these peddling attempts to give proper accommodation there, the only result from which was very inadequate, while large ocean-going steamers were able to load at Port Kembla without the assistance of any harbour improvement. Therefore, notwithstanding the fact that Wollongong is a Government port, and that all the Government institutions are there, the people of Wollongong came to the conclusion that they would throw in their lot with the people of other parts of the district, and allow the Government officials to decide which was the best place for a harbour. I live in Wollongong, and my interests are mainly centred there, but rather more to the north of it than to the south. Personally, it would suit me best if the Wollongong Harbour could be made to answer all purposes, and the next best thing for me would be to have Bellambi Harbour made; but, in the interests of Illawarra, I was willing to join with Mr. Nicholson, the hon. Member for Woronora, and other people of the district, and ask the Government to send its officials to make a survey of the coast, and to report upon the best place for a port. A survey has been made,
and

and Port Kembla has been chosen. For myself, I never thought that any other competent recommendation was possible. Any person with one eye open who looked at the place would see that nature had done far more for Port Kembla than for any other place on the coast. To show that from the very earliest days of the Colony this place has presented itself to persons connected with the sea as a place of shelter, I would like to read a few lines from Bennett's "Australian Discovery and Colonisation." One hundred years ago Bass and Flinders voyaged down the south coast in the "Tom Thumb," a boat 8 feet long, and the first place that struck them as being likely to afford shelter was the place where it is now proposed to make a harbour. Mr. Flinders says:—

We were constrained to pass the second night in the "Tom Thumb," and dropped our stone anchor in 7 fathoms under the lee of the point.

That is exactly the spot where it is proposed to make the harbour. Bass and Flinders had no local axes to grind. They travelled down the coast when the country was in its virgin state, and they anchored in that spot because, in their opinion, it presented the safest shelter. The following day they went southward round the point and entered what was unquestionably Lake Illawarra, and they came back in the evening and anchored again under the lee of one of the islands. Not only is there deep water at Port Kembla, but on the mainland to the south of it there is a high ridge which shelters the basin in southerly weather. Some men from the Harbours and Rivers Branch of the Department of Public Works are down there now testing the place for stone. There appears to be enough stone there to build a dozen breakwaters. I believe that the first Government settlement on the south coast was made at Port Kembla. The land in the neighbourhood was granted to the late Mr. David Allan in 1817, and some years later a Government settlement was established at Port Kembla. In 1835, the late Mr. Charles Throsby Smith was granted about 300 acres at Wollongong, and whether it was because it was found difficult to cross Tom Thumb Lagoon from Port Kembla, to get to Sydney, or because Mr. Smith was able to bring some influence to bear, the whole encampment was soon afterwards shifted from Port Kembla to Wollongong. The Government township laid out at Wollongong was a little south of the present town, Wollongong being built upon what was Mr. Smith's property. The first jetty erected at Port Kembla—the eastern jetty—was erected by the Mount Kembla Coal Company about twelve years ago, or more, and some years later—about seven or eight years ago—the other jetty was built. The second jetty runs into deeper water than the first jetty, and it is there that the large steamers load.

618. Is it substantially built? I am not an engineer; but I believe that it is a fairly strong jetty.

619. Did it cost more to construct than the eastern jetty? The eastern jetty has been very much strengthened since its erection, and there are now two levels on it. On one level the waggons run in one direction, and on the other level they run in the other direction. I should not think there was much difference between the values of the two jetties. The steamer "Indrani," which loaded at Port Kembla the other day, had 7,400 tons of nickel ore on board at the time, and she took away 1,200 tons of bunker coal.

620. If large steamers can load at the port now, why should we spend money in improving it? Whilst large steamers are able to load at Port Kembla in fair weather, they have to be ready to clear out at any time in the event of the weather changing. In a memorandum which I obtained from the Southern Coal Company, and which is dated the 29th August this year, they say, after referring to a number of large ships which have loaded at Port Kembla, "This satisfactory record has been achieved in the face of difficulties, which would be removed by the erection of a breakwater protecting the port from the southerly weather that occasionally compels loading operations to be suspended for days together. A case in point may be instanced: The "Gulf of Bothnia" and the "Rakanoa" were to load some 5,000 tons during the present week, but the sudden south-westerly gale has compelled both steamers to wait, entailing considerable loss." This would have been obviated by a breakwater.

621. Do you know of any case where a steamer, having come alongside the jetty, has had to suddenly leave because of southerly weather coming up? I have known of many such cases. When the question of improving Darling Harbour was before the Public Works Committee in 1892, the Hon. Ebenezer Vickery gave this evidence in reply to a question by Mr. Ewing:—

What do you believe is the best way of dealing with the coal on the south coast? An immense amount of money has been spent at Wollongong in the erection of wharfs, breakwater, and jetties, and if the facilities at Darling Harbour are increased the effect will be to injure the port of Wollongong very much. At the same time, I do not think that Wollongong is the right place for the shipment of southern coal. Had the subject been looked upon in an unprejudiced light by competent persons, I am confident that Port Kembla would have been selected. By an expenditure of from £50,000 to £100,000, a harbour might be made there for the shipment of southern coal quite equal to that of Newcastle, and quite as safe as Port Jackson; and it would not only be a harbour for the shipment of coal, but also a harbour of refuge in stormy weather. Port Kembla is the place where vessels often run for shelter in severe weather.

I have obtained from the Custom House officer at Wollongong a summary of the shipping operations at Port Kembla during the last five and a half years. It is contained in the following table:—

Number of Vessels.	Foreign Bound and Coasting.	Registered Tonnage.	Tons Coal Shipped.	Tons Coke.	Number of Vessels.	Foreign Bound and Coasting.	Registered Tonnage.	Tons Coal Shipped.	Tons Coke.
1891.					1894.				
83	Foreign	62,983	76,949	3,189	113	Foreign	126,426	111,400	10,790
275	Coasting	86,610	118,468	.....	218	Coasting	53,461	76,129	.....
358		149,493	195,417	.....	331		179,887	187,529	.....
1892.					1895.				
96	Foreign	88,277	106,920	.....	110	Foreign	125,636	128,183	7,120
368	Coasting	102,236	136,495	.....	254	Coasting	65,898	92,054	.....
464		190,513	243,415	.....	364		191,534	120,237	.....
1893.					Half-year 1896.				
107	Foreign	109,798	120,783	3,209	60	Foreign	70,363	96,476	511
315	Coasting	87,895	116,764	.....	99	Coasting	27,635	37,447	.....
422		197,693	237,547	.....	159		97,998	133,923	.....
					Total number of vessels, 2,098		1,010,518	1,218,068	24,810
						Total coal and coke			1,242,837

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A. Campbell, Esq., M.P. 622. You regard Port Kembla as the most suitable place on the south coast for the construction of a harbour? Yes; and the Government officials having reported in favour of it, the people of the district, of whom I am one, are willing to abide by their report.

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623. Are the people of Wollongong content to have the harbour constructed at Port Kembla? Yes.

624. What about the people of Bulli? I understand that several of them would like to see the harbour made at Bellambi, though I cannot understand how it is that prominent people in that locality are departing from the arrangement which was made to abide by the decision of the Departmental officers. That was the understanding come to by the representative people of the three localities principally interested—Port Kembla, Wollongong, and Bellambi.

625. You know that dissatisfaction has been expressed in regard to the report in favour of Port Kembla? Dissatisfaction has been expressed by a few individuals at the Bulli end; but I am not aware to what extent they represent public opinion there on the subject.

626. Have you heard people interested in the coal trade say that they would not use Port Kembla if harbour works were carried out there? I have not heard anybody directly interested in the collieries say that, though the manager of the South Bulli Colliery has expressed himself strongly in favour of Bellambi.

627. There are private jetties both at Bulli and Bellambi? Yes.

628. Do you think it likely that coal would be sent to Port Kembla from the vicinity of Bulli and Bellambi? Large vessels cannot load at those jetties, so that whenever there are large vessels to be loaded the coal will have to be sent to Port Kembla. At the present time as many as four or five collieries sometimes contribute towards the loading of a large vessel. The Corrimal Colliery, which is situated some distance north of Wollongong, pays about £3,000 a year to the Government for the use of the line. They use their own waggons and locomotives, and pay $\frac{1}{2}$ d. a ton for the coal hauled over the line.

629. But small vessels would continue to load at Bellambi and Bulli? In all probability, while the jetties lasted; but I am strongly of opinion that it would be found more expensive to maintain the jetties and to pay all the incidental expenses connected with the work of loading there than to send direct to Port Kembla. As far as Bellambi is concerned, it is doubtful if a jetty would have been erected there in the first instance, had there been a railway to Wollongong. The anchorage is bad both at Bellambi and Wollongong. The largest vessel that ever put into Wollongong was the "Royal Tar," the ship which took the New Australia people away. She was a 900 tons vessel, and nearly blocked up the basin. About eighteen months ago, when a steamer was lying in the basin in very rough weather, the captain considered it necessary to scuttle her in order to save her, and did so.

630. What sort of anchorage is there at Port Kembla? I am told by captains of vessels, the pilot at Wollongong, and other people capable of giving an opinion, that it could not be better. The anchor goes down into a good clay, and would hold for all time.

631. Have you any information to give us in regard to the Lake Illawarra scheme? That is a private concern. Powers were given by an Act of Parliament to enable a private company to open the entrance to Lake Illawarra, and to dredge a channel across the lake as far as Tallawera Point. The company obtained their powers seven years ago, about the time that the Wollongong Harbour Trust was formed; but so far little has been done. At the same time it was never intended that they should be looked upon to supply the harbour requirements of the south coast. They have a large property adjoining Lake Illawarra, and they have power to make the best use they can of it, and if they can make a harbour there, I say—and I believe the general public would say—God speed them.

632. Had they not to construct a railway within a certain time? Yes, and that work was completed just before the time expired. If it had been a question whether the Government or a private company should convert Lake Illawarra into a harbour, the public, and I as one of the public, would have sided with the Government against the private company; but as it was a question whether a private company would make a harbour there, or whether there should be no harbour at all, there was no objection to a private company carrying out the work if they would do so. If, within the last seven years they had carried out their proposed work they would have had a strong case in assuming that the construction of a harbour at Port Kembla was unnecessary; but inasmuch as they are no further forward than they were seven years ago in regard to harbour construction, I think it comes with bad grace from them to try and block the Government proposal.

633. Do you know that they have any desire to do so? I have read in the newspapers that they have sent a letter to this Committee objecting to the proposed work.

634. Are you aware that the time within which they have to carry out their proposed work does not expire for two years? Yes. Instead of doing anything practical in the way of harbour works within the time available to them, they asked for and obtained an extension of time. A good deal has been said about the quantity of coal-land in the southern districts owned by private individuals; but this map of the County of Camden which I produce shows that the largest coal-owner in the district is the State. The State owns an area of coal-bearing land many times greater than the whole area held by private individuals.

THURSDAY, 12 NOVEMBER, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHREY.

The Hon. JAMES HOSKINS.

The Hon. CHARLES JAMES ROBERTS, C.M.G.

The Hon. WILLIAM JOSEPH TRICKETT.

The Hon. DANIEL O'CONNOR.

HENRY CLARKE, Esq.,

CHARLES ALFRED LEE, Esq.

JOHN LIONEL FEGAN, Esq.

THOMAS HENRY HASSALL, Esq.

GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

Archibald Campbell, Esq., M.P., sworn, and further examined:—

A. Campbell, Esq., M.P.

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635. Mr. Roberts.] When the Committee rose yesterday afternoon you were making some explanations in regard to a map of the County of Camden? Yes; I was making the statement that, although it has been represented that the proposed harbour would benefit private owners to a very great extent, if not wholly, the real fact is that the great coal-owner in the southern district is the State. Immediately

Immediately back from the summit of the Illawarra Range the watershed dips northward and westward, so that the margin of the Sydney water reserve comes right to the top of the range. The whole of the coal in that reserve belongs to the Government, and for every ton of it that is taken a royalty of 6d. must be paid to the Treasury.

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636. *Mr. Hoskins.*] How far is that land from the railway? It is immediately behind the summit of the Illawarra Range, which at no point is more than a few miles from the railway, and some of the Illawarra mining companies are now working part of that coal. I believe that the Mount Keira Company takes some of the coal, and others of the colliery companies in the district have secured permits to mine there. The coal will be brought out through the present openings, and will be taken to the railway and to the proposed harbour by the existing tramways. I do not say that the whole of the coal in this reserve, or even half of it, will be worked from the eastern side. The reserve comprises an area of 354,000 square miles, and I cannot say how much of it would be worked from the eastern side. But the coal is there, and a lot of it has already been secured by means of permits, for which an amount of £64 a year is payable. It only requires very simple arithmetic to ascertain what royalty will be obtained from the coal underlying this ground.

637. *Mr. Wright.*] What is the thickness of the seam? There are four or five seams. One seam, taking a very low average, has a thickness of 5 ft.

638. *Mr. Hassall.*] Is that the Bulli seam? Yes; the top Illawarra seam. That is the seam which the collieries are working now, but at Dapto they are testing some lower seams. The Department of Mines reckons that every foot of coal per acre means 1,000 tons, so that a seam 5 ft. deep would give 5,000 tons, and pay a royalty of £125 an acre. The sooner facilities are offered for the exhaustion of the private coal supply the better it will be for the country, because then for every ton of coal that will be worked the State will receive a royalty of 6d. a ton, or £125 from every acre of only a 5 feet seam. Only recently there has been a lawsuit between the representatives of the late Mr. Henry Osborne and the old Bulli Coal Mining Company. The representatives of the late Mr. Osborne contended that the old Bulli Coal Company had been working into their land, and they tried to prevent the company from going into liquidation. They put in a claim for £11,250 for 14 acres 1 rood and 5 perches of coal-land which they said had been worked; but afterwards they asked permission to increase their claim to £45,000. I am not aware what the end was, but I am under the impression that the plaintiffs got a very substantial verdict. They claimed that 8 feet of coal had been worked, and they made no allowances for faults or anything of that kind. I refer to this case to show the value of the State coal property. It would not require many acres to be worked for the royalty to be sufficient to pay interest even upon £500,000.

639. *Mr. Roberts.*] How far would the land you speak of be from the Port Kembla? About an average of 10 miles.

640. Is there a railway anywhere near it? The Mount Kembla Company, after they shall have worked out their own land, will work into the Crown land, and I believe the Mount Kiera Company and the Mount Pleasant Company intend to do the same. Not only will the State receive a royalty of 6d. per ton, but there will also be a return from the haulage of the coal over the railways; and should there be shipping dues and so forth paid on it, the Government will get fully 1s. a ton for it.

641. *Chairman.*] What royalty do the private companies pay to private coal-owners? I think the usual royalty is about 9d. a ton, and they are glad to get coal at that price. I believe they have sometimes to pay as much as 1s. a ton.

642. *Mr. Roberts.*] Are you in favour of the construction of two breakwaters at Port Kembla, or do you think that the eastern breakwater will be sufficient? The construction of the eastern breakwater would protect the place very much from the sea.

643. Do you think it would be necessary to carry it out 2,800 feet? I favour the construction of both breakwaters, and I think that the present jetties should be used at first as much as possible for the shipment of coal, a small portion of the long wharf proposed being constructed at which one or two fair-sized vessels could discharge. If only the eastern breakwater were constructed it would be desirable that it should be lengthened rather than shortened. Beyond the construction of such a wharf at which vessels could discharge, I would leave the rest of the proposed inner arrangements over for the future development of the port. The whole of the wharfage accommodation proposed by the engineers is not now required, nor is it likely to be required, even under the most favourable circumstances, for some time to come.

644. If both breakwaters were constructed, do you not think it probable that the whole of the improvements would be necessary? The construction of both breakwaters would take five or six years, perhaps ten years, and there is no saying what development may not take place in that time.

645. Do you think it would be better to construct the eastern breakwater first? Yes, I think it should be carried out first. With regard to the discharging wharf, it might be put between the two jetties, or it might be made on the west side of the harbour; but its location is a matter upon which I am not capable of expressing an opinion.

646. Do you think that if the eastern breakwater were constructed a large number of sailing ships would go to the port to load coal for foreign parts? I am informed so by people who understand the trade.

647. Do you disagree with Mr. Yuill's evidence? I would not take exception to his evidence on these points, nor to that of any gentleman who understood the shipping trade of the place. Mr. Yuill is a very high authority on the subject, and I take it for granted that what he said was correct.

648. Can you tell us anything about the probability of ores coming to Port Kembla, should the harbour be constructed? The smelting-works at Dapto seem to be proceeding very well; but the local manager has complained to me about there being no unloading appliances in the district, and consequently I wrote to the Department of Public Works upon the subject. Everything that they have ordered from over sea has had to be brought from Sydney.

649. Would there be any large shipment of agricultural produce from the proposed port? There would be some, but the percentage would not be very large. There will always be a considerable amount of produce shipped where there may be a large trade connected with a fertile and populous district. The "Indrani," when she went to the jetty the other day, had 7,400 tons of nickel ore on board, which she was taking from New Caledonia to Glasgow. Undoubtedly, when we get appliances for discharging cargo on the south coast, a great deal of that ore will be treated there.

650. *Mr. O'Connor.*] That vessel had no difficulty in getting into the port? No, because the weather was fine. If the weather had been rough she would not have been able to enter; and if it had come on rough after she got there she would have had to go away before completing her loading. Any vessels that came to the port with ore or any other cargo would be likely to take coal away.

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651. *Mr. Roberts.*] Would the resumption of the land near Port Kembla be a costly matter? No, I think not. It is very poor land, though the land in other parts of the estate is fairly good. It would be necessary to resume land to take in an area for a stone quarry to the south of Port Kembla. Probably 200 or 300 acres would have to be taken. The present market value of that land would be, I should say, £8 or £10 an acre.
652. Do you think it would bring that? Part of it would not; but the whole of it might average that. I am speaking of its value apart from the probable construction of this harbour. Considering the additional value which the harbour works would give to what was left, I think the State might expect to get what it resumed practically for nothing.
653. Do you think that this is a case where the betterment principle should be applied? Yes, decidedly. I am rather opposed to the application of the betterment principle where the holdings affected are small; but where there are large portions of land, I am strongly in favour of the principle being applied. The land that would have to be resumed is part of an old grant, which is bordered on the east by the ocean, on the north by Tom Thumb's Lagoon and part of Allan's Creek, and on the south by a line running across from Lake Illawarra towards Red Point.
654. *Chairman.*] There appears to be an area of something over 2,000 acres? Yes; 2,200 acres. The date of the grant is 24th January, 1817.
655. *Mr. Roberts.*] The owners of this property might give the land wanted by the State, and they would obtain full compensation because of the increased value which the State expenditure would give the rest of the land? Yes. If the estate were mine, I should be very glad to give the Government 200 or 300 acres of it free. The harbour improvements would render what was left more valuable than the whole estate is now.
656. I think you said there was a quarry on part of the land? There is a large quantity of stone there, in a ridge extending eastward and westward right through the estate, and within half a mile of the proposed harbour. I do not think many harbour works would exhaust the stone supply.
657. Is equally good stone obtainable at Bellambi? I do not think so. Stone for Bellambi would have to be obtained from the Illawarra Range either about Clifton or nearer Sydney. There is plenty of free-stone between Waterfall and Helensburgh, and there is good stone about Clifton, but it is somewhat difficult to get at. Near the South Bulli Company's mine there is some basaltic stone, but I am under the impression that it would be difficult to work.
658. Would the jetties at Port Kembla cost much to resume? A gentleman representing the owners of the eastern jetty has stated more than once that his company would be ready at any time to dispose of it to the Government, either on condition that the shipment of their coal from it should not in the future cost them more than it does now—which, in my opinion, is a proposal which should not be entertained, because it is so very indefinite—or at such a figure as may be determined upon by arbitration. Mr. Senior, of England, who represents the interests connected with the other jetty, is in the Colony now, and, I am informed, is in a position to deal with the matter absolutely.
659. How many new jetties would be necessary at Port Kembla? I think that these two would be sufficient for some time to come.
660. Do the islands opposite Red Point afford a good shelter to Port Kembla from the south-east? Yes; from the south and south-east. Before leaving Port Kembla, I should like to refer to its advantages as a harbour of refuge. At the present time there is not a single place where a vessel can take refuge between Sydney and Jervis Bay, a distance of nearly 100 miles.
661. Do you think that a harbour of refuge is necessary there? I think so. At the present time a vessel might become disabled between the two places with very disastrous consequences.
662. But you do not look upon this as a special reason for carrying out the proposed works? No; I only put it as an incidental advantage. The Marine Board, in making a cruise down the coast recently, put in to Port Kembla, and I thereupon wrote to them to ascertain what they thought about the place. This is the reply I got,—

Sir,

Sydney, 14 October, 1896.

In reply to your letter of the 8th inst., I have the honor, by direction of the Marine Board, to inform you that they made a cursory inspection of Port Kembla on their late tour along the coast, and were certainly impressed with its capacity as a coal-shipping place. If a breakwater of 2,800 feet is run out, as proposed, the place will be much improved. It will then afford greater convenience than at the present time, and would, moreover, give excellent shelter to ships in difficulties in the neighbourhood.

I have, &c.

GEO. S. LINDEMAN.

Secretary.

Archibald Campbell, Esq., M.P., Parliament House.

The captain of a very large vessel recently told me that his last shovelfull of coal was in the furnace when he got into Sydney from the southward, and that he was afraid all along of the supply running out. He was a stranger, but knew that there were places along the coast where coal could be obtained, but he did not know how he could get into them, neither could he with the large vessel he had.

663. Do you think it would be wise for the Government to go on with the proposed work until it is seen what the Illawarra Harbour Company intend to do? I am of opinion that the Illawarra Harbour Company should not be taken into consideration at all in connection with the Government responsibility to the coal trade of the southern districts.

664. Do you mean to say that there would be trade for Port Kembla even if the Lake Illawarra scheme were carried out? I believe that there would be a very good trade even for the two harbours; but the Lake Illawarra people have given no practical indication that there is anything more to be hoped for from them in the future than there was in the past.

665. Has any work been done at the entrance to the Lake? A bank of stone has been laid along from Windang Island. Lake Illawarra would be useless as a harbour of refuge because of its narrow entrance.

666. Would it not be more convenient for the Illawarra Smelting Company to have its ore landed at Tallawera Point than to have it landed at Port Kembla? I have scarcely referred to the ore traffic at all. I regard that trade and the possible export of produce as only incidental to the coal export trade. Even if their ore were brought to Tallawera Point they would still have some distance to take it to get it to where the works are.

667. Does it not appear to you that it would be useless to carry out the Port Kembla works if the Illawarra scheme were completed? That is not my opinion. I believe that there will be sufficient trade to Port Kembla in any case. The great want of the district is facilities for the loading of the largest vessels,

vessels, and in my opinion it is not probable that harbour works are likely to be carried out, that will enable very large vessels to get into Lake Illawarra. The company say that they are going to dredge a channel 25 feet deep; but in their Act they only specify 15 feet.

668. A fair sized steamer would be able to get up a channel 25 feet deep? Yes; if the works were carried out. I contend that the Illawarra scheme should not be allowed to stand in the way of the Government scheme at all. It would be just as reasonable to allow the omnibus companies to oppose the construction of the George-street tramway. I have here an extract from a return made by Mr. Joseph Barling, before the Parliamentary Standing Committee on Public Works—in the course of evidence being taken relating to proposed harbour improvements at Newcastle.—20th March, 1895.

A. Campbell,
Esq., M.P.

12 Nov., 1896.

RETURN showing the amount expended in connection with Newcastle Harbour to 1894.

	£	s.	d.
Southern breakwater	103,789	18	1
Northern	19,636	0	5
Newcastle—Wharf construction and erection	35,310	14	10
" Lighthouse repairs	407	15	4
" Signal stations	190	12	0
" Boat shed	673	6	7
" Boatharbour	1,232	4	0
" Steam-crane	1,308	12	1
" Purchase and erection of steam cranes	10,415	17	4
" Steam cranes, working expenses, and repairs	5,864	19	2
" Additional steam cranes	8,092	8	8
" Coal staiths	30,768	14	3
" Hydraulic engine-house, cranes, &c.	20,000	0	0
" Screw-moorings	1,875	0	0
" Lamps on wharf	60	0	0
" Removal of rocks	18,871	18	7
" Beacons, southern breakwater	303	19	8
" Wharf and shipping facilities Newcastle, Bullock Island, and Stockton (exclusive of steam cranes, Newcastle wharf)	288,065	3	1
" Wharf repairs	15,490	9	10
" Dyke, Bullock Island	1,958	14	3
" Boatharbour, Bullock Island	2,207	12	10
" Jetty at Stockton	232	2	8
" Excavation of silt by dredges	477,084	11	8
" Reclamation, North Harbour, Newcastle	1,146	3	0
" Dredge, &c., for Newcastle	19,966	6	4
" Punt for "Vulcan"	1,220	0	0
" New steam dredge	48,950	14	2
" Construction of three punts for dredge "Newcastle"	3,500	0	0
" Large iron punt for dredge "Newcastle"	4,936	15	0
	*£1,124,480	14	4

* Since then a further sum of £147,000 has been voted on the recommendation of the Public Works Committee, for Harbour Improvements at Newcastle, thus increasing the expenditure in connection with that port from £1,124,480 14s. 4d. in 1894, to a total of £1,265,480 14s. 4d. in 1895.

I should also like to hand in some extracts from the Annual Report of the Department of Mines for the year 1895. When it was proposed to submit the matter of a port for the south coast to your Committee, some people spoke of it as being ridiculous to make a harbour for the exportation of only 900,000 tons of coal. At Newcastle, however, I desire to point out by way of illustration that the exportation last year was only a little more than twice that tonnage.

Newcastle Harbour (the Principal Coal Port of the Southern Hemisphere), and its Facilities for Shipment.

Newcastle, in the county of Northumberland, the trade of which is second only to that of Sydney, owes its great commercial importance to the different coal-mines which have been opened out close to and within 32 miles of the harbour.

On the south or town side of the harbour there is a continuous line of wharf, 3,607 feet long, belonging to the Government, 2,130 feet of which is occupied for cargo berths for deep-draught vessels; 500 feet reserved for Sydney passenger steamers; and the remaining 977 feet is used as a general cargo wharf, including a lumber berth for loading vessels with timber. The whole length of this wharf is lit with gas.

At Bullock Island, on the western side of the harbour, a substantial timber Government wharf, 7,760 feet in length, and four ballast jetties, each 50 feet long and 200 feet apart, has been constructed along the face and around the south end of what was formerly known as the Ballast Dyke; at present 5,550 feet of this wharf is set apart chiefly for the shipment of coal. The loading is performed by hydraulic cranes, of which twelve are erected, capable of shipping 1,000 tons of coal each in twenty-four hours—six being 15-ton, four 9-ton, and two 25-ton cranes, the latter for discharging heavy machinery, &c., and three 15-ton steam cranes. The remainder of the wharf and the ballast jetties are used by vessels discharging ballast or waiting their turn to load. Ships of the largest class can load under the hydraulic cranes, and proceed direct to sea through deep-water channels recently dredged. It is proposed to spend immediately £150,000 to further increase the shipping facilities at Bullock Island. This wharf is now lit by electric light, which greatly facilitates the loading of coal at night, and is one of the finest systems of electric lighting in existence, consisting of fifty large arc lamps, each 5,000 candle power.

A branch double line of railway connects the wharf with the Great Northern Railway, and along the back of the wharf is laid a very extensive system of sidings and standage room for working coal traffic.

A sand-dredge is reclaiming the foreshore in front of the hydraulic engine-house, where 2,000 feet of wharf will be erected as a commencement of a 90-acre basin inside the present wharf, which basin it is intended to dredge to a depth of 25 feet, where vessels will be able to lie in slack water, and the whole will be lit up with the electric light.

At Stockton, on the northern side of the harbour, there is a Government wharf 600 feet long with a shoot capable of shipping 1,000 tons in twelve hours. A sand-dredge is also reclaiming the foreshore at Stockton.

In addition to these Government cranes, the Australian Agricultural Company have three large private shoots capable of delivering 2,000 to 3,000 tons of coal per diem. Vessels loading from them can discharge their ballast on to the company's ballast wharf, lying alongside at a draught of 18 ft. 6 in. and upwards. Vessels drawing 22 feet can load at the company's shoots. The Waratah Company also have a shoot at Port Waratah capable of shipping about 50 tons per hour, and Messrs. J. and A. Brown have two shoots on the Hunter River, at Hexham, 10 miles from Newcastle, capable of shipping 100 tons per hour.

Newcastle Facilities for Shipment of Coal.

The present estimated capabilities for shipment of coal at the abovementioned places in Newcastle Harbour are about 24,000 tons per day by the Government hydraulic cranes, and about 4,800 tons per day from private shoots.

Coal shipped from Newcastle Harbour, the Principal Coal Port of the Southern Hemisphere.

The quantity of coal shipped in 1895 to foreign and intercolonial ports was 1,920,378 tons, valued at £678,217; and the largest quantity of coal taken by a steamer (May 30, 1895) was 5,235 tons, by the "Port Stephens," and by sailing vessel, 4,558 tons, by the ship "Royal Firth, on June 14, 1895,

Illawarra

A. Campbell,
Esq., M.P.

12 Nov., 1896.

Illawarra District, and its Facilities for Shipment of Coal.

The Wollongong Harbour and Basin is situated 45 miles south of Sydney Harbour, and at low tide there is a depth of 13 feet of water at its entrance and alongside the wharf, where there are three cranes capable of shipping 1,800 tons of coal per hour.* The Belmore Basin has a depth of 17 feet of water at its eastern side, where there are four shoots, each capable of shipping 100 tons per hour; but as only two vessels can load there at the same time, the largest quantity of coal shipped by them is 200 tons per hour, or 2,000 tons per day. The largest steamship which has coaled at the harbour drew about 15½ feet of water, and carried about 900 tons of coal; and the largest sailing vessel has taken away about 700 tons of coal.

Coal shipped at Wollongong Harbour, the Jetties, and sent by Rail, &c.

The coal raised in the Illawarra and Southern districts in 1895 was 910,123 tons, valued at £239,035.

* The cranes referred to have never been used for coal shipping, all such loading being done by the shoots.

669. *Mr. Black.*] Do you consider that the construction of a harbour at Port Kembla would be a good thing for the Government? Eventually it will be, especially when the State coal land comes to be worked.
670. The proposed harbour if constructed as projected will cost £440,000. In addition to that there will be the cost of purchasing existing lines of railway, and of resuming a considerable quantity of private land and two jetties. Will it not also be necessary to make a new railway connection? It will be necessary to make about 4 miles of railway over level country, most of it being Crown land.
671. Do the colliery owners down there think that this will be a good thing for the Government? I leave them to tell their own tale.
672. How is it that if the construction of this harbour would be such a good thing these shrewd business men do not carry out the work themselves? The Government are one body representing the whole community, whereas there is a great number of different interests in the Illawarra district.
673. Do these gentlemen believe in private enterprise? Not in regard to harbour works such as that proposed, I presume. They may have quite enough to do to carry on their own mines.
674. They believe in private enterprise when they see a certain profit, and when they do not they believe in Government enterprise? Well, I will leave them to answer that question themselves.
675. You think that if both the Lake Illawarra scheme and the Port Kembla scheme were carried out, Port Kembla would get the trade? Probably each would get some trade.
676. Lake Illawarra would not be shut out by the competition? Not if the company's terms and conditions were not exorbitant. One reason why a Government harbour should be constructed is that it may not be within the power of a private company to extort the last penny from the trade of the district.
677. You do not think that if both harbours were constructed, there would be a great outcry against Government interference with private enterprise? Not unless it was from those associated with the Lake Illawarra scheme.
678. As the distance between Helensburgh and Port Kembla is only 2 miles less than the distance between Helensburgh and Sydney, it is not probable that coal would be sent from Helensburgh to Port Kembla except to be loaded into steamers requiring fuel for their own consumption? Yes, or into vessels taking over-sea cargoes. They would never send coal from Helensburgh to Port Kembla to be taken again by sea to Sydney.
679. Did you say that the coal shipment at Newcastle only exceeded that of Port Kembla by 100 per cent.? The coal sent away from Newcastle last year was only about 100,000 tons more than twice the output of the Illawarra district.
680. Are you aware that the trade of Newcastle does not depend wholly upon the coal shipments? Yes.
681. Newcastle is, to a large extent, the port for the northern districts? Quite so.
682. Do you think that Port Kembla is likely, in the near future, to become a port for the reception of general goods, such as Newcastle is? It has not so large a district behind it, as Newcastle has; but it is difficult to say what developments may not take place in the future. Authorities consider that the mineral deposits of the Illawarra district are capable of great development, and it is possible that as much trade may result from that development as results from the pastoral and agricultural industries in the northern district.
683. Do you consider that in the event of a large dairy produce trade with foreign countries, Port Kembla will be the port of shipment? I regard the shipment of dairy produce as only incidental in its significance. I believe that most of the dairy produce would come to Sydney, though, of course, the vessels trading to Port Kembla would require supplies.
684. Do you not think it would be possible to so construct the proposed breakwaters at Lake Illawarra as to allow vessels to enter in safety even in bad weather? I do not think so. The breakwaters would not be out very far from the shore, and the worst swell always prevails in the shallow water near the shore.
685. One of your objections to the Lake Illawarra scheme is that the entrance would be too near the shore? I say that a vessel would be very fortunate to be able to get into such a narrow entrance in safety during bad weather.
686. Do you think it would be possible to make the entrance to Port Kembla safe in all weathers? I do, because it will be right out in the open sea in deep water.
687. The entrance would have to be wide? I should think that the 800 feet proposed would be wide enough; but that is a question for engineers and nautical men to decide.
688. The wider the entrance the rougher the water inside? Possibly.

FRIDAY, 13 NOVEMBER, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHREY.

The Hon. JAMES HOSKINS.

The Hon. CHARLES JAMES ROBERTS, C.M.G.

The Hon. WILLIAM JOSEPH TRICKETT.

The Hon. DANIEL O'CONNOR.

HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.

JOHN LIONEL FEGAN, Esq.

THOMAS HENRY HASSALL, Esq.

GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

Frederick Augustus Franklin, Esq., Memb. Inst. C.E., sworn, and examined:—

689. *Chairman.*] What are you? A civil engineer.

690. Have you had considerable experience in this Colony? About thirty-two years.

691. Have you a knowledge of the South Coast? A great knowledge of a portion of it.

692. And the proposal before the Committee? I have inquired into it and I know a great deal about the locality from observation extending over a long period of time.

693. You have had an opportunity, as far as necessary, of seeing the plans? Yes.

694. You know the proposal? Yes, from the plans here.

695. Will you make a general statement in regard to the proposal before the Committee? I wish to make a statement to show in what manner I am acquainted with the rise and progress of the trade in the south, and to briefly give my reasons for thinking that some improvements should be made to assist the increase of that trade. In the first place, I may say that I was present at the opening of the Belmore Basin, Wollongong, in 1868. Provision was then made for a better system of shipping the coal output from two mines—Mount Pleasant and Mount Keira. The provision was simply by means of staiths fixed on the side of the Belmore Basin. The trade steadily increased over a period of ten years, and in 1878 the existing companies commenced a complete change in their system of working, the Bulli Company, by the construction of a branch railway on a new footing, and the Osborne Company by changing a 3 feet gauge line into a standard gauge railway, and reducing gradients of their line by taking out an incline, and so laying themselves open for a largely increased trade. Immediately following that, in 1879, the Government carried out great improvements in the Belmore Basin, adding more staiths capable of tipping 6-ton hopper waggons, and discharging 6-ton trucks of coal. The corners of the existing dock were cut off and portions recessed, in order to allow turning space for vessels of larger tonnage. This work went steadily on with some alterations (for carrying out the coastal trade there) to the Illawarra Company's jetty, and the construction of a T jetty, and a system of lines and approaches, for a projected and proposed large increase of trade. Owing to certain defects in the machinery it was never made use of, until the Trust came into existence. The Trust was formed in 1889, and they commenced their business without any well-defined design on which they were to work. Immediately after, they submitted data for Sir John Coode to base his calculations upon for a port of large dimensions—a port capable according to the information supplied to him of carrying out the entire trade or the coal output of the Colony, and I should think that his design was based on such operations. The Trust continued their work up to the time of their dissolution on 2nd December, 1895, under, I must admit, extraordinary difficulties. The proposal laid before them was impracticable. Their collateral security was not sufficient to admit of their obtaining funds on fair security and the result was that their labours were trammelled from first to last.

696. *Mr. Trickett.*] Would you mind in a few words telling us what that proposal was? I do not think anybody could tell you that fairly. I think that the proposal on which the Act was based, was not very much more than a picture which you might take from a glove-box. To show how very preposterous the proposal was, I may say that it was to cut a channel a little short of a mile to the Tom Thumb Lagoon, and starting from the inner basin at Wollongong. I think that channel was to carry a sufficient depth on the sill for nearly the largest vessels we have. It was to be cut through a sand formation from Wollongong Harbour to an unknown number of chains where a rock-bar existed. Beyond that the formation is silt deposited for a considerable depth. I do not know what rock there might be in that, but the proposal to cut that channel to give a depth and also slopes that would stand up naturally would mean an excavation equal to 15 acres of water surface with 30 feet draft on the sill—equal to the largest floating basin in Liverpool, England. After arriving at the Tom Thumb Lagoon, a distance of about a mile, a system of excavations to the same depth was to be carried out, and the excavated material deposited over the area of that lagoon—one of the most expensive systems—changing the direction of road and lays that could ever have been devised. That excavation alone was estimated at the time and at the lowest rate would have approached nearly £1,000,000. Supposing the excavation was to have been done in that friable material, then retaining walls would have been required. Those retaining walls never entered into the calculation—the nature or the character of them—and unless retaining walls to that large basin were finished the approaches from all parts would be on raised staiths for shipping purposes. For that reason I consider that it was perfectly impracticable. The lagoon itself is influenced at the entrance by a hard drift. When a sand drift forms at the mouth of the output of Allen's Creek this water rises. It is extremely shallow. Excepting one or two defined channels there is very little water even at high tide in the sea, so that nature has done little or nothing in the way of excavation. The lagoon may have a clay formation; there is a great deal of clay formation at certain depths. I am not prepared to say from any observation of borings, but the surface is drift silt. The Trust then received a modified plan from their engineer and approved of it, in order, if possible, to make a berth for deep-sea vessels by projecting a breakwater northerly from the limit of the existing breakwater. That work was very carefully carried out so far as it went; but it was evidently undertaken with very limited means, and it resulted, as I suppose one might have expected. The work remains to-day unfinished, but what has been done has been substantially and well done. However, in doing that work a great deal of the then existing work was dismantled, and on the closing of the Trust those dismantled appurtenances that were formerly established have been left in a state of

F. A.
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M.I.C.E.

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of ruin. Therefore, if claims that are now brought against the Government are added to the absolute expenditure the total will make approximately over £8,000 a year over a period of five years for which we have derived no practical benefit. Previous to the establishment of the Harbour Trust, we had an expenditure over the time of the first Vote, thirty-six years, of about £116,000. That produced very excellent working appliances for a very moderate output of coal. That would make an expenditure over that period of about £3,222 a year; but when I come to consider that we have always boasted that that was the third port of New South Wales, I do not think that that was a very large expenditure, or one likely to encourage the participation of other mines in the operation of coaling at that port. Therefore, the general desire was that better facilities should be provided and that all the mines should work on equitable terms in putting out the coal of that district. The largest boat we ever attempted to coal there, the "Black Hawk," grounded in going out with, I think, about 900 tons dead weight.

697. *Chairman.*] What is a fair amount to say Wollongong is up to? She cannot do more than 350 or 400 tons.

698. *Mr. Wright.*] What water is in the basin? I am not prepared to tell you that exactly. I have not had the advantage of soundings; I can only speak from observation. The engineers will doubtless be able to tell you more correctly, and I should not like even to give you approximate figures. I think that Captain Howard's plan is the only one that will give you accurate information. I want to point out that from about 1878, the time when the Government began to make some very excellent improvements in the basin there, in regard to fixing new bollards, extending the wharf, and making a new jetty, the output of the coal has increased as regards the number of mines and has gone on from that time. In 1885 the Bellambi Mine was valued and purchased from the Osborne Estate. I valued that line and pit for purchase, and I also saw the result of the life of the jetty. I am speaking now of what is known as Taylor and Walker's first Bill. I estimated that line. I took it in all its detail and on examining the jetty I found it really had no value, so that taking the period from the time of its erection up to that time it seemed that twelve or fourteen years was the life of a jetty. I mention that to show you the cost of the maintenance of those sea jetties. The cost of that jetty I could not ascertain. It had been built a number of years. Many of those works were carried out by myself, so that I have an intimate knowledge of what I am speaking of, for instance the Bulli Railway and the Osborne Railway. The valuing of the coal mines and the untouched coal are also things I have dealt with there. For instance in the Mount Pleasant, which is only one of our coal mines, and which stands within a very short zone of the scene of all this consideration, has 635 acres of untouched coal within its boundaries. Taking that at two-thirds bulk for the 6-foot seam it gives over 4,300,000 tons of coal yet untouched to work from that one mine alone, and in considering the mines in the neighbourhood of Wollongong, whether north or south, it may be considered the centre of the present untouched coal in the southern district. Taking what we know to be within the boundaries of Keira, and taking also what we know lies between the northern boundary of the Kembla and the southern boundary of Keira, there is an area of coal that will last for a time we do not need to calculate now, and without going a very great depth back, even though we calculate for an output of three times the quantity we are doing now. South of Kembla I have no evidence as to developed coal. I know that a series of coal leases exists from Kembla South, almost as far as Jamberoo, but I am not personally aware that any coal has been developed on that line. Beyond certain difficulties that are well known to exist between Kembla and the north, we are pretty certain that we have a very large face of coal yet untouched. I do not know that I can say any more generally with regard to that. I should like, if possible, to offer an opinion with regard to the proposal at Kembla. I should like to call attention to the fact that in 1864 I reported to the Chamber of Commerce, at Colombo, Ceylon, upon making Colombo a port. I am now looking at a copy of that report. Why I speak of Colombo now is because the features of the two places are essentially the same. I was asked also to make an alternative scheme to use the lake at Colombo. Those gentlemen who have visited Colombo know that there is a very large lake close to the shore in a position similar to that of Lake Illawarra. The proposal is set forth in that report with very full particulars, but I will merely state that the reason why a lake was suggested as an alternative to the breakwater there was, that in making a tidal basin there we got 203,000 cubic yards of excavation done by nature in the lake, and the rest is a material that can be easily dredged, and the bottom—a formation of what is locally called "kabook"—is easy of removal. When that proposal was made Point de Galle was the principal turning-point of the world for harbour use, and the people of Point de Galle said it was ridiculous to make a port at Colombo; but the breakwater has been carried out, and we have one of the finest harbours in the world there.

699. *Mr. Hassall.*] What you wish to illustrate is that what can be done at Colombo can be done here? Yes. I know it may be said that we should not ask for a Government or State work at Kembla, because there is some proposal by a private company. Their proposal is a magnificent one, I think, in all its proportions, equal to all that has been done at Newcastle.

700. *Chairman.*] You are speaking of the Lake Illawarra proposal? Yes; I consider that is a magnificent scheme.

701. Why did you not use the lake at Colombo? They found that the difficulties were too great to make an entrance there. They thought that the channel would possibly silt up, and they gave other reasons; but that was many years ago, and I cannot now remember them. They submitted the two proposals, first of all, to Sir John Hawkshaw, and, later on, to Sir John Coode, and he undoubtedly approved of the breakwater.

702. The difficulty in opening an estuary, such as you had at Colombo, is greater than making a port in the open sea? Yes.

703. Were the difficulties in constructing a port at Colombo greater, or less, than at Kembla? Greater than at Kembla.

704. What is your inference in comparing Port Kembla and Colombo? Well, at Colombo the only protection from the south was a projecting point, the same as the Red Head Point you have here. They have a point projecting at Colombo which they call the Custom House Point; but the bay there is open to the Indian Ocean. There is nothing at all to protect that open bay, and from the Lighthouse Point to an indented bay, similar to Kembla, the sea came in without the slightest obstruction from the Indian Ocean on the western side. The system of loading coffee, at that time, into lighters was carried on by swiveling the load from the yard of a ship to a standing mast in the lighter, and during that operation

operation ships rolled to their gunwales in the water. The breakwater was carried out two-thirds of a mile, in the same direction as at Kembla, enclosing 500 acres of water, and now, even in very heavy weather,—and the sea is very rough there at times,—there is no motion inside the breakwater, but there is a very heavy break on the breakwater itself. The water, however, soon steadies itself on passing over the breakwater. Now the port is so secure that the most frail vessel they have,—the “catamaran,”—may safely go from the wharfs to the ships. I may say that before the construction of the breakwater there was a large town on the bay called Mutwal, a native town, and frequently the ships were thrown high and dry on that beach by the force of the sea.

705. *Mr. Hoskins.*] The vessels do not lie alongside the wharfs at Colombo? No; they discharge into lighters.

706. *Chairman.*] What material was used at Colombo? It was very difficult to construct the Colombo breakwater owing to the distance at which they had to quarry and carry the stone. The nearest stone for the breakwater at Colombo was obtained at a distance of 18 miles. The breakwater was made by forming a berm of coarse rubble, and the upper tiers were formed with very large masses of concrete laid in zig-zag fashion from the root to the outer end. I wish to convey the idea that that breakwater was put out into an open sea-way of the roughest nature,—nearly as rough as Madras, and I am told nearly as rough as the Gold Coast,—and it is doing its duty well. At Colombo it is only a very moderate protection which nature has provided by the point forming that bay. I think that at Kembla we have a very much greater protection against the southerly sea than at Colombo. If you take the trend of the coast-line northward you will find with an offset of a mile east to Red Head Point, and another offset to those connected islands you have at Kembla practically two miles of safe anchorage in the bay. From observation, I have found that there is a safe anchorage there for certainly 1,500 acres of safe mooring in a southerly gale, but during the southerly gales there is a very heavy set in on to the beach, intervening between Allen Creek and Wollongong, but the break is never so great between the proposed site of the Kembla port and the entrance to Tom Thumb Lagoon as from Tom Thumb Lagoon to Wollongong, in a measure caused by the position of the two islands standing a little north of east opposite the site. During the late southerly gale, which was not an excessively southerly one but a very good fresh gale, several ships were moored off the site proposed for the Kembla harbour waiting their turn at the jetties and they took their loading during that southerly gale. They were not interfered with during the southerly gale last week. I wish to show that this natural protection gives unusual facilities to those two jetties, and I think that the interruptions throughout a year here cannot be compared with the interruptions, delays, and demurrage at Newcastle in the ordinary way of shipping there. No vessel need go to Kembla until she knows she may be loaded within a few hours at any rate. I examined this site very critically. In 1885, I examined the whole of this site in order to report upon it to the directors of the Southern Coal Company. The Southern Coal Company was then contemplating the construction of a large jetty and the carrying out of some very large works. I have the report before me. I have made extracts from it which I think will suit this enquiry. This report deals in detail with everything in connection with jetties, moorings, lines, screens, and the workings of the pit. With regard to the value of this place as a site for a harbour my notes are: that the piles of that jetty were freely driven to a depth of 14 feet for a distance of 1,000 feet out from the shore. The jetty consists of an approach of 900 feet, an inclined approach on timber staiths, and then proceeds another 1,000 feet supported on three piles, all of these driven from 14 to 16 feet into very fine driving indeed—a thing scarcely expected to be found in a place like that—which goes to prove that the original formation has been very little disturbed by silt or anything of that sort. The total length of that jetty is 2,350 feet.

707. *Mr. Hoskins.*] Do large vessels lie up at that jetty and load? Yes; the jetty projects that distance of 2,350 feet in an isolated bay, self-protected inside the two miles protection from the south. Both those jetties existing there have a local protection from the southerly gales of 2,800 feet beyond the projection of the jetties. The point immediately east laps the jetties sufficiently to give a protection of 2,800 feet from a southerly gale.

708. Is there no protection from a easterly gale? There is nothing to protect from an easterly gale except the two outlying islands which are nearly abreast of that place and somewhat break the continuity of the sea. A long wave would be broken by those two islands which would reduce its force considerably. That large jetty fitted with all the modern appliances that could be devised was put up for about £21,000, the tenders for the work at the time ranged from £23,000 to £28,000.

709. *Chairman.*] When was it completed? I do not know the date of its completion, but I am speaking of the time it was in progress, in 1885.

710. Was it completed in 1886? It was completed about 1886. With regard to the bay itself, the test of the value of the place for mooring was found by laying the quarter-line moorings of the ships. In nearly every case it was found to be a very tenacious clay, and where that did not exist of course they used heavier anchors. No fault can be found with the place as a safe anchorage. I think that the proposal as to the 260 acres would afford ample accommodation for a largely increased trade there. The largest of those jetties will load a vessel from 6,000 to 7,000 tons, and about 600 feet in length, on the outer end, and inshore there is room for smaller vessels; but I do not think they have loaded smaller vessels nearer than where they have their appliances fixed; but in their first design they proposed to load smaller vessels inshore.

711. You have already stated that in your opinion the life of a jetty is about twelve or fourteen years? Yes.

712. If that statement be correct, is it right to infer that the sinking fund for a jetty would be about £1,500 a year? I do not want to fix their value, because I did not build any of those jetties; the cost of their repair should be a charge against the output. I take it that in this year's operations we shall approach a quarter output of the Colony from all mines.—that is, taking it on the basis of last year, 700,000 tons. So far as we have ascertained, up to the present time I think that 1,000,000 tons will be the output of the southern collieries this year. At a moderate wharfage of 3d., that should give us £12,500, or 4 per cent. on the capital of £312,500. That will be £79,000 in excess of your estimated cost of this breakwater. I think that 3d. a ton would be a small charge for the advantage of using a good Government wharf there. My figures assume that if equal facilities were given to all the mines to get deep-sea loading, and if with that advantage we were to increase the output there to 1,000,000 tons, that is something like the revenue you would derive at 3d., without port charges. I do not know what the port charges are.

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713. Before the coal can be shipped at Port Kembla it has to come a certain distance along the railway line, and there is also some expense in shipping it—is that 3d. for outside services rendered? I do not consider the haulage on the main line at all. The metropolitan coal has to be drawn a distance of 27 miles, and then pay wharfage.

714. Is that for outside services rendered—is it a levy because the port is constructed? I consider that is a levy that should be made for the use of the port, outside any charges for the railway. They have spent so much money for the line and jetties, and the interest on the cost must be so much per ton output; but as I could not ascertain what should be sunk for the maintenance of those works, I should not like to say. However, I consider that a simple charge for shipment would be better than the maintenance of those large works of our own.

715. That is your opinion, although you can give us no figures on which you base it? I think that would be much better, combined with the advantage of being able to compete with those people who are now loading large cargoes. I think the existing sea-jetties would be used for small loading during all their life, notwithstanding the facilities of a port; but I think that that port would wonderfully increase the bulk of our trade and the quality of it.

716. Is it your opinion that after the jetties had served their purpose, and after their life had run out, the proprietors of them would build new ones? I do not think they would, if they had a good port with shipping facilities, on equal terms.

717. Is it your opinion that all future developments in the Illawarra district would come down to the port, and that they would cease to build jetties? Yes; I think that they would consider that the State provided a proper and safe means of getting rid of their produce.

718. You believe that all new developments will come to the new port? Yes.

719. And you believe that they will use their jetties until their life runs out? Yes. We think that the coaling at this port would develop our trade to a very large ratio indeed. I have a very high opinion of the position from its natural shelter.

720. *Mr. Lee.*] Supposing a coaling rate of 3d. per ton is charged at these works, would that have the effect of driving shipping away to some of the existing jetties? No; the ships that would load at this proposed port could not go alongside existing jetties.

721. Would the proprietors of those jetties be in a position to offer terms that would attract them? No existing jetty outside that position at Kembla could compete at all with the trade done either by the Southern or the Bellambi Company at the present time. There is no place in the southern coal measures where such trade could be carried on, as by those two existing jetties in the Kembla port.

722. You are very clear about that? Quite clear. I do not mean to say but what the Southern and the Kembla Company load small vessels, but they have facilities for loading the deepest vessel. The "Indrani," a vessel of 6,000 or 7,000 tons displacement received her cargo a fortnight ago there, and that is the trade we require. If you make Kembla a safe port the small ships can go to the available sea jetties that exist, but the large trade would be not only with steam but also with sailing vessels. There is a class of steamers that would not be allowed under their insurance to approach ordinary open sea jetties, but those two in Kembla Bay are excepted. On the other hand it would be impossible to take anything but a vessel relying on steam propulsion in to those sea jetties as they exist. We have known sailing vessels to be driven ashore and wrecked at the site of those jetties. Sailing vessels cannot do any business except in Wollongong Harbour. They cannot go to the open-sea jetties. At Wollongong we load into the very smallest vessels and they are so accustomed to the port that they know its dangers and difficulties. At Kembla Bay, as I have shown, the natural protection from southerly gales is so great that any sailing vessel could gather in her sails and be towed into the port at any time if this proposal were carried out. Kembla is an exceptionally fine place for a port protected by an eastern breakwater.

723. *Chairman.*] Will you give us your comparison between Port Kembla and Bellambi? I am not sufficiently acquainted with Bellambi. I know Bellambi has a most wonderful protection in the way of a projecting submarine reef—a long reef extending to the eastward.

724. You are not prepared to express an opinion in detail in regard to Bellambi? I could not compare Bellambi with a port I have known to be successful elsewhere.

725. As an engineer which port do you consider is the better port, Kembla or Bellambi? I consider Kembla is the most sheltered place along that coast.

726. *Mr. Hoskins.*] Is there not good holding rock at Bellambi? I do not know. But I know Kembla to be an exceptionally good anchorage.

727. Will you give us an opinion with regard to Lake Illawarra? In regard to the Lake Illawarra scheme all I know is that by an Act dated 1890, extending to five years a concession was given for the carrying out of the work of opening the mouth of the lake, constructing a breakwater, and deepening a portion of the lake as a channel up to a loading point, and I know that in December, 1891, by permission of the Government, the Company were allowed to reduce a portion of Windang Island—an island standing eastward, opposite to the entrance to the lake and having an area approximately of 8½ acres—for the purpose of getting 350,000 cubic yards of stone for the breakwater, and in March of that year that work absolutely commenced. Some work was done in excavating for the purpose of making a tie bank between that island and the mainland, and all I know is that that was for some reason discontinued. The Act was amended in 1895, giving an extension of two years for the completion of those works and I believe that the cost of the proposed harbour was stated to be estimated at £140,000. I am not quite sure as to that, but I know that there are two years remaining in which to complete the work.

728. Do you know the mouth of Lake Illawarra? I have never been there. But for the purpose of comparison I will take the two zones. Supposing we take Lake Illawarra which would make a very grand harbour if all the difficulties were removed, and its mouth and everything else made equal to deep-sea loading. Then the zone from Clifton to Port Kembla would be 16½ miles and to the lake 23 miles; from North Bulli or Austinmer 12½ miles to Port Kembla and 19 to the lake; from Bulli 9½ miles to Port Kembla and 16 to the lake; from Woonoona 8 miles to Port Kembla and 15 to the lake; from South Bulli or Bellambi 7 miles to Port Kembla and 14 to the lake; from Corrimal 6½ miles to Port Kembla and 13 to the lake; from Mount Pleasant 5 miles to Port Kembla and 10½ to the lake; from Mount Keira 4½ miles to Port Kembla and 10 to the lake; from Kembla 4½ miles to Port Kembla and 6½ to the lake. I have no data or plans before me. I have simply the county map but I do not think that those figures would have to be altered very much. I wish to say in connection with the Kembla scheme that the

the existing line of railway and loop from the main line at Wollongong, being already Government property, cover three-quarters of a mile of the approach to Kemplab port and a deviation near the gaol or near to our port would traverse I think fully three-quarters of the distance on Crown lands. In the first place this proposal would give a central safe shipping port accessible to over-sea ships of every class which is now impossible. It would prevent what I think would be the destruction of the town of Wollongong which has hitherto been regarded as a port of the third magnitude in this Colony. It would give all the mines facilities for loading large vessels on equal terms. Although it would appear to divert the trade from Wollongong port proper it would create a larger trade, Port Kembla and Wollongong being then in juxtaposition to the dyke and Newcastle. Anything which the Government has done lately has not improved the town of Wollongong but the carrying out of this proposal would very much improve Wollongong.

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729. What is the distance from the nearest jetty in Kemplab to the town of Wollongong? About $4\frac{1}{4}$ miles to the township.

730. *Mr. Black.*] Do you not think it is likely that a town would spring up at Port Kembla? No I do not. Since the establishment of this business at Kemplab with improved appliances there has been no effort to build anything like accommodation for the coal-trimmers there. The coal-trimmers have to wade breast deep now every time they pass to and from their work at those jetties—they have to go through the Tom Thumb lagoon entrance. There is no punt or bridge there and several lives have nearly been lost there. I consider that Wollongong would benefit through doing the ordinary sea-port trade for the increased shipping at Port Kembla just in the same manner as it does business now with the distant miners. All the miners in that district look upon Wollongong as a sort of depôt for their ordinary supplies, and I am sure that with only a slight foot-bridge Wollongong would immediately come into touch with the shipping at Port Kembla. In supplying meat, vegetables, milk and other things to the ships a large business would rapidly grow up and increase. The Wollongong people cannot reach the shipping at Kemplab now on account of the physical difficulties that now intervene between Wollongong and that port.

731. *Mr. Lee.*] If that port became so important as you contemplate, is it not likely that a town would spring up there? No, I do not think so. Wollongong is singularly well supplied with every establishment necessary for a very fine depôt, we have excellent business places there, and also all the necessary places for the administration of the law. There is not a thing which you could suggest which Wollongong would require and which she has not now even if her shipping trade were doubled or even quadrupled, and by the carrying out of this proposal I consider that Wollongong would be saved. According to the assessment made for municipal purposes we formerly had in Wollongong and a small surrounding area property estimated to be worth £1,500,000. What I mean by saying that the carrying out of this proposal would save Wollongong is that it would protect vested interests in Wollongong, that town being, as regards Kemplab, in the same position as Newcastle is to the Dyke, but a shorter distance away from Kemplab than Newcastle is from the Dyke, and Wollongong will be a convenient depôt for the shipping requirements of Port Kembla, Wollongong being already furnished with every necessary establishment for a seaport depôt. The carrying out of this proposal would also create an export trade, as the pastures in the district are eminently suitable for fattening stock for exportation. It would also re-establish the value of real property which, as I have already said, was formerly estimated at £1,500,000, but is now much depreciated by failure to provide improvements in the port. On the construction of the jetty and the short line of railway, revenue would at once commence, as a slight interruption by stress of weather is small compared with the demurrage and charges at Newcastle. The next reason in favour of this proposal is that the zone system on the inter-Illawarra portion of the main line could be adjusted on equitable terms to suit each mine, and create a large and profitable traffic on the railway. Kemplab is the natural centre of the untouched coal in the district. Port Kembla would be a safe harbour of refuge in southerly and easterly weather, the existing protection from the reef and promontories forming Wollongong, and from the islands, being sufficient to render any weather from the north-east perfectly harmless. Owing to the extent of the island point eastward, and the set of the current inshore, the harbour is not liable to silt. The immediate formation in the neighbourhood is granitic, and offers unusual advantages, with a very short haulage, for getting material for cheaply constructing the breakwater. Owing to the existence of the present jetties the cost of landing timber, as in the case of those jetties themselves, would be reduced to the minimum. The great national value of the southern coal would be demonstrated on equal terms in proportion to the northern trade. Although the present sea jetties may be used to the extent of their lives for small craft, it is believed that all the mine proprietors are desirous of participating in the deep-sea trade from which they are now debarred owing to physical difficulties. The establishment of such a port will in every way benefit the whole community—mining, mercantile, and agricultural—in a district more highly improved and more densely populated than any area of similar character of country in New South Wales. The construction of these works, beyond their national importance, would be but simple justice when compared with the large expenditure on the northern ports and rivers. The people of Illawarra should not be punished for the failure of the Illawarra Harbour Trust to carry out the work under their own direction when the Harbour Trust were working under an unwieldy and unworkable Act. Most of the mines have already loop connections with the main line. The loop line and the railway connecting with Wollongong Harbour to the proposed point of deviation towards Kemplab port, are already Government property. The short line proposed for the port would traverse nearly four-fifths of Crown land on level grades. The sand reclaimed there already has become permanently grassed over, and might be made available for this line of railway without interfering with the boundary in any way.

732. *Chairman.*] In your opinion, will the erection of such an obstruction to the current as is proposed by means of the eastern breakwater in Kemplab Bay, cause the bay to silt? No; I have already said that those bays do not silt, and that the trend of that eastern breakwater would be such that the inshore current would set along and do exactly what it does now. The site of your present proposal does not silt. We have no evidence of a similar construction ever having silted.

733. You believe that the altered condition of the bay, caused by the erection of such works, would not cause it to silt up? I do not think there is current there to do it.

734. *Mr. Black.*] You have told the Committee that you think the people of Illawarra are entitled to a good harbour, and you think such a large expenditure as the carrying out of this proposal would involve, would recommend itself on the score of the return that would be made to the Consolidated Revenue? I do not know what expenditure you allude to—I do not know for what purpose you mean, whether for breakwater, jetty, or what.

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735. You have been recommending the construction of a breakwater have you not? Yes; I will keep to that.

736. And I think, from the trend of your remarks, you would like to see a double breakwater made? Indeed, I have never suggested it. I said that at Colombo for many years they have carried on their work without a northern breakwater.

737. You also said they were constructing another breakwater? I said that after fifteen years they have thought of spending more money.

738. Then, if your comparison between Colombo and Kembla is a good one, and if it would be necessary to have a second breakwater at Colombo, it would also be necessary to have a second breakwater at Kembla? No; I have told you that Kembla is far more naturally protected than Colombo. Having examined the two places thoroughly, I consider that Kembla has more natural protection than Colombo.

739. Which breakwater would you suggest should be made at Kembla;—the eastern one? Yes, the eastern breakwater.

740. You think there is no danger of storms from the north? If you had an excessive storm such as we have seen at Madras, but Madras is notoriously the most boisterous coast in the world. The breakwater there was turned right over.

741. Are there no strong northerly gales on the Illawarra coast? No. The northerly wind does not affect us anywhere.

742. Artificial protection is necessary from the east? Yes.

743. Natural protection is already partially afforded from the south? Yes; so much so that during the last week's gale loading operations were carried on. That was essentially a southerly gale.

744. Do you think it is likely that the company that has commenced works at Lake Illawarra are likely to complete them? If they succeed as well as they have done hitherto, I think it would be very much to their advantage to complete them.

745. Do you think that if they go on and complete their harbour works at Lake Illawarra it would be a good thing for the Government, as a matter of finance, to construct a competitive harbour at Port Kembla? If the Government could make themselves perfectly certain that the mines would take their coal all those additional miles to ship, I should say that it would be better to let private enterprise do it, but I have not heard that Lake Illawarra is to be used for the output of the coal for the southern district.

746. Do you think that Lake Illawarra would not be a suitable place for the shipment of coal? I do not say that. There is nothing impossible in engineering now.

747. Then what is your reason? I have stated clearly that Kembla is in the zone of the greatest bulk of the coal for our future business.

748. Do you think that a few miles extra haulage that would be entailed with coal coming from the north and going to Lake Illawarra would tend against that place as a shipping port? I do not think so at all. I am only speaking in regard to the present developed trade. I am not aware that that port was designed for the purpose of diverting the trade of the coal already being won. I should not think that that would be part of their project. As a port of entry to a large area suitable for a vast number of industries it is of very great value, as instanced by the great works now being erected there, but I have never heard that it was likely to be used for the shipping of our coal.

749. But you have no reason to think that that harbour company would have any objection to the utilization of their harbour? No; I give them great credit for their business capacity. They will take all the trade they can get, and if they can compete on better terms than the Kembla new port, well and good.

750. You acknowledge, then, that there is some risk, if the Illawarra scheme should succeed, of diverting at all events some portion of the traffic that would otherwise go to Kembla? I have not considered that at all. What I have considered is that omitting the refinements you have proposed for Kembla and doing only what is absolutely necessary, you would get a very cheap and safe port for our present purposes. We do not know the extent to which that company may go, or whether they may make provision for embracing the Illawarra trade as a natural part of their business, but what we do know is that legally they have only two years left to carry out their works. I have tried to make it understood that immediately on the construction of a short line from Wollongong to the jetty, your revenue may commence. Your breakwater construction would be a tedious operation which might go on for all time—at any rate the expenditure on that would cover a long period. All the other part could be developed in one year if necessary. I do not wish to place this in opposition to that great bold scheme of Lake Illawarra. With the large area lying around the lake it is capable of becoming the Birmingham of New South Wales.

751. Supposing the Lake Illawarra Company were to place it in opposition, what then? Let them do it by all means. I like to see competition. We would go on improving our port at Kembla immediately. But I do not think that the present state of affairs, considering that we are putting out a quarter of the output of the coal in the whole of the Colony, is to stay for an indefinite time until some work which has not been practically commenced is finished. I do not know what evidence you have, but my opinion is that the construction of those works must cover a long period of years.

752. Do you think there would be sufficient trade there to warrant the existence of two ports in such close proximity? Our port would have nothing to do with that port, this being I consider a port constructed by the State for State purposes. I myself have read that your Government tell people in other countries "we have a magnificent asset here in our wealth of coal," and I know it to be lying in the Illawarra district and I want to know why it should not be developed. I do not think that it should be left to private enterprise at all. This is a great national wealth, we have monopolies growing up here, and when mines are restricted like that, they cannot progress.

753. Do you refer to the monopoly of the harbour business? I say that I would rather see the control of the port and shipping directly under the State. I am sorry the State does not own the coal.

754. I thought that perhaps you referred to the national ownership of coal mines? I was not referring to that. I should however like to see the output of that coal as much under the direction of the Government as the output of State products should be.

755. *Mr. Hoskins.*] It is estimated that the eastern breakwater would cost about £240,000 and that to complete the works as designed by the Engineer-in-Chief for Harbours and Rivers would cost in round numbers £440,000; do you think that the Government would be justified in expending either of those large sums of money, if a private company were to give largely increased accommodation for the shipment of

of coal and produce a few miles further south, without calling on the Government to expend a penny? If I could see the work at Lake Illawarra progressing towards completion, I should say decidedly not.

756. Do you know how much work has been carried out there? I do not.

757. Therefore as far as you know the company may be going on actively with the work now? You may put it in that way. I might know indirectly, but I do not know.

758. You have expatiated at some length on the advantage you thought would result from the proposed improvements at Port Kembla; do you think, if the company at Lake Illawarra carry out their scheme as they say they intend to do, that equal advantages will be offered to the shipping trade, the coal trade, and the trade of the district generally by the carrying out of the Lake Illawarra scheme as you think would result from the carrying out of the Port Kembla scheme? I admit it is possible to make at Lake Illawarra the grandest harbour in the world; but I do not know whether it will suit the existing trade to go so far over so many miles of the inter-system of railways to ship coal there. I cannot see how it would be in the interests of the coal-mining industry to wait for the possibility of Lake Illawarra producing all those advantages. If I had seen the work at Lake Illawarra progressing up to this time of inquiry I should have said that it would have been a most unfair thing for the State to set up direct opposition against such private enterprise, but of my own knowledge I do not know how much has been done.

759. Can you say of your own knowledge whether there are any extensive coal-fields further south than the Mount Kembla or the Southern Coal-mining Company's schemes that are now being worked? I do not know. I know intimately the southern boundary, I know the limit of the coal at that point, but further south I do not know.

760. Then you are not prepared to say from your own knowledge whether the Lake Illawarra Company have an idea of working coal seams further south? I have an idea from information in the public press that that is their future hope. They hope to open up coal mines in the vicinity of the lake.

761. However, I take it that I may assume from your evidence that in consequence of the extra distance for haulage from most of the mines in the southern district which would be involved from shipping their coal at Lake Illawarra, you prefer that works should be carried out at Port Kembla? Most decidedly.

762. Even although the Government might be acquiring land by purchase and laying out a large sum of money at the same time that a private company a few miles south might also be expending a large sum of money to meet the shipping requirements in that district? I cannot give you any evidence as to what they are doing.

763. But supposing that the company are proceeding expeditiously or with moderate expedition with their work—and they are under bond to do so;—do you think that the Government under such circumstances would be justified in expending large sums of money in improving shipping facilities at Port Kembla? I do not know; I cannot enter into that political part of it. All I say is that for the existing vested interests throughout that place now, the amount of money that has been expended, the town established, and the expenditure for public buildings, the facilities we have for making a depôt for that trade, concentrated as it is, should be protected. We do not know the value of the coal still undeveloped. We do not know when that harbour will be finished. We do not know if it will be constructed in two years; it is only a matter of time, money, and men.

764. This Committee have had this evidence from the Engineer-in-Chief for Harbours and Rivers—that he does not think that the Crown would be justified, or that he would recommend or approve of a large expenditure on two coal shipping ports on the southern coast, because he thinks one would suffice for the work;—are you of that opinion? All I say is that if the work must be done by the Lake Illawarra Company within the limit of the time granted to them they will have to display unusual energy in doing it, and when that is done it will not serve the coal industry of Illawarra as much as this port would. The existing business and interests will be best served by making a depôt at Port Kembla, although it is rather hard on Bulli, Ballambi, and Corimal, as it gives them a larger zone and they can now get more quickly to a port.

765. Do you think that the Government, having expended large sums of money in the southern district on so-called harbours, would be justified in expending a much larger sum on work of a similar character if facilities for shipping produce and coal were afforded by works constructed independently of the Government only a few miles south of it? If you allude to spending the maximum amount estimated for Port Kembla, I would not recommend that. I minimise my remarks to the breakwater and a general jetty which would be available to the general public.

766. But we have it in evidence that to ensure affording proper facilities for sailing vessels loading coal at Port Kembla, and to ensure there being moderately still water enclosed within the breakwater, it would be necessary to carry out the full works, although coal might be shipped as the works progress;—are you of that opinion? I think coal could be shipped from the time the jetty was ready under the same conditions as are now enjoyed by those two best favoured jetties in existence. You would place all the mines in the same position, and I think the small expenditure that would produce that result and from which you could get a revenue almost immediately and even before the eastern breakwater was made, would be justified under the circumstances.

767. This Committee had given in evidence by a gentleman very largely interested in the shipping business of the colonies a statement that what is required in the southern coal district is a port to which sailing vessels could be sent—unfortunately, he says, that cannot now be done—and the proposal of the Government is by the expenditure of the large sum of money I have named to give moderately smooth water so that sailing vessels could load within the two breakwaters? I assume you mean the northern breakwater I do not believe in the extra refinements of wharfs and jetties. I do not wish to condemn anybody's project, but merely to say what I know to be a fact, and that is if you wish to carry out a moderate work for the protection of a much larger trade than we are doing, you would give us a breakwater protecting from the eastward and you will give us a jetty that will last sufficiently under such protection, and be for the use of all the mines alike.

768. Then your scheme appears to be a more moderate one than we have listened to? Yes, I would not recommend you to go in for all those refinements of excavations, wharfs, and so on. I approve of the eastern breakwater, and of a Government jetty between the two existing jetties.

769. If those improvements were carried out the Government would have to resume the two existing jetties? No, I think the two companies would work out the life of those jetties. I do not think the Government would use those jetties.

770. You know the locality very well? Yes.

F. A.
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M.I.C.E.

13 Nov., 1896.

F. A.
Franklin, Esq.
M.I.C.E.
13 Nov., 1896.

771. Could the Government carry out such improvements as you suggest without being compelled, in consequence of private jetties being in the way of their works, to purchase the private jetties, or to purchase land forming the approaches to the private jetties, or in point of fact being compelled to purchase a large area of land? I think that all that would be necessary for communication with the Government jetty would be a rearrangement of the lines and the approach to that jetty. The approach to the jetty that might be erected by the Government would have to be arranged in connection with the present approaches to the existing jetties. I think that there would be sufficient space between the two private jetties to carry out the proposal without interfering with these operations.

772. And therefore increased facilities could be given at Port Kembla, on that large sheet of water, without the Government being compelled, in consequence of blocking or interfering with the working of private jetties, to purchase those private jetties or to acquire possession of any large amount of land? I do not think that would be at all necessary.

TUESDAY, 17 NOVEMBER, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHREY.

The Hon. JAMES HOSKINS.

The Hon. CHARLES JAMES ROBERTS, C.M.G.

The Hon. WILLIAM JOSEPH FRICKETT.

The Hon. DANIEL O'CONNOR.

HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.

JOHN LIONEL FEGAN, Esq.

THOMAS HENRY HASSALL, Esq.

GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

Tannatt William Edgeworth David, Esq., B.A., Professor of Geology and Mineralogy, University of Sydney, sworn, and examined:—

T. W. E.
David, Esq.,
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773. *Chairman.*] You have had an opportunity of discussing with the Government Geologist the question of the southern coal-measures? Yes, and I have also personally examined them.

774. Was the geological map on the wall prepared under your supervision? Yes.

775. Will you make a statement with regard to the coal deposits in the Illawarra district south of Helensburgh? There are two series of coal-bearing formations in the Illawarra district—an upper and a lower. The location of the upper series is shown on the map to which you have referred by a dark brown band, and is generally known as the Bulli-Newcastle series. This series is being worked at Newcastle on the north, at Bulli and various places down to Mount Kembla on the south, in the Eskbank and Lithgow district on the west, and at Mittagong on the south west. This series contains a considerable number of seams which are of varying thickness; but so far only the uppermost seam, which is known as the Bulli seam, has proved to be workable over large areas. This seam varies in thickness from 2 feet to as much as 12 feet. It has been proved at Helensburgh to have a thickness of about 12 feet, and from Helensburgh going south it has a thickness of not less than from 5 to 6 feet until about the latitude of the Southern Coal Company's mine.

776. Does the uppermost seam of the upper series cease to be of commercial importance south of Unanderra? That is my present opinion. I am of opinion that, at or about the position of the Southern Company's mine, the Bulli seam has so lost in thickness, and has so much deteriorated in quality partly because of the destructive action of volcanic rocks, which are very much developed further south, and particularly in the neighbourhood of Kiama, that it ceases to be workable over large areas. At the same time, I would not like to state definitely that there were no workable patches of coal along the eastern line of outcrop; but wherever I have seen the coal, and I have seen it in a good many places, it is not workable, having either thinned too much by contemporaneous erosions, or because it has been spoilt by the heating action of the volcanic dykes. This is notably the case near Kiama and in the Cambewarra Range, near Nowra. The Bulli seam is limited southwards, so far as I know, by the Cambewarra Range. I have not had an opportunity of closely exploring the country in the immediate neighbourhood of Jamberoo. I have been told that there is workable coal there; but I have never seen workable coal in the uppermost seam—the Bulli seam—from a point commencing at the Southern Company's mine down to the Cambewarra Range, and I have been over the greater part of that country.

777. The area of country in regard to which you are unable to express an opinion will be limited in extent? Yes.

778. There can be no great coal deposit on the south coast of which you have no knowledge? That is so. With regard to the depth of the Bulli seam at Camp Creek, near Helensburgh, it was found to be 846 feet below the surface in the diamond drill bore. Going south it rises gradually, until it comes out at sea-level at Coal Cliff. Continuing to rise it outcrops at Jamberoo and in the Cambewarra Range at from 1,600 to 1,800 feet above sea-level; so that there is nothing to prevent its being worked so far as depth is concerned.

779. How far does the seam go west? So far as I know, no evidence has been obtained by means of the sinking of shafts, or by boring, as to the quality of the coal at any considerable distance west of the outcrop in the coast range; but it outcrops in the neighbourhood of Mittagong, Moss Vale, and Bowral. We find the same seam recropping at Nattai Creek and in other rivers, so that the upper coal measures must be continuous westwards from the coast range to Mittagong.

780. What is the quality of the coal there? Slightly inferior to that of the Bulli coal. There is rather more ash in it. Still there are patches of payable coal near Mittagong.

781. *Mr. Fegan.*] The coal you speak of is very brittle? Yes, brittle and splinty, and the ash percentage is very high. I should consider that on the whole the Bulli seam would slightly deteriorate going westwards. At the same time there would be a very large area of good workable steam coal west from the coast-line, between the latitudes of Helensburgh and the Southern Company's mine.

782. How far west is Nattai from Bulli? About 25 miles.

783. Is it reasonable to infer that the deterioration you speak of is gradual? Yes.

784. So that 10 miles west from Bulli we might get pretty well the same class of coal as at Bulli? Yes. Near Mittagong and Berrima the coal-measures are close to what were high ranges, and under these circumstances

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circumstances we always find that the coal deteriorates rapidly, because the ranges supplied coarse sediment to the swamps where the coal is forming. It has been my experience in the northern district that where the coal deteriorates by reason of a high percentage of ash, the deterioration comes about very suddenly, just as you approach the edge of the coal-basin. One sees that notably at Greta, where in three or four miles you pass from good workable gas and steam coal to an almost worthless coal. The Bulli seam consists of thoroughly good steam coal, and I should think that a minimum thickness of 6 feet could be reckoned upon all over the area to which I have been referring.

785. How many tons per acre would there be in the Bulli seam? Roughly speaking, a cubic yard of coal weighs a ton. Taking the average thickness of the seam as 6 feet, that means 9,680 tons of coal to the acre. From that you must deduct one-third for waste and working, the pillars left, and so on. That leaves 6,450 tons of marketable coal, of which about one-fourth would be small coal and the remainder, 4,838 tons, large coal.

785½. How far is it from a point 5 miles south of Helensburg to Cambewarra? Nearly 50 miles.

786. How far is it from Port Kembla to Cambewarra? Thirty-three miles.

787. Is it reasonable to infer that all coal lying 5 miles west from the face of the Bulli seam will, if worked, be brought down to the seaboard? I think so.

788. Would it pay to haul the coal 5 miles along underground workings? That is a question a little out of my province. The Inspector of Collieries or the Government Geologist would be able to give you information upon the subject.

789. The distance between Coal Cliff and a point on the outcrop of the coal measures due west from Port Kembla would be 17 miles. Taking a strip of land 5 miles wide between those two places, you have an area of 85 square miles, or 54,400 acres. Allowing 6,000 tons of coal to the acre, that gives 326,400,000 tons of workable coal. Is it reasonable to suppose that that quantity of coal would find its way to the seaboard from the upper series? I think so.

790. Have you any information with regard to the other seams in the upper series? I have examined them at many places; but I have not observed that they are anywhere workable. There are no seams of any commercial value below the uppermost seam.

791. Now what about the lower series? This series is known as the Greta series. It crops out at Greta and West Maitland, where the thickness of the seam varies from 17 feet to 30 feet. From West Maitland it dips down to a great depth, being about 7,000 feet below Sydney. Gradually rising as you go south it comes out at the surface at the head of the Clyde River, south-west from Jervis Bay. At the southern development of this series, the seams are not nearly so thick as they are at Greta and West Maitland. The total thickness of coal as measured by me at the head of the Clyde River was 6 feet 8 inches. In that thickness there was one layer of good coal, 3 feet thick. The rest of the thickness was made up by thinner layers, which, however, probably come together further north, making one seam of a thickness of about 6 feet.

792. If it were accessible would that be valuable coal? It is of commercial value.

793. At the present time? No, I think not, considering the difficulty of access to the place.

794. *Chairman.*] The coal is good, but difficult of access? Yes.

795. If that coal occurred in the Illawarra or Newcastle district would it be worked? It is a little questionable whether it would be worked at the present day; but it is a seam which will be worked when the thicker seams come to be more worked out.

796. How deep would the Greta series be at Wollongong or Port Kembla? At Wollongong it would probably be at least 3,000 feet below the surface. Even at Nowra or Jervis Bay it would be a little over 2,000 feet below the surface.

797. What is the deepest coal-mine in the world? The Belgian mines are about the deepest. I am afraid to say what depth they are, but I know they are a good many hundred feet over 3,000 feet deep. It is very good coal that they are getting, and more easily worked coal is becoming scarce there. With regard to what I said about the Bulli seam having deteriorated south of Port Kembla, I wish that statement to apply only to the eastern portion of the coal-field. I do not wish it to apply to the whole area as far west as Mittagong or Berrima, though my remarks would apply to a strip of country at least 5 miles wide.

798. *Mr. Humphery.*] Would you include the Saddleback and Jamberoo? Yes. The Saddleback is about the centre of the volcanic disturbance.

799. *Chairman.*] Is Jamberoo the only place where any large deposit is likely to be found? There is an outcrop at the Fitzroy Falls.

800. Is not the Illawarra Land Corporation's colliery within the locality where you say the coal has been spoilt? I think that if there is good coal there it will be limited in area. I have followed the range right along, and I have examined various tunnels and shafts in the district, and the coal all seems to me to have deteriorated. On Mr. Biggar's land the seam is only about 2 ft. 6 in. thick. The coal has very much deteriorated along the outcrop south-west from the Dapto Railway Station. If there is any workable coal at the place you name, I should say that it is only a patch coming down from the main field to the north, and it would not extend southwards for any distance.

801. May there not be a considerable area of coal land? Not in proportion to the area of the whole field. It is either an isolated patch or a tongue coming down from the main field.

802. *Mr. Wright.*] Have you personally inspected this country? I have personally inspected a great part of it. I have followed the seams round from Cambewarra towards the Saddleback, and I have examined them at the Saddleback and on the property of the Hon. J. H. Watt and along the Wongawilli Ranges.

803. Your deductions are made from personal observations? Yes.

804. *Mr. Fegan.*] You would not say that the Greta seam has deteriorated? No.

805. *Mr. Humphery.*] Have you seen the 12-ft. seam belonging to the Illawarra Harbour and Land Corporation? No, I have not.

806. You have heard, I presume, that the corporation have a seam of anthracite coal 12 feet in thickness, giving about 12 per cent. of ash, which they have penetrated for a distance of about 60 feet? No.

807. How long is it since you inspected this part of the south coast? I made the chief inspection in 1890.

808. If this seam has been discovered, will it lead you to change your opinion as far as the character of the coal south of Port Kembla is concerned? Not if the coal is part of the Bulli seam. If it belongs to a lower seam that has not been much tested elsewhere, the fact would modify my opinion.

809. It may belong to the uppermost seam? Yes, or it may be one of the lower seams which have improved in quality at that spot.

- T. W. E. David, Esq., B.A.
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810. *Chairman.*] Supposing it belongs to the uppermost seam? That would not modify my opinion, because the uppermost seam has been proved at so many places to have thinned down or to have been damaged by dykes.
811. *Mr. Humphery.*] This would be one of the patches to which you have referred? Yes.
812. Are you prepared to express an opinion as to the probable extent of this patch? No, but it cannot extend very far south, because it would soon reach the northern end of the land at Wongawilli, where the uppermost seam has a thickness of only 2½ ft.
813. At any rate an inspection would be desirable, assuming that the extent justifies further exploration? I think so.
814. *Chairman.*] Do you think that the total amount of coal extracted from the Illawarra mines forms any great proportion of the total amount of available coal? Do you mean within the 5 miles' strip.
815. Yes? It is very doubtful whether 26,000,000 tons of coal have been sent away from the district. I should think that not one-twentieth of the available coal has been taken.
816. *Mr. Humphery.*] If the Illawarra Harbour and Land Corporation's coal belonged to a seam other than the Bulli seam that would largely increase the probable store? Yes.
817. And it might then be of very great extent? I hardly think so, because I have seen several of these lower seams exposed to view both to the north and to the south of this ground.
818. *Chairman.*] Are we justified in believing that there is no accessible coal having a commercial value, adjacent to Jervis Bay? Yes. The nearest coal would be 2,000 feet below the surface. A bore was put down between Jervis Bay and the Clyde River, and the Greta coal was only reached at a depth of 1,331 feet. The coal there was not of good quality. You will find a report of the bore in the annual report of the Department of Mines for 1890.
819. *Mr. Hoskins.*] Have you ever given any attention to the question of providing appliances and conveniences for shipping coal;—have you studied this question in connection with the ports of Great Britain and Wales? No, I am not a mining engineer at all. I have concerned myself purely with the geological features of coal mining—the distribution of coal seams, the points of outcrop, the depths, and so on.
820. *Mr. Trickett.*] Is it not probable where an upper seam is found to be affected by volcanic action that the lower seams will be of inferior quality? As the volcanic rock comes from below, the lower seams generally have to bear the brunt of the onslaught. Therefore the coal does not usually improve in quality as you go down. If you find that the upper seams are burnt, you generally find that the lower seams are burnt to a still greater extent.
821. Is not the good coal in the Illawarra district superior for steaming purposes to any other coal in New South Wales? Yes, it is a very superior coal for steaming purposes.

WEDNESDAY, 18 NOVEMBER, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.

The Hon. JAMES HOSKINS.

The Hon. CHARLES JAMES ROBERTS, C.M.G.

The Hon. WILLIAM JOSEPH TRICKETT.

The Hon. DANIEL O'CONNOR.

HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.

JOHN LIONEL FEGAN, Esq.

THOMAS HENRY HASSALL, Esq.

GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

Edward Nassau Senior, Esq., General Financier, and Representative of the London Board of Management of the Southern Coal Company of New South Wales (Limited) sworn, and examined:—

E. N. Senior, Esq.
17 Nov., 1896.

822. *Mr. Humphery.*] You represent English investors in Australia? Yes, very largely. I suppose I represent between £3,000,000 and £4,000,000 of capital invested here. I have come out to Australia every four or five years for the last twenty years.

823. Are you familiar with the various ports south of Sydney and with the southern coal mines? Fairly so. I do not consider myself a coal expert.

824. Have you brought a statement? I have here a short statement, which I will read:—

I represent the English shareholders in the Southern Coal Company, which owns the largest jetty at Port Kembla. Before we decided to build the jetty we made careful inquiries as to which was the safest and most suitable place on the coast for the shipment of our coal. In coming to a decision we were largely assisted by the advice of the late Sir John Coode, who, being a personal friend of the chairman of the company, gave us the benefit of his advice unofficially. We decided that Port Kembla was the most suitable place, being the nearest approach to a natural harbour on the coast, and also from the fact of the coal being traced many miles south of it, it seemed to us that it would occupy the most central position eventually. He advised us strongly at the time to erect a breakwater to protect shipping from the south-east and easterly gales, but we did not then think the position of the southern coal trade of New South Wales justified such a large expenditure of money. This position is now entirely changed, the trade in southern coal having increased now to almost 1,000,000 tons per annum. About one-fourth of this is shipped at Port Kembla, and, were we now thinking of erecting a jetty, the importance of the trade would fully justify the expense of a breakwater. Experience has shown us that a harbour safe to load at in all weathers is the one thing remaining undone to fully develop the trade in southern coal. The best of it is within 7½ per cent. of the very best English and Welsh coal for steaming, and, if there were a harbour on the south coast where vessels (especially sailing ships) could load in all weathers, the future of southern coal in the eastern ports would indeed be bright, and the cheap Japanese coal, which is inferior in steaming qualities, could not compete with it.

I am informed that it is laid down by experts that it would require 400,000 tons shipped at Port Kembla, upon which a levy of 6d. per ton was made, to pay 4 per cent. interest upon the cost of the eastern breakwater. I am very confident that, at the very least, 400,000 tons would be shipped within the first year after the breakwater was made, which would annually increase considerably. At the present moment there are some 220,000 to 250,000 tons shipped at Port Kembla alone, and, if this is done regularly when there are many days in the year that steamers cannot load, the inference is only fair that, when steamers can load there all the year round, the amount shipped by steamers must increase.

Experience has shown at Newcastle that the foreign sailing ship trade takes away from that district about the same amount that the steamers do—this points to a similar result following in the south, so that we may fairly expect that when once sailers can coal there we might expect a similar result to Newcastle which would double the quantity now shipped from the southern district. The whole of the sailing trade must come to the safe harbour.

It must also be borne in mind that in bad weather the harbour would be utilised by all the collieries in the district, as the weather would be too rough for them to load at their own private jetties. The value of this increase would naturally be dependent on the weather.

I have very little doubt that, when once a breakwater is built at Port Kembla, many large English shipowners, who at present regard the port as a somewhat uncertain roadstead, will regularly send their ships to load there. E. N. Senior,
Esq.

There is another source of revenue to be confidently expected when once Port Kembla is made into a regular harbour—I refer to imports. I am informed that the Smelting Company of Australia expect to deal with some 200,000 tons of Broken Hill ores and some 40,000 to 50,000 tons of flux—this would bring in a handsome revenue. I am also very confident that, if a safe harbour is made on the southern coast, other industries of a character similar to the Smelting Company must be established; in short, in my opinion the southern district has now improved its position so much that I think it has a right to expect a sum of money to be expended in forming a safe harbour, especially so when a revenue more than covering the interest on the loan can be looked for with the greatest confidence. As a commercial affair I would have no hesitation in recommending people in England to put their money into a company to erect this breakwater, were it possible for a private company to make a levy of 6d. per ton upon everything imported and exported at the port. 18 Nov., 1896

It may be contended that no such harbour is required, as all the appliances are in Sydney, but I would point out that the expense of sending coal from Mount Kembla to Sydney is something like 3s. 9d. per ton for railway carriage. This is a simply prohibitive tax, and the southern coal could never compete for the steam coal trade in the eastern ports if it were handicapped with this prohibitive charge. Indeed, the policy of the Railway Department has been hitherto to stifle local developments in the southern district, and to divert everything to Sydney.

If it can be proved that there is a better or more suitable harbour on the south coast than Port Kembla, by all means let that harbour be chosen. All that I (representing a large sum of money already invested in the southern district, and possibly more to come) ask, is for a safe harbour to be made.

825. Before you selected Port Kembla for the shipment of coal were you interested in any of the coal mines? No. Our first idea was to buy a coal mine, provided we could see our way to ship the coal from a safe harbour close at hand.

826. In your statement you refer to a conversation which you had with Sir John Coode upon the subject? I have had a great many conversations with Sir John Coode upon the subject.

827. Did those conversations take place before you acquired any interest upon the south coast? Yes.

828. How long, subsequent to that, did the investors whom you represent acquire an interest? I should say two or three months afterwards.

829. What led to your acquiring an interest in the Southern Colliery? It was represented to us that the coal trade in Australia was likely to increase; that the coal in the southern districts was very good, and that all it wanted was to have capital put into a harbour to increase it. I was out here in 1886, and several things were mentioned as being good. Finally a property was offered to us; but we said, "No, we will not take that property unless we can obtain a safe harbour for which to ship the coal. We then considered Bellambi, Lake Illawarra, and Port Kembla, and, after a good deal of consultation we decided that Port Kembla was the best place for a port of shipment.

830. You then acquired a coal property in its vicinity? Yes.

831. Have you any objection to state the nature of the interest which the investors acquired. Did they buy one coal mine or several? They bought a coal property at Mount Kembla, consisting of about 750 acres freehold, and a good deal of money was spent in building a pier at Port Kembla, and in making a railway from the coal property down to the pier.

832. Was that coal property been a success? No, it has not. We only went for one seam—the Bulli seam, which is what all the collieries there are working—but we found that the coal was burnt. There are other seams on the property; but we thought it better, instead of prospecting them to take Corrimal which was offered to us on a royalty. Having commenced operations there, we have been going on regularly ever since, and now our output is about 100,000 tons a year. We have constructed two railroads; a railroad from the Southern Coal Company's property to the Government line, and from the Government line to our pier at Port Kembla, and another from Corrimal to the Government line.

833. Had you constructed the jetty previously? No; the whole of the work went on simultaneously.

834. How did you acquire the right to construct a jetty? I think we bought it from people who had an Act of Parliament.

835. Have you a lease in connection with the jetty, or do you pay royalty? I think we pay royalty.

836. You cannot remember what royalty you pay? No.

837. Who are the property-owners to whom you pay royalty? I cannot remember.

838. What has been your expenditure in connection with the jetty? I should say approximately £25,000.

839. And what on the railway? Approximately another £25,000.

840. How much did you expend in testing the property which you are not working? I could not tell you off-hand; but we spent a good deal of money over it.

841. Many thousands of pounds? Yes, a good many.

842. What is the length of your line from the Government line to Port Kembla? It is over 2 miles.

843. What water is there at the end of the jetty? Over 30 feet.

844. I suppose the largest vessels can lie alongside the jetty? Yes. I believe that the largest carrier in the world but one—the "Indrani"—has been there.

845. Is it your opinion that two breakwaters are necessary in order to make Port Kembla a safe harbour for sailing vessels? No. Personally I should try one first. My opinion is that the eastern breakwater would be sufficient.

846. Have you had any experience in connection with breakwaters? No; but I have had money put into a good many, some of which have been a success, and some not. I am not an expert in any way. If I was managing a private company that intended to carry out the work, I should erect the eastern breakwater first, in the hope that it alone might be successful.

847. Before you decided to construct a jetty at Port Kembla did you consider the possibilities of Lake Illawarra, Wollongong, and Bellambi? Yes. Our reason for deciding against Bellambi was that the holding ground was not good, the bottom being rocky. Sir John Coode did not advise us to go into the Illawarra scheme. His idea was that constant dredging would be necessary there, and that a large expenditure would be necessary to make a good harbour there.

848. Did Sir John Coode fully explain to you his reasons for not liking the Lake Illawarra scheme? He advised against it mainly on the ground that it would require a great amount of dredging, and that the lake was not deep enough to take really large steamers.

849. Were you influenced by Sir John Coode's advice in determining upon Port Kembla? Very much so. If Sir John Coode had not advised me to decide upon Port Kembla I should not have taken up the idea.

850. What is the present position of the company. Is it a going company? We are just about paying our way now. I suppose that this year we shall do a little more than pay our way.

E. N. Senior
Esq.
8 Nov., 1886.

851. Is there any intention of abandoning or of selling the property? Not the slightest.
852. Is there sufficient encouragement for you to continue operations there? Certainly.
853. Is there another mine close to Corrimal in which you are interested? We have leased a bit of property from Captain Osborne which we work in conjunction with Corrimal.
854. Do you know anything about the coal-measures below Port Kembla? Only from hearsay. I do not believe that they have ever been thoroughly tested, though I believe that Mr. Howell is now testing them for the Smelting Company of Australia.
855. Looking upon the construction of breakwaters at Port Kembla as a commercial enterprise, would it offer any encouragement for the investment of capital, supposing that the investors were permitted to charge a rate of 6d. per ton upon the imports and exports of the place? I would willingly join in forming a company to construct a breakwater if the company were given power to make such a levy.
856. That would be a general levy upon exports and imports? Upon all coal shipped away, and upon all imports. I expect that if a breakwater is made, the imports there will be large, on account of the close proximity of the smelting-works.
857. When you refer to a charge of 6d. per ton, that would be exclusive of railway charges? Yes; that would be simply a shipping charge.
858. Assuming that 900,000 tons are now sent away from the Illawarra district annually, do you expect that if a breakwater were made at Port Kembla at least 1,000,000 tons would be sent from that place alone every year? The experience of Newcastle would lead one to believe that if a safe harbour were made at Port Kembla the export would be doubled, because sailing ships would take away as much as the steamers take.
859. Therefore, nearly 1,000,000 tons of coal would be sent away from Port Kembla annually, exclusive of what was shipped from the other jetties? Yes.
860. In addition to that, there would be the imports, which you estimate at about 250,000 tons? Yes.
861. That would make the trade of the port 1,250,000;—is that an unreasonable estimate? I do not think that it is, judging by the experience of other places.
862. With regard to the Lake Illawarra harbour scheme, the company's Act provides that a channel should be dredged through the lake to a depth of 15 feet;—in your opinion, would that depth be enough? No; you ought certainly to allow a depth of 30 feet. Nowadays it is no use making a port unless you make it large enough to take in the biggest vessels.
863. Unless the lake were dredged to a much greater depth, it would not be able to accommodate the class of vessel which you would expect at Lake Illawarra? That is my opinion. I should not dream of putting money into the Lake Illawarra scheme unless provision were made for the accommodation of vessels drawing at least 26 feet. I should think the depth ought to be 30 feet.
864. Is it your opinion that the ores and flux required by the Smelting Company of Australia would be brought to Port Kembla, and not to Sydney? I should say so. The steamers would save a journey of 40 miles going and coming, and they would be able to take in coal while they were putting out the ore.
865. The vessels bringing ore would need coal for back loading? Naturally.
866. So that, apart from the saving in haulage, because of the shorter distance to Port Kembla, it would be a great advantage to the vessels engaged in the trade to go to Port Kembla? I should think so.
867. Will you state the extent to which those whom you represent are interested in the south coast? As regards the Southern Coal Company, we have something like £160,000 expended. As to the other companies which I represent, I should have to look over the list of investments before I could give you the information you desire.
868. Would the other companies to which you refer be affected by the proposed scheme? No. The only company affected by this scheme with which I am connected, so far as I remember at present, is the Southern Coal Company.
869. In your opinion, the proposal before the Committee is the only proposal for the construction of a safe harbour into which it would be safe for investors to put their money in the hope of getting a return? That is a very large question. It is the scheme that I personally prefer.
870. If the proposed work were carried out, would you be prepared to hand over your jetty to the Government? I should be uncommonly sorry to do so.
871. Upon reasonable compensation, or would you prefer to continue to work your jetty? I should prefer to continue to work our jetty.
872. Would it be reasonable for the Government to undertake an expenditure of the kind proposed without some contributions from you? I think it would be quite reasonable. The Government would make their own profits out of the work.
873. In what way? If they made a levy of 6d. a ton upon all exports and imports, and the breakwater only cost them £150,000 or £160,000, they would make an uncommonly good thing out of it.
874. Would there be any objection on your part, or on the part of other owners circumstanced like you, to paying such a charge? I do not think so. The construction of the breakwater would increase our trade enormously, and in that way we could get a *quid pro quo*. I do not ask the Government to resume our jetty. All I ask is that the Government will give us a safe harbour.
875. And you are quite willing to pay for it? Yes.
876. *Mr. Hoskins.* In regard to the Lake Illawarra harbour scheme, would it not be necessary to dredge a great deal more than a mere channel across the lake;—would not a large basin be necessary for the reception of shipping? I think you could get better information on that subject from a naval expert.
877. If sailing vessels were taken there, it would be necessary to have room to move them about in? I think it will be a long while before we have sailing ships in Lake Illawarra.
878. You are of opinion that there will never be an extensive sailing-ship trade to Lake Illawarra? That is my opinion. I should be very sorry to put money into the Lake Illawarra scheme.
879. If you simply dredged the channel across the lake you could only deal with one vessel at a time? I do not think that follows, because you could make wharfs for the accommodation of several vessels at a time. I have not seen any plans, so that I do not know exactly what is required at the lake.
880. Could the Smelting Company of Australia discharge vessels at Port Kembla at the present time? No; not while there is no breakwater.
881. What is the area of land leased by the Corrimal Company? I could not say offhand. I cannot remember all these particulars

882. Do you anticipate that if the Government carry out the proposed improvements at Port Kembla, that place will be used for the shipment of coal from other mines besides those which send there now? Certainly; so far as sailing ships go, the whole trade must come to Port Kembla, or wherever a safe harbour is made. At present there is no sailing-ship trade on the south coast.

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883. Would your company be able to work their jetty while the breakwater was in course of construction? Yes.

884. *Mr. Trickett.*] You spoke of the coal upon your Mount Kembla property being burnt;—did you make any investigation to ascertain whether there was not better coal lower down? We went on with the seam a long way; but we did not test the other seam. At present the only seam which is in demand is the Bulli seam.

885. You had no bores put down to test the other seams? No.

886. The reason being that it paid you better to make other arrangements? Quite so. The leased block is 12 or 14 miles from Port Kembla, while our purchased block is close to Mount Kembla, and about 5 or 6 miles from the port.

887. Is your coal brought down to Port Kembla over the Government railway? It is first brought over our own lines, then over the Government lines, and then over our own line again.

888. Is it an extensive seam that you are working at Corrimal? I think it is about the average width of the Bulli seam.

889. Do you intend to leave your purchased block unused for any length of time? We are cutting our coal according to our cloth, and are waiting until we have some spare funds before further developing the freehold block.

890. The southern coal is a good marketable coal? The Corrimal coal is.

891. Where is the chief market for that coal? We have contracts to supply various ocean-going steamers, and a certain amount of coal goes to Singapore and up that way.

892. There is a large demand for this coal in the East? Yes, and I think there will be a still larger demand in the future. It is not enough known yet. To my mind it is only a question of time when the southern coal trade will be very largely developed in the East.

893. You have dwelt considerably upon the necessity of making a harbour at Port Kembla for the accommodation of sailing ships? I do not pin myself to Port Kembla. I have been speaking of the necessity of having a safe harbour for sailing ships upon the south coast.

894. Do you think the days of sailing ships are likely to continue? There will always be a certain number of sailing ships employed, though the number of sailing ships does not increase so fast as the number of steamers. Of course, the more steamers increase, the more coal will be required in the East.

895. But steamers can come to Port Kembla in safety in any weather? No; there are certain days in the year when they cannot load there. That is the experience of every jetty upon the coast. We constantly telegraph to Sydney to say that it is no use for a steamer to come down. It would not suit us to have our pier bumped away. There is no open pier in the world at which vessels could load all the year round.

896. Therefore, the necessity for the breakwater exists, even if only steamers are to be employed? I do not say that it is so vitally necessary for steamers, because they can load there during most of the days of the year. But it upsets the whole of our colliery arrangements when we have to stop loading for two or three days.

897. You say that your company originally contemplated constructing a breakwater? Sir John Coode advised us to make a breakwater, because he said that it was the only way to provide for the loading of sailing ships.

898. If you had made a breakwater, would you have sought to get special rights in connection with the port? We did not see our way to make a breakwater, because we did not see that we could get our money back again. If we had the right to make a levy of 6d. a ton upon all exports and imports we should be willing to make a breakwater to-morrow.

899. Is not 6d. a ton a high rate? Well, I spoke of 6d., because I have heard that rate talked about. If the Government could make it less than 6d. so much the better.

900. *Mr. Clarke.*] In your estimate of the future trade of the port, did you include the Metropolitan Co.'s coal? No; that coal goes to Sydney by rail.

901. Would the mines which now send to Clifton, Bellambi, Bulli, and other jetties continue to ship there if the proposed work were carried out? I think so, whenever they could. They would only come to Port Kembla during bad weather.

902. Or to load large vessels? Yes; they do that now sometimes. If we have a big steamer at Port Kembla, which we cannot load ourselves at once, other people often help us.

903. These jetties do not last very long, so that it might be cheaper for them to send to Port Kembla than to incur the cost of maintenance? Our jetty was built in 1888, and everything that has been required to properly maintain it has been done at once, so that I do not think it is any worse now than it was the day it was built.

904. It is not a fact that the foreign coal trade is nearly all done by sailing vessels? Pretty well.

905. The trade to California, Chili, Peru, and South Africa? Well, I do not know about South Africa.

906. Sailing vessels cannot use Port Kembla in its present state? That is so.

907. A large quantity of coal is now shipped at Wollongong;—do you think that that coal would continue to be shipped from there, or would it be brought to Port Kembla? That would depend a great deal upon the contracts. If they got small contracts in Sydney, they would probably ship from Wollongong; but if they got big contracts, for the supply of big steamers, they would probably send to Port Kembla.

908. *Mr. Lee.*] Do you think the prospective trade of Port Kembla—1,000,000 tons a year—could be shipped from the existing jetties there? I should be sorry to answer that question offhand.

909. If the output of coal increases, will not the owners of the jetties at Port Kembla have to make a charge for the coal shipped from them? At present we make a charge for all coal going over our jetties.

910. Would not additional appliances be required for the shipment of a much larger quantity of coal? I think that is a question for a practical man.

911. Would your company offer any serious objection to the resumption of its jetty by the Government? That is a thing which I have not considered. As regards the question of appliances, I think that is a matter

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- for experts. As to the question whether we should offer any objection to the resumption of our jetty by the Government, I take it that the Government have absolute power to resume that jetty if they choose.
912. Supposing it were found necessary to resume these jetties, the mere fact that they belong to the Government would not interfere with your business as coal exporters? Not a bit.
913. *Mr. Wright.*] You have spoken about the probable development of the coal trade at Port Kembla; have you any knowledge of the coal trade generally? I have bought a great deal of coal, and I have sold a great deal of coal for ships; but I am not a coal expert.
914. You cannot double the trade of a place unless there is a market;—what probability is there of the market for Australian coal increasing? I think that our southern coal would be very largely used in the eastern ports—Singapore, Hong Kong, and so on. I think that the cheap Japanese coal will be knocked out entirely.
915. Is the southern coal better than the Newcastle coal? It is better steaming coal. Steamers prefer it when they can get it on equal terms.
916. You think that a large increase of the steamer fleet of the world will mean a large increase in the consumption of this coal? I go further. The steam-coal of England is not going to last for ever, I am afraid. Mr. Price Williams, who is supposed to be an authority, has, I believe, stated that the steam-coal of Wales will not last more than 100 years.
917. Are you familiar with the eastern waters? No; but I have sold coal to go out there.
918. I believe that there are large coal-beds in China and Japan? Yes; but I understand that the coal is very gasy.
919. Still that coal will enter into competition with our coal? Yes; and we want to be in a position to meet that competition. If you have the best article it is wrong of you to let other people beat you.
920. *Mr. Egan.*] Has your company ever approached the Government and pointed out the necessity for this breakwater? Never, that I am aware of.
921. As far as your company is concerned, it does not matter whether the breakwater is constructed or not? I do not say that. It is everything to my company, and to everybody interested in the southern coal trade to have a safe harbour made.
922. You are only speaking for the Southern Coal Company? Yes.
923. You say that about 200,000 tons of coal are sent away from Port Kembla now;—a tax upon that coal would not repay the Government the cost of constructing a harbour at an expenditure of £300,000? Certainly not.
924. You look for the expansion of the sailing-ship trade upon the construction of this breakwater? Yes, chiefly.
925. You do not think that the construction of the breakwater would be in any way detrimental to the interests of Newcastle? It would not affect Newcastle in the slightest degree.
926. It is chiefly to the eastern trade that you are looking? The eastern and the Californian trade.
927. Did it ever occur to you to ask Parliament for the right to construct a breakwater? I never thought of such thing, because I never imagined that Parliament would give us the right. If the Government asked us to find the money for this work, and allowed us to charge 6d. a ton upon all exports and imports. I should certainly consider their proposal. I would do more, I would put my own money into the scheme.
928. You say that the time has come when the security of the southern coal trade should be considered, as the security of the northern coal trade has been considered? Yes.
929. *Mr. Hassall.*] You do not know anything of the coal south of Mount Kembla? No.
930. If the coal-seams extend south of Mount Kembla, Port Kembla would be very centrally situated to the various collieries which may be opened? Yes.
931. Is the Illawarra coal equal to the Welsh coal? It is from within 7½ to 10 per cent. of the best Welsh coal.
932. The cost of rail carriage practically prevents you from sending your coal direct to Sydney? Yes; and the handling spoils the coal. The southern coal is inclined to be brittle, and the less handling it gets the better.
933. You spoke of this coal taking the place of Japanese coal? I think our coal is better than the Japanese coal, and ships coming out here would be glad to take coal as ballast to the eastern ports.
934. Have any efforts been made to develop any of the seams besides the Bulli seam? I do not know. I have made several inquiries; but I have had no definite answer.
935. Do you know whether any test has been made of the quality of the coal in the other seams? I have not heard of any; but as long as people can work the Bulli coal, they will not try any other.
936. Would your company and other coal shipping companies be able to pay a charge of 6d. a ton on all coal shipped, if a safe harbour were provided? I think so.
937. You would not raise any objection to such a charge? No.
938. *Mr. Roberts.*] If the contemplated works at Lake Illawarra were carried out, would you regard the construction of a breakwater at Port Kembla as necessary? No. If Lake Illawarra could be made a safe harbour that is all we should want.
939. Are you able to say if Lake Illawarra could be made a safe harbour for sailing ships? I have my own opinion upon the matter, but I am not an expert.
940. Do you not think it would be necessary to construct the northern breakwater at Port Kembla in order to protect the place from black north-easters? There are a good many headlands to the north, which, I think, give enough protection. Personally, I should prefer only to carry out one breakwater at first.
941. *Mr. Black.*] Sixpence a ton upon 1,000,000 tons would give a return of £25,000, or about 8 per cent. upon annual expenditure of £320,000. Against that, however, there would have to be set the interest, working expenses, and the capital sunk in resuming land and purchasing private rights to existing jetties and railways lines? I think that if the Government made only 4 per cent., or even less upon their total expenditure, they should make a port in the southern district.
942. Even if it involved a loss of from £20,000 to £25,000 per annum? I do not admit that there should be a primary loss at all; but even if there were a small loss I think the work should be carried out.
943. *Chairman.*] Do you ship 100,000 tons from your jetty at Port Kembla? Yes.
944. Is it reasonable to suppose that you could ship 200,000 tons a year from that jetty? Yes.*

945.

* NOTE (on revision):—The quantity of coal shipped over the Southern Coal Company and the Mount Kembla Company's jetties at Port Kembla during the first nine months of the current year is as under:—Mount Kembla Company, 107,164 tons; Southern Coal Company, 115,472 tons; total 232,636 tons.

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Besides the ordinary regular steam-coilers belonging to Sydney, carrying up to 750 tons of coal, numerous large vessels from 2,000 to 7,000 tons each have loaded at Kembla, but with some risk both to jetties and themselves when heavy weather came on; and from inability to load sailing ships with safety the company has been compelled to decline trade with Bombay, Madras, Singapore, Shanghai, Colombo, and America.

Mr. Darley's whole plan would undoubtedly provide a harbour as safe as Port Jackson and serve for all time; but I am of opinion that his proposed eastern breakwater would answer present purposes, and should immediately be undertaken. There is abundance of stone to be had at Red Point, and also an immense quarry of bluestone 5 miles distant with a railway already constructed from Red Point right up to the face of the quarry, and these can be shown to the Committee on the spot, so that the work can be carried out cheaply.

As regards the cost, from information I am of opinion that the eastern breakwater could be built well within Mr. Darley's estimate, and I consider the district has a good claim for the expenditure as a national and necessary work. I suggest that the Government resume either the whole or at least 1,000 acres of the Five Islands or Wentworth estate for resale and settlement. The whole of the cost of the breakwater would probably be recouped thereby.

It is a work upon which many of the unemployed could be engaged.

There is not only the output of the Mount Kembla and Southern Coal Companies, now equal to 250,000 tons per annum, but I believe the port will be largely availed of by six or seven other coal-mines as far north as South Clifton and even by the Metropolitan, as all these mines are already connected with Port Kembla by their own railway sidings and the Government line of railway.

No expenditure for the railway purposes will be required.

The smelting works at Dapto are also already connected by railway with Port Kembla.

As regards Wollongong and Lake Illawarra, my conviction is that they never can be made to suit large vessels or be adapted to the bulk of the coal trade of the district, and I doubt whether capital will be available to carry out the Lake Illawarra scheme, and if it were carried out the existing collieries could not afford the cost of railway traction and shipment there. It would be of little use to them.

Lake Illawarra has only 10 feet of water, and it cannot be made deep enough for vessels as large as those that have already loaded at Port Kembla without any dredging. The entrance to the lake could not be made safe enough for vessels to enter in rough weather, and could not leave during north-easterly weather. The Illawarra Act only compels the channel to be dredged 15 feet deep, which is insufficient for the existing steam-coilers.

There is an enormous quantity of coal at the back of the present mines, which will have to be shipped during the centuries to come, as also at Coal Cliff, South Clifton, North Illawarra, and South Bulli mines.

The operations of the collieries have so far been limited to what is known as the top or Bulli seam, but it is well known that there are five other seams underneath proved to exist, so that there is little fear of the coal running short for shipment.

At the present rate of output the Mount Kembla from top seam only will last 200 years, and the South Bulli 100 years. Keira and Pleasant will probably last as long.

The collieries can afford to pay the same rates for railway traction and shipping as are paid at Newcastle.

The collieries could pay a shipping rate that would return interest upon outlay. There would also be revenue derivable from wharfage on cargo discharged at the port to industrial concerns, which will assuredly be started contiguous to the coal with a good harbour and upon land rendered available by resumption for the erection of various works.

THURSDAY, 19 NOVEMBER, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.

The Hon. JAMES HOSKINS.

The Hon. CHARLES JAMES ROBERTS, C.M.G.

The Hon. WILLIAM JOSEPH TRICKETT.

The Hon. DANIEL O'CONNOR.

HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.

JOHN LIONEL FEGAN, Esq.

THOMAS HENRY MASSALL, Esq.

GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

Charles Edward Rennie, Esq., Chief Draftsman, Department of Lands, sworn, and examined:—

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948. *Chairman.*] You produce some plans? Yes; I produce two plans which have been prepared in accordance with the wishes of the Committee. One shows the tenure of land within 10 miles of Jervis Bay, and the other the tenure of land within 10 miles of each of the southern coal ports and of Lake Illawarra. The tenure of land within 10 miles of Bellambi Harbour is—Freehold, 45,300 acres; conditional purchase and conditional lease, 2,750 acres; reserves, 42,500 acres (including 4,120 acres held under mining tenures); Crown lands, 3,650 acres. Within 10 miles of Wollongong there are—Freehold, 55,180 acres; conditional purchase and conditional lease, 1,630 acres; reserves, 25,430 (including 4,914 acres held under mining tenures); Crown lands, 8,480 acres. Within 10 miles of Port Kembla there are—Freehold, 65,400 acres; conditional purchase and conditional lease, 340 acres; reserves, 11,040 acres (including 4,754 acres held under mining tenure); Crown lands, 105 acres. Within 10 miles of Lake Illawarra—Freehold, 118,850 acres; conditional purchase and conditional lease, 7,880 acres; reserves, 55,830 acres (including 15,640 acres held under mining tenure); Crown lands, 3,015 acres. Within 10 miles of Jervis Bay—Freehold, 61,180 acres; conditional purchase and conditional lease, 20,470 acres; reserves, 28,070 acres; Crown lands, 28,380 acres; there are no mineral leases in force within this area.

Of course, these 10-mile limits overlap in places, because some of the ports are less than 10 miles apart.

949. Is there any Crown land immediately at Bellambi? No, not immediately adjoining Bellambi Harbour.

950. What about Wollongong? There is no Crown land immediately adjacent to the port of Wollongong,* but a little to the south, extending from the beach to Tom Thumb's Lagoon, there are about 1,400 acres.†

951. Is there any Government land at Port Kembla? No; the land all around Port Kembla for some considerable distance back is freehold.

952. To whom does the estate belong? The original grantee was a Mr. Allen. I do not know who the present owner is.

953. Is there 100 feet reservation at each of these places? I do not know; but I will find out.

NOTE.—The above areas are approximate only.

* NOTE (on revision):—It should have been added that there is a narrow strip of land extending from the northern boundary of C. T. Smith's 300-acre grant along the harbour frontage; thence along the coast to the northern boundary of the show-ground—comprising about 100 acres, forming part of the Wollongong "Harbour Trust Lands." The control of this land was taken over by the Government on the dissolution of the Harbour Trust by proclamation in *Government Gazette* of 2nd December, 1895.

† NOTE (on revision):—Should read, "About 400 acres, embracing the recreation-ground, show-ground, racecourse, permanent and temporary commons, and part of the Wollongong 'Harbour Trust Lands.'" A lithograph marked "X" shows the land referred to in notes (*) and (†).

The Hon. Ebenezer Vickery, M.L.C., sworn, and further examined:—

954. *Mr. Hoskins.*] You are in favour of the recommendation of the Harbours and Rivers Branch of the Department of Public Works in regard to Port Kembla? Yes, I think that the best place for a harbour on the southern coast.

955. You approve of the eastern breakwater being constructed? Yes.

956. While it is in course of construction will it interfere with the working of the private jetties? Not in the least. It will facilitate loading at the jetties.

957. Will the construction of the wharf interfere with the jetties? Not in the least.

958. Could the Government ship coal from the proposed wharf without interfering with the operations of the companies using the jetties? Yes.

959. I suppose the Government would not require a very large area of land as an approach to the breakwater? No. I think that if they resumed 100 acres that would be quite sufficient for present purposes; but it would be a great mistake not to resume more, because the Government expenditure will add largely to the value of the land. By resuming a large area and reselling it, the Government might recoup a large proportion, if not the whole, of the cost of the eastern breakwater.

960. To whom does the land belong now? To the Wentworth family.

961. What would be the value of 1,000 acres of that land? It has an increased value because of the royalty which the companies pay to the Wentworth estate for running their coal over it.

962. What would be a fair price for the Government to pay for 1,000 acres of it? If I were asked to buy the land, without taking into consideration the income derived from the coal companies, I should say that it was not worth more than £10 an acre; but because of its position, and because of the income from way-leave, I think its value might be £20 an acre.

963. How would the Government be recouped by the sale of this land? A considerable population would want to settle round the wharfs, and the land could be sold in allotments to people connected with the shipping. Then, too, if there were a port, other industries, such as chemical works for example, might be started. The place is peculiarly adapted for manufactories, because of the nearness of the coal.

964. What is the distance from Port Kembla to the smelting works? About $4\frac{1}{2}$ miles in a direct line, or about 8 miles going round by the railway.

965. If a direct line of railway were made, through whose land would it have to be taken? It would go through part of the Wentworth estate, and I think through part of the Jenkins estate.

966. Do you think that if such a line were made, ore could be landed at Port Kembla and taken to the smelting company's works? Undoubtedly. In my opinion, if the eastern breakwater is constructed, the seas which come from the south-east will be thrust on to the beach a long way to the north of Port Kembla, with the result that the water inside the breakwater will be quite smooth, and vessels will be able to lay alongside a wharf there and discharge their cargoes almost as easily as at Circular Quay. Lake Illawarra has been mentioned in comparison with Port Kembla; but, in my opinion, it is idle, and trifling with a great public industry, to speak of Lake Illawarra as adapted for the shipping of coal to any great extent. A harbour only 15 feet deep would not suffice for the present colliers. The lake is a beautiful place for boating, fishing, picnicking, or anything like that; but, regarded as a coal port, it is a delusion. To show the bad state of the entrance, I may say that I have driven across to Windang Island in a cart. At Port Kembla, on the other hand, you have deep water within a very short distance of the beach, and a splendid anchorage. I have been there when it has been blowing a black north-easter, and the waves have been rolling with tremendous force against the jetties; but vessels have been able to ride out the gale at their anchorage, although I almost quaked for their safety.

967. How long is it since the Mount Kembla Company's jetty was erected? Our first jetty was washed away. The present jetty has been there for, I think, about nine years.

968. What does it cost annually to keep the jetty in repair? The cost is something considerable, because the waves at times do considerable damage, and piles have frequently to be renewed. We watch the jetty very carefully, and, perhaps, every two or three months, we put down a few new piles.

969. Could ore be landed at Port Kembla as it is at present? Not easily; though of course we have landed a good deal of stuff there. We have landed heavy machinery there; but it is rather troublesome work. If any large quantity of ore were to be landed there, it would be necessary to provide further accommodation for the shipping. To land stuff at our jetty you would require to make a lower stage. The jetty, as it stands at present, is about 25 or 28 feet above the water.

970. Port Kembla will not be available for the shipment of ore until the proposed improvements are carried out? Until the eastern breakwater is constructed no large quantity of ore can be landed there; and I am sure that no large quantity of ore could be taken into Lake Illawarra. The other day a vessel came to Port Kembla bringing a very large cargo of ore from New Caledonia, and she loaded 1,200 tons of coal at the southern jetty. To talk about taking a ship like that into Lake Illawarra is, in my estimation, absurd.

971. Do you think that a channel and a dock could be readily made at Lake Illawarra for the accommodation of sailing vessels? Of course, with money you can do almost anything; but I do not believe that the £500,000 which it is proposed to expend in making breakwaters and in cutting a channel across the lake will anything like meet the cost.

972. In addition to the channel across the lake, there will have to be a basin or dock for the reception of vessels? Yes. I believe that the dock is to be made deeper, so as to enable vessels to load there at any time and go out with a high tide.

973. The channel alone would not be sufficient? No, you must have a dock.

974. If the proposed improvements were made at Port Kembla, would the directors of the coal companies shipping there object to pay harbour dues? I do not think so.

975. What do you think would be a fair charge for the Government to make? I think that 3d. a ton inwards and outwards would be a fair charge, supposing the eastern breakwater were made.

976. Would that provide for the maintenance of the works and pay interest upon the expenditure? I apprehend that the trade and population of the place will increase so largely that such a levy would pay interest upon the cost of the breakwater. My opinion is that the breakwaters could be constructed for less than the sum stated by Mr. Darley, because an enormous quantity of basalt is procurable just at the base of it.

977. Do you think it could be done for £120,000? I think so. The stone would simply have to be quarried, and run out into the sea. Then at 5 miles from Port Kembla, along the Mount Kembla railway, there

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there is a very fine bluestone quarry, where blocks of immense size could be quarried. This quarry was opened by the contractor to get blue-metal for the railway. Port Kembla is naturally more sheltered than it appears to be from the plan I am now looking at.

978. Do you think that the estimate of the Department will more than cover the cost of the Port Kembla breakwater? Yes. I should be very glad to undertake a contract for the amount stated.

979. Do you consider that the proposed works will yield a fair return? I do not know what might be considered a fair return; but I think that the work should be carried out apart from the question of profit. The district has been neglected far too long. While the Government have been spending scores of thousands of pounds elsewhere they have spent nothing in this district and while the public have done nothing for themselves at other places along the coast, in Illawarra we have spent scores of thousands of pounds in trying to make ports. The various jetties at Coalcliff, Austinner, Bulli, South Bulli, and Port Kembla have cost at least £140,000, besides maintenance.

980. Do you think that if the proposed improvements were carried out it would lead to a great expansion of trade? Yes. The mines down there have been crippled for the want of a place at which sailing vessels could be loaded. The southern coal has been pronounced by many persons to be equal to the best Welsh coal. The Messageries Maritimes Shipping Company have said over and over again that they would rather have it than the Welsh coal, and ever since their ships came here they have refused to take anything else. The P. and O. Co. will have nothing but southern coal, neither will the German Australian Co. The Adelaide Steamship Co. also uses it, and so does a great number of other shipping companies. For steaming and smelting purposes it is a very superior coal. It does not make a very large quantity of ash; it does not clinker; it has little or no sulphur and phosphorus in it; it packs into a smaller compass than most other coal, especially than Newcastle coal; and it does not throw off sparks like the northern coal. The northern coal has its advantages for domestic purposes and for gas-making, and it is a good steam coal; but it is nothing like so good a steam coal as the southern coal.

981. Has the Mt. Kembla Company been constrained to refuse orders because of the poor accommodation for shipping at Port Kembla? Yes. They have not been able to receive sailing ships, because the company is not strong enough to take the risk of having its jetty knocked down by a sailing ship bumping against it.

982. Would the Mt. Kembla Co. be disposed to carry out the proposed harbour improvement if they were empowered to levy harbour dues upon all vessels coming to the port? There was a time when they would have done so; but when the Southern Coal Co. erected their jetty the Mt. Kembla Co. determined not to go on any further. The Mt. Kembla Co. had the place sounded and plans prepared for the construction of a breakwater; but the coal trade has been so unprofitable that we have had no encouragement to spend large sums of money, even if we had had the money to spend.

983. Will the breakwater give any protection to the place as the work proceeds, or shall we have to wait for its completion for the contemplated benefits of the scheme? It would probably take four years to carry out the whole scheme proposed by Mr. Darley, in which provision is made for a mile and a half of wharfage. I think, however, that the only wharf required would be one inside the eastern breakwater; and I do not think that the breakwater should take more than twelve months to construct, because of the facilities for getting stone there. Every 20 feet of breakwater will improve the harbour, and indeed our company have at times had in contemplation the purchase of old hulks to fill with stone and sink off the point in order to give some protection to the jetty.

984. Could the wharf which you speak of be made at the same time as the breakwater? Yes.

985. And when the breakwater is completed and the wharf erected there will be no obstacle in the way of unloading ore at the place? None whatever.

986. Are you acquainted with Bellambi? The coal which is shipped at Bellambi is chiefly my coal.

987. I understand that the anchorage at Bellambi is very bad? No; Bellambi would make a very good port indeed. It would suit me better to have Bellambi improved than to have Port Kembla improved, because I have more interests in Bellambi.

988. Why do you like Port Kembla better? Because it has a larger area of deep water, a magnificent approach, and a splendid anchorage. There is clay underneath the sand; but I do not know that there is clay under the sand of Bellambi.

989. Is there better shelter at Port Kembla than at Bellambi? Any difference between the two places is decidedly in favour of Port Kembla. Port Kembla receives a great deal of shelter from the Five Islands.

990. *Mr. O'Connor.*] It would be a great advantage for the Committee to see these places for themselves? Yes.

991. And the inspection would not take very long? No; and the colliery proprietors would be glad to do what they could to facilitate the work of the Committee.

992. *Mr. Clarke.*] You recommend the resumption of 1,000 acres of land in the immediate neighbourhood of Port Kembla? Yes; some of the land would be required for additional sidings. There is already a large amount of siding accommodation there; but if a great number of mines sent coal to the place, additional siding accommodation would be required.

993. That is very inferior land? Yes; but it has a special value because of its position. Apart from its position, I do not think it would be worth £2 an acre.

994. I suppose the water-frontage helps to make it valuable? No doubt. In itself it is only inferior coast land.

995. I think you stated that the coal companies paid royalty for the permission to erect their jetties? No; we obtained Acts of Parliament authorising us to erect our jetties. We pay royalty for the permission to lay down railways and carry coal over them.

996. Would the Mount Kembla Company be willing to hand over their jetties to the Government for reasonable compensation? Yes, quite willing.

997. And the railway as well? Yes; if the Government would resume it at cost price and allow us to send our coal over it at the ordinary rates.

998. What would your jetty cost? The present jetty has cost us about £18,000, while the original jetty cost about £10,000. We have spent upon the two jetties, the railway and sidings, and including £1,000 or £2,000 for driving into the mine, £72,000.

999. Is Port Kembla a safe harbour for sailing vessels? No. We have often been asked to take sailing vessels, but we never run the risk. Of course small sailing craft have gone there with timber.

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1000. I suppose the insurance companies would not insure a sailing vessel going there? No; though they will insure the steamers.

1001. I suppose it is safe to load at the existing jetties, except in very bad weather? We can load there with comfort in 250 days out of the year; but when heavy weather comes on suddenly the steamers have to cut and run, sometimes with only half a cargo, or perhaps before they have commenced loading at all. Sailing vessels would not be able to get away quickly enough.

1002. Would the construction of the eastern breakwater make it safe for large sailing vessels to load there? I think so. We can load more rapidly at our jetties than they can load with the cranes at Newcastle, and we have put 300 tons on board in an hour. Of course the ships could not take that quantity every hour, but we can pour the coal into them as fast as they can trim it.

1003. I suppose if sailing vessels could go there a large amount of coal would be taken by them to various parts of South America? Yes; and to Colombo, Shanghai, Madras, Bombay, and other places. We have had offers from those places, but we always have to reply that we cannot load sailing vessels.

1004. A great deal of the trade of Newcastle is done by sailing vessels? About half of it. Then, too, if the eastern breakwater were constructed, more steamers would go to Port Kembla than go there at present. Some captains are very timid, and have no confidence in the place until they have been there two or three times. After that they say that they would as soon go there as anywhere else.

1005. You say that 3d. a ton would be a fair charge to make upon the shipping? Yes. The companies could afford to pay such a charge, and I think that it is all the Government should ask.

1006. The inward shipping would be very small unless ore were brought from Broken Hill? Yes. Of course it will not be necessary to wait for a direct line of railway to convey ore from Port Kembla to the smelting-works, because there is at present railway communication between the two places.

1007. There would not be much inward cargo at present? Certainly not.

1008. Then, do you think that a charge of 3d. a ton would reimburse the Government the cost of making the breakwater? I have not thought the matter out; but I am of opinion that the Government should not wait until they can see their way clear to get a sufficient return to pay interest upon the expenditure. I think that the claims of the southern district and the importance of the coal trade should be a sufficient inducement, even supposing a charge of 3d. a ton would not pay interest upon the amount expended.

1009. You think that, taking into consideration all that has been spent by the Government in harbour improvements at the Richmond, the Clarence, and in other places, some consideration should be shown to the people of Illawarra? I think so.

1010. Even if only a little revenue was obtained from the expenditure? Yes. If the Government had not spent a great deal of money at Newcastle, Newcastle would not be what it is to-day.

1011. Mr. Senior stated yesterday that his company would be willing to pay harbour dues to the extent of 6d. a ton? I think that that rate should not be exacted. At the present price of coal it is almost more than the companies could afford to pay.

1012. Do the vessels of the Navy use the southern coal? Yes.

1013. They generally use the Metropolitan Company's coal? They are now using the Metropolitan Company's coal; but it is all from the same seam.

1014. *Mr. Lee.*] Do you think that Mr. Senior's estimate of the coal output will be reached in the near future? I think you may reckon upon the shipment from Port Kembla being doubled almost immediately. At present about 250,000 tons are shipped there annually. The mines to the north—Mount Pleasant, Mount Keira, and South Bulli—will always send coal to Port Kembla to load sailing vessels. At the present time they cannot take orders to supply sailing vessels.

1015. What quantity of coal do you think would be shipped annually at Port Kembla if the eastern breakwater were constructed? I think about 500,000 tons a year for certain, and very likely the output would go beyond that. Small vessels will of course still go to Wollongong, and to the other jetties.

1016. Do you expect a large over-sea trade in sailing bottoms? Yes; that is what is wanted.

1017. You think that what has happened at Newcastle will happen at Port Kembla? Yes.

1018. Newcastle was a very poor port thirty years ago? I can remember it since 1849. There was a very poor port there then.

1019. The output of coal at Newcastle has increased as the port has been improved? No doubt. As the place has been more adapted for shipping, the shipping has increased there. If the whole of Mr. Darley's scheme were carried out, you would have a better harbour at Port Kembla than at Newcastle; but I think that the construction of the eastern breakwater will be sufficient for the present.

1020. Taking into consideration what has happened at Newcastle, and remembering the quantity and quality of the southern coal deposits, is it not fair to assume that an increase in the output will follow any improvement at Port Kembla? Yes; and without doing any damage to the Newcastle trade, because the two coals are altogether different. If you came to the south for gas coal you would not get it; but you would get good steam coal, and good smelting coal.

1021. Do you think that the existing jetties will be sufficient for the export of 500,000 tons of coal a year? Yes. I know that the Mount Kembla jetty could ship 300,000 tons of coal a year quite easily, and the other jetty will take larger vessels than we can because it is higher and goes out further into deep water, though they cannot ship as quickly as we can. I believe that the two jetties could easily dispose of 500,000 tons of coal annually.

1022. The Government propose to put a wharf between the two jetties? Yes. That would do very well for the landing of cargo; but it would necessitate a certain amount of dredging. If the wharf were put inside the breakwater you would get deep water without any dredging at all.

1023. But would there not be a risk of the surf breaking right over the breakwater? That would seldom happen, and it would be harmless if it did.

1024. An import trade could not be carried on unless wharfs were erected? No.

1025. Looking at the matter from a national point of view, are you of opinion that if the Government carried out these improvements, they should resume the existing jetties and railways? I am not sure that the Government ought to resume the jetties, because I think that they would be managed better by private individuals than by the Government. At the same time the Government might fairly make a charge for the protection they provided. So far as the Mount Kembla Company is concerned, I do not think that they would object to the resumption of their jetties or of their railway by the Government.

1026. Supposing the Government put you in the same position as the Newcastle mine-owners, charging so much

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- much for haulage, and so much for shipping? All the southern colliery proprietors would be very glad to be put in the same position as the Newcastle mine-owners in that respect. Although all the colliery proprietors in the district may think that one port is better than another, so far as their interests are concerned, they have all agreed to accept whatever port the Government select after a survey of the coast.
1027. I suppose that wherever the port is made there the shipping will concentrate? No doubt.
1028. Would the Bellambi jetty continue to be used if the proposed improvements were carried out at Port Kembla? In fine weather all the companies would use their own jetties and railways.
1029. But only to load small steamers? Yes.
1030. Sailing ships would all have to go to Port Kembla? Yes. I think it very likely that even the Metropolitan Company would send coal to Port Kembla to fill sailing-ship orders.
1031. You think that for some time to come it would be unnecessary for the Government to construct another jetty at Port Kembla? Yes.
1032. A new jetty could be constructed whenever the requirements of the trade warranted it? Yes. I do not think that there is any necessity for a new jetty at the present time.
1033. Supposing the Government did not resume the railways and jetties, might not difficulties arise between the various colliery proprietors? Of course the other colliery proprietors would have to pay way-leave before sending coal over our railway.
1034. Under all the circumstances, do you not think that it would be better for the Government to resume the railways and jetties and have a fixed charge for every one? I think so. I should prefer that as the simplest plan.
1035. What rights have been conferred by the owners of the land in respect to these railways? The Mount Kembla railway runs through freehold, with the exception of that portion which passes through the Wentworth estate. Of that we have fifty years' lease, and pay $\frac{1}{2}$ d. a ton royalty. I think the Southern Coal Company has a similar lease. At the present time the two railways run side by side, with only a dividing fence between them, so that if the Government resumed them both they would have a double line of rail, and could use one as a return line.
1036. Would it be safe to impose an average charge of 8d. per ton for the haulage and shipment of coal, basing the rates upon the Newcastle rate? I think so.
1037. Is one half-penny a ton all that you pay to the Wentworth estate? Yes; that is for the privilege of bringing coal over the railway, and for the use of 30 acres of land near the port, together with the right to build four cottages for the accommodation of the people connected with the wharf. They would not allow us to start a settlement down there. They fixed a limit as to the number of cottages that we could build.
1038. Do you think that the Mount Kembla jetty is in fair order at the present time? Yes, it is in splendid order.
1039. *Mr. Wright.*] Can you tell the Committee what revenue is derived from the Wentworth estate? I fancy that they are getting £300 or £400 a year in royalties, and a similar amount for grazing rights.
1040. Do you think that they would be justified in asking £20,000 for 1,000 acres of that land? I do not think that the land is worth that amount; but it would be better for the Government to resume it at that price than to allow it to remain in private hands.
1041. What does your company pay the estate annually? I cannot remember; but I should say about £300 a year. I have been told that the Southern Coal Company pay 1d. a ton royalty.
1042. What is your honest conviction as to the probable expansion of the southern coal trade, in view of the fact that there is always active competition at Newcastle, and that you are likely to meet competition from China and Japan? I think that the trade will double in seven years.
1043. Do you think that the output of coal from Japanese and Chinese mines will not interfere with you? No. We have more to fear from strikes. They annoy our foreign customers, because of the delay and inconvenience which are caused. The frequent strikes have been most detrimental to the Colonial coal trade.
1044. You are aware that the recent discovery of coal in Victoria, and the action of the Government there in offering a bonus for its production, has decreased the importation from New South Wales? Of course it has influenced the importation from New South Wales, but Victoria cannot supply her own demands.
1045. I understand that the railway authorities of Victoria have contracted to take 280,000 tons of the Victorian coal;—supposing other colonies adopt a similar policy? They will have to find the coal first. I do not think that all the Victorian mines will be able to supply the Government with that quantity of coal.
1046. You see no reason to doubt that the output of coal from the southern district will steadily increase? I am convinced of it.
1047. *Mr. Egan.*] How long have you been connected with the coal trade? Between twenty and thirty years.
1048. From the beginning you have heard these dismal cries about other countries knocking out the New South Wales coal? Not all the time; but I have heard them of late years very frequently.
1049. Is it not a fact that prior to the last strike we were supplying Victoria with as much coal as we ever supplied her with before the discovery of Victorian coal? Nearly as much, I think. That has been partly owing to the fact that the steamship companies have lowered their freights very much. Of course the Victorian mines cannot supply the demand.
1050. Is not their coal inferior? Some of it is inferior; but some is very good.
1051. Where does the good coal come from? I cannot remember the names of the various coal-mines in Victoria.
1052. The great proportion of the Victorian coal is inferior to the New South Wales coal? Yes; their coal is patchy, and, I believe, costly and dangerous to mine.
1053. What objections have you to the making of a port at Bellambi. None whatever. Next to Port Kembla, it would make a splendid harbour. There have been two or three vessels wrecked on a reef just outside Bellambi; but I have not heard of any vessels being wrecked outside Port Kembla.
1054. Vessels have been wrecked at the entrance to Port Jackson? Bellambi would make a very good port; but it is not equal to Port Kembla. While my interests are mostly centered at Bellambi, I am convinced that Port Kembla is the best place for a harbour. The extent of either place would make a sufficiently large harbour for any possible trade for years to come.

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1055. Would it cost as much to make a breakwater at Bellambi as at Port Kembla? I think so. There is not so much stone at Bellambi as at Port Kembla, and I do not think there are any quarries close to the place.
1056. Is not Bellambi more centrally situated? It is right in the centre of the coal district; but some wise people say that good coal is to be found south of Mount Kembla. No such coal has been discovered to any extent; but if it is discovered, Port Kembla will be centrally situated.
1057. Have the coal companies ever asked the Government to construct a harbour for them? I do not think so.
1058. Then how has this proposal originated? The inhabitants of the district, from Bulli to Dapto, have been asking for a harbour. Wollongong wanted a lot more money spent there, but the Government did not see its way clear to such an expenditure, and common sense justifies that view. The Bulli people have been asking for a harbour at Bellambi.
1059. There is a difference of opinion among the residents of the district as to the best place for a harbour? No. They must all think that Port Kembla is the best place for a harbour, but there is a difference of interest.
1060. Did not the people of the district agree to abide by the decision of the Government officers? I believe that that was the determination of the inhabitants of the district. I know that a resolution to that effect was arrived at by the colliery proprietors.
1061. Can you supply the Committee with a copy of the estimate you received for the construction of a breakwater at Port Kembla? No; I have been unable to find those estimates. We intended to start from the same point as the proposed Government breakwater; but we should have curved in a little more, and would not have gone out so far. We would have followed the line of rocks.
1062. Do you remember what the estimate was? I did not believe in the estimate. It was too low. We did not intend to go out more than 1,100 or 1,200 feet, and the estimate of our engineer was £23,000, while the estimate of another engineer was £50,000. I preferred the higher estimate.
1063. Do you think that the southern coal trade is likely to interfere with the northern coal trade? I do not think so.
1064. You think that any increase of trade will be new trade? Yes.
1065. The construction of this proposed harbour will not interfere with Newcastle? No. I think we have more to fear from Newcastle competition than they have to fear from our competition. The Illawarra coal is splendid coking coke, and the works at Newcastle use some of it to improve their own coke.
1066. If the Lake Illawarra scheme were carried out, would you need a harbour at Port Kembla? There is no room there for two large harbours; but my contention is that you can never make a suitable harbour for large ships at Lake Illawarra. I do not think that they would ever carry the scheme out. I was asked to join it originally, but I declined, because I did not see anything in it.
1067. You were not asked to appear before the Select Committee which took evidence in regard to the proposal? No. When I was asked to join the enterprise, I said, "Look at Port Kembla, and you will see that there is no comparison between the two places."
1068. What is the difference between the price of coal at Newcastle and in the southern district? There is not very much difference—free on board. The price of the southern coal will compare with the price of the best Newcastle coal. There are some inferior coals at Newcastle which are sold very cheaply.
1069. It is rather on account of the quality of your coal than because of its cheapness that you expect to get trade? Yes.
1070. What seams have you in the southern district? I know of five or six. The top seam is what is known as the Bulli seam.
1071. How thick is it? At the Metropolitan Company's mine, I think it is 12 or 14 feet thick. At Bulli it is between 6 and 7 feet thick, and about the same at Mount Pleasant, Mount Keira, and Corrimal, and in a great part of Mount Kembla; but it narrows towards the south.
1072. Is its average thickness 7 feet? It would be if you included the Metropolitan Company's mine. Not including that company's mine, I would say that its average thickness is about 6 feet.
1073. You have four seams under the Bulli seam? Yes. At Mount Kembla we worked a seam of kerosene shale for a time; but it did not pay us. Then, we have a 4-foot seam, a 16-foot seam, a seam of anthracite, and another seam.
1074. Trebling your present output, I suppose the coal would last 400 or 500 years? My opinion is that at the present output the Mount Kembla coal will last 200 years, and the South Bulli coal 100 years—that is, using the one seam.
1075. But using all the seams there would be a supply for 300 or 400 years, even trebling the output? I cannot say as to that. I am quite content to have a 200 years' supply. There is an immense area of coal land extending right back to Mittagong.
1076. Would the coal-owners of the southern district object to the construction of the proposed breakwater if they had to pay the same shipping rates as are charged at Newcastle? I think they would gladly pay the same rates as are charged at Newcastle.
1077. Up to the present time private companies have done a great deal more for the south coast than the Government has tried to do? The Government has done next to nothing, while private companies have done a great deal.
1078. And you think that the colliery proprietors in the southern district have as much right to ask the Government to make a harbour for them as the northern colliery proprietors had? Yes, undoubtedly they have.
1079. This will not only be a harbour for the shipment of coal, but it will lead to the creation of new industries, and thus give work to a large number of people? Yes. It will also provide a harbour of refuge, which I think is needed in the southerly weather. Vessels have often taken refuge at the place as it is at present, and they can always get out again. I do not believe that a vessel could get out of Lake Illawarra while certain weather continues.
1080. I suppose you would want 30 feet at any wharf at Port Kembla? I think 26 feet would be enough.
1081. Therefore some dredging will be required if the wharf is put where the Government propose to place it? Yes.
1082. You think that some of the Metropolitan Co.'s coal would come to Port Kembla? I think some of it would.
1083. What charge do the Railway Commissioners make for the use of their waggons down south? I cannot say, because both the Mount Kembla mine and the South Bulli mine use their own waggons.

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1084. *Mr. Hassall.*] The principal coal shipped at Port Kembla comes from Corrimal or Mount Kembla? Yes. The Mount Kembla Co. ship about 150,000 tons a year, and the Corrimal Co. about 100,000 tons. Occasionally the Mount Pleasant mine and other mines send coal to Port Kembla; but the bulk of the coal comes from two mines.

1085. What return would be necessary to cover the interest upon the cost of the eastern breakwater and the resumption of jetties, and so forth? I have not made a calculation; but I think the Government should carry out the works whether it paid them or not. It is a national undertaking, and there is a very strong claim for the construction of a safe harbour there.

1086. What interest has the Government in the place as compared with private owners? What interest had the Government at Newcastle; they do not receive a great deal for their expenditure there.

1087. Is it reasonable to ask the Government to suffer an annual loss for the benefit of private individuals? It is not only for the benefit of private individuals, but for the benefit of the Colony, because increased trade supports a larger population, and adds to the railway revenue.

1088. Do you think that the coal trade will be sufficiently large for a charge of 4d. a ton to pay interest upon the cost of constructing these works? It would be very easy to make the calculation.

1089. Would you be willing to pay 6d. a ton? No, not if I had to ship the coal myself, and to keep my own railway and jetty in order. I think it would be unfair to ask us to pay so much. I am not the proprietor of Mount Kembla mine; I am only a shareholder, and one of the directors. Sixpence a ton is too much to ask us to pay, considering the present price of coal.

1090. Will your company be willing to pay 4d. a ton? I think so; but I believe that 3d. a ton would be a fairer charge.

1091. *Mr. Roberts.*] How would you place Port Kembla, Wollongong, and Bellambi, considering them as ports of shipment and harbours of refuge? Judging by points, I would give Port Kembla 100 points, Bellambi 95, and Wollongong about 40.

1092. You look upon Wollongong as out of the question? Yes.

1093. And Lake Illawarra also? Yes.

1094. Lake Illawarra would not be suitable for sailing vessels? If you could get sailing vessels in there it would be all right, because the lake is thoroughly sheltered; but no company would spend the money required to give accommodation for large vessels there. It would cost as much for dredging as is allowed for the whole work.

1095. You mean to dredge to the depth fixed by the Act of Parliament? That is only 15 feet, which I think is ridiculous.

1096. Will there be much ore landed at Port Kembla or Lake Illawarra? I can only judge by the representations made by the smelting company.

1097. Would it be more convenient for the smelting company to get their ore at Lake Illawarra than to get it at Port Kembla? It would be more convenient to land it at their wharf at Lake Illawarra.

1098. You have some doubt about the Lake Illawarra scheme being carried out? I have very grave doubts about it. It will never pay to make Lake Illawarra a harbour for large vessels. The age requires the employment of vessels of very large tonnage.

1099. In order to make a perfect harbour at Port Kembla would it not be necessary to construct both breakwaters? The harbour designed by Mr. Darley would be everything one could wish; but I think that the eastern breakwater will be sufficient for some years to come.

1100. If that breakwater were constructed, would it be difficult to land ore at Port Kembla? If the wharf were erected inside the breakwater you would get still water.

1101. When a vessel is discharging cargo, she must be fastened alongside the wharf? Yes, and the water at Port Kembla is quiet enough for that in ordinary times; but we have not proper jetty accommodation for unloading general cargo.

1102. Do you not require perfectly smooth water for unloading cargo? You will get sufficiently smooth water by the erection of the eastern breakwater.

1103. Do you not think a large amount of money would be saved by carrying out the whole of the work proposed by Mr. Darley, instead of doing things piecemeal? I do not think it would make any difference.

1104. You do not regard the northern breakwater as absolutely necessary at the present moment? No. Of course I do not speak as an expert, though I have a good knowledge of the locality.

1105. *Mr. Black.*] I gather that you are interested in other coal properties besides Mount Kembla? Yes. I am interested in Mount Kembla as a shareholder, and in the South Bulli and Coalcliff mines as proprietor.

1106. Are you interested in any of the other mines? No.

1107. I believe that, as a rule, you do not believe in Government interference with private enterprise? As a rule, I do not.

1108. Do you not think that in a matter of this kind, where there is a number of colliery proprietors who imagine that the construction of a breakwater would greatly benefit their enterprise, they could combine in carrying out this work themselves? They have not the right to do it.

1109. Do you not think that they could acquire the right to do it? I do not know if Parliament would grant it. There are far more mine-owners in Newcastle than are on the south coast; but they did not combine to improve the port of Newcastle.

1110. It strikes me as a very peculiar argument to say that because there has been a heavy, and possibly wasteful, expenditure in one locality there should be a similar expenditure in another locality? What I say is, that at Newcastle private enterprise has done little or nothing.

1111. Should we not rather learn from the errors of the past than repeat them? I do not say that the expenditure at Newcastle was an error.

1112. Do you think the cases of Newcastle and Port Kembla analogous? I think they are.

1113. Was there not a larger number of people at Newcastle when the harbour works were begun there than there are at Port Kembla? I remember when there were not so many people in and about Newcastle as there are now on the south coast.

1114. Is that when the Government began to construct the harbour? Yes; and they have gone on improving the place ever since.

1115. Have you any special reason for thinking that settlement would spring up near Port Kembla if a harbour were made there? Wherever a large number of men is employed settlement is likely to take place. If the land at Port Kembla were resumed by the Government a lot of it would be taken up and built

built upon, though I do not think that that would hurt Wollongong any more than the works at Dapto will hurt the place. Wollongong Harbour is adapted for vessels of a certain size, and such vessels will continue to go there in fine weather.

1116. Would not the Government be very unwise to go to the expense of making a breakwater and constructing jetties, if they permitted privately-owned jetties to compete with them? I think it would be better for the Government to resume the existing jetties and 1,000 acres round the foreshores.

1117. Do you think that during the 250 fine days which you say there are in the year the proprietors of private jetties would send coal to Port Kembla? I have said that the proprietors of private jetties will use them in fine weather; but at the present time vessels going alongside these jetties often have to run away with only part of a cargo, which is very damaging to the trade. For instance, a vessel may come from Adelaide to take a cargo of coal, but, bad weather springing up, she may have to go on to Sydney, and lie there for a day or two before completing her loading. That adds to the price of the coal.

1118. If a vessel were loading alongside Bellambi, and rough weather came up, she could go down to Port Kembla and finish coaling there, supposing the breakwater were made? No doubt it would be a great advantage if vessels could run down to Port Kembla and finish loading there during rough weather.

1119. But if that is done, the output from Port Kembla will be so small that the return to the Government would be infinitesimal as compared with the cost of construction? I do not say that all the jetties on the coast can ship coal during 250 days of the year. I do not suppose that at Coalcliff or at the North Illawarra jetty you could load during more than 100 days in the year, while at the Bulli jetty you could not load during anything like 250 days in the year.

1120. Still you acknowledge that the owners of private jetties will not send to Port Kembla during fine weather? I think they will prefer to use their own jetties whenever they can, though some of them are not using them now. The North Illawarra jetty is not being used.

1121. Is the North Illawarra colliery still working? No. If there had been a safe harbour I daresay that company would be in existence still.

1122. If in addition to the proposed harbour works you put the cost of resuming 1,000 acres of land, and of compensation for private jetties and railways, the cost of this harbour improvement will be very large? My contention is that £150,000 or £160,000 will pay for the eastern breakwater.

1123. Will no new jetties be required? Not until the trade increases.

1124. I understand that the life of a jetty is thirteen or fourteen years? If a jetty is not properly maintained it may last only thirteen or fourteen years. Jetties require constant attention, and when they become weak new piles must be put in. Under proper management they will last thirty, forty, or even fifty years.

1125. At what would you estimate the necessary expenditure at Port Kembla? That is more a question for an engineer; but I should think £150,000 would pay for a breakwater, £10,000 for the land resumed, and £30,000 for the jetties and approaches.

1126. Say £200,000? Yes.

1127. With a harbour charge of 3d. a ton the Government will get an annual return of £12,500;—would that be sufficient? That would be a return of 6½ per cent. upon the outlay. I do not think more than 2½ per cent. would be required for maintenance, and that would leave 4 per cent. to go towards meeting the interest. I contend that the Government should not expect to receive as much as 4 per cent.

1128. When I spoke of maintenance, I meant the cost of management and control? Yes, I include that.

1129. You recommend this as a great national work? Yes, I do so with great confidence.

1130. Why do you value the land at Port Kembla at £10 an acre;—I understand that it is inferior sandy land? It is inferior land, and, if before the Mount Kembla mine was opened I had been asked to value it, I would not have valued it at more than £1 an acre. The traffic over it, however, has increased its value. The Mount Kembla Company showed the importance of Port Kembla, and its proximity to that place would give the land an increased value.

1131. Is there any demand for land there at such a price? No.

1132. Do you know what the land has been assessed at by the land valuers? No; but that would give no idea as to its real value.

1133. If it had been assessed at less than £10 an acre, I suppose the owners would not stick out for £10 an acre? I do not know; but I think they would expect to get full value.

1134. I understood you to say that at one time the Mount Kembla Company intended to build a breakwater, but abandoned the idea because of the advent of a rival company? The Mount Kembla Company intended to construct a breakwater; but we could not raise sufficient capital, and while we were thinking about it an opposition company started.

1135. You do not fear the opposition which might follow the construction of a breakwater by the Government? No.

1136. *Chairman.*] What does it cost you to ship coal once you have it on the jetty? I do not think it costs us more than 1d. a ton.

1137. What does it cost per ton per mile to bring coal from Mount Kembla to the jetty? When we are at full work I think that 3d. or 4d. a ton is the whole cost of maintaining the railway and shipping the coal.

1138. What distance have you to bring the coal? Seven and a half miles. We use our own waggons.

1139. What does it cost you a year to maintain the jetty? That I cannot tell you. We include the cost of maintenance in the shipping charge.

1140. They charge, 3d. or 4d. a ton, everything included? Yes. My main desire in advocating the construction of this breakwater is to increase the trade of the port. If the trade of the port were increased the mines in which I am interested would be able to turn out more coal.

1141. Threepence or 4d. a ton would not be an exceptional charge for the Government to make? No.

1142. *Mr. Trickett.*] What are the largest vessels that have been to Bulli and Bellambi? The Bulli jetty has recently been enlarged; but I do not think they can take a vessel of much over 1,000 tons there. At South Bulli we can load a vessel of 1,750 tons. There are two jetties in Bellambi Bay—one belonging to the Bellambi Coal Company, and the other to the South Bulli Coal Company.

1143. Are these local traders or foreign-going vessels? Melbourne and Adelaide steamers. We sometimes get vessels to load for Fiji.

1144. But vessels do not come there to load for the east? No.

1145. If the Port Kembla harbour were constructed, all foreign vessels would come there to load even in fine weather? All the trade done by large vessels would be done at Port Kembla.

The Hon.
E. Vickery,
M.L.C.

19 Nov., 1896.

FRIDAY, 20 NOVEMBER, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.	CHARLES ALFRED LEE, Esq.
The Hon. JAMES HOSKINS.	JOHN LIONEL FEGAN, Esq.
The Hon. CHARLES JAMES ROBERTS, C.M.G.	THOMAS HENRY HASSALL, Esq.
The Hon. WILLIAM JOSEPH TRICKETT.	GEORGE BLACK, Esq.
HENRY CLARKE, Esq.	FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

John Barnes Nicholson, Esq., M.P., sworn, and examined:—

J. B.
Nicholson,
Esq., M.P.
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1146. *Chairman.*] Do you desire to make a statement to the Committee? Yes. The great reason to be adduced in favour of the construction of a safe harbour on the south coast is the great increase of the coal trade which has taken place in the past, and which is likely to be even greater in the future. The coal output of the south coast increased from 370,000 tons in 1886 to 910,000 tons in 1895—about 150 per cent. in ten years; and with good facilities for loading deep-sea vessels, the quality of our coal for steam purposes will guarantee a still further increase from year to year. The twelve collieries on the south coast, at the present time, employ underground somewhere about 1,400 men, with facilities for an output sufficient to employ 4,000 men; besides the number of hands employed in our coke industry, saying nothing of the prospects of the iron industry opening up in the near future, which would greatly increase imports and exports. We have also at Bulli, already started, a pottery and tile-works, paying heavy freights by rail to Sydney; and the fact that we have eleven collieries within a radius of $7\frac{1}{2}$ miles north and south from Bellambi, where, allowing the approximate increase in our coal trade for the next ten years, 1,500,000 tons of our total coal trade would be secured for Bellambi. If any need for new collieries arise, there is almost unlimited scope from Bellambi, north to Helensburgh. Steamers have frequently loaded at Bellambi when unable to do so at Wollongong or Port Kembla. The cost of construction and resumption combined would be fully three times as much at Port Kembla as at Bellambi, for the following reasons, viz.:—1. Two private jetties exist at Bellambi, both built under lease from the Crown, and both terminable in 1899, so that before a breakwater could be constructed both of said leases would fall in; hence the saving on cost of resumption No. 1. At Port Kembla two private jetties also exist, both built under special Acts of Parliament, with powers for all time to construct new jetties, piers, &c., both jetties being good substantial structures, and thoroughly equipped with latest improvements for loading. The vested interests of the two companies would amount to a large sum. 2. The length of railway to resume at Bellambi would not necessarily be more than $1\frac{1}{4}$ mile, as against 10 miles at Port Kembla. 3. Land necessary for sidings, roads, &c., would in like proportion be in favour of Bellambi. The Government plan of last survey at Bellambi shows (conclusively, to anyone acquainted with the port), the site for breakwater considerably inside the inner reef,—thus much curtailing our area of water; and what is still worse, occupying the deepest water, where our jetties and loading-berths ought to be, which fact also materially increases the cost of construction. I am of opinion that if a survey were made on the inner reef at Bellambi, undoubtedly the best site on which to build a breakwater, the depth of water would be decreased to much below that of Port Kembla and Wollongong,—so that the cost of construction at Bellambi would be reduced much below the cost estimated for any of the three sites, as per Mr. Carleton's report. Moreover, Bellambi is sheltered on the north and north-east by the natural contour of the coast, and to a certain extent on the south by the outer reef, so that if the inner reef were capped by a breakwater its full distance out, viz., 1,800 feet, we should have a harbour to which the captain of any ship would come for loading with the greatest confidence, owing to its safe entrance in almost any weather; it being also the centre of the known workable coal-measures of Illawarra; and upon this all-important point alone the claims of Port Kembla or any port south of Wollongong, as a coal-loading port for the south coast district, are ignominiously thrust aside, for not only is Bellambi the most central for all the mines from Mount Keira to Clifton, but it is absolutely nearer to the main coal-field of Kembla mine than is Port Kembla itself; therefore Bellambi is most centrally situated, requires least cost for construction and resumption, and must therefore be most suitable. I have several plans here, one of them being a tracing of the survey made in 1859, three years prior to the time when the sum of £10,000 was voted by Parliament for the construction of a harbour at Bellambi. That money, however, was never applied to the purpose for which it was voted. In my opinion the Departmental scheme for Bellambi is either the result of a mistake or it is very unfair. The Government proposal is to put in a breakwater in what is absolutely our deepest water, and to take up a space where jetties should be placed for the accommodation of shipping. The breakwater should, as a matter of fact, be constructed further to the east, along the top of the reef. In that way you have only two-thirds of the depth, and you increase the area of the protected water. Personally, I cannot see the necessity for carrying out the breakwater 2,800 feet.

1147. *Mr. Trickett.*] Do you consider it necessary that a safe harbour should be made upon the south coast? I do.

1148. What advantages has Bellambi as a port of shipment? In the first place, it is the best natural harbour on the south coast, and has been ever since the opening of the Illawarra coal-mines in the very centre of the southern coal-field. There are eleven collieries within $7\frac{1}{2}$ miles of Bellambi. The collieries extend from Clifton on the north to Mount Kembla on the south. It is not at present known if there is workable coal south of Mount Kembla.

1149. Of these eleven mines, how many are now working? All of them with the exception of Bulli "B" Pit and the North Illawarra mine. Both these collieries are to the north of Bulli.

1150. Why are they not working? Because of the want of trade and the inequality, or rather the lowness, of the seam.

1151. The coal there is not as good as the coal in the mines which are being worked? In the Bulli "B" Pit they have from one-third to two-thirds of burnt coal, and the good coal is too thin to make the working profitable. More than that, they have no facilities for getting the coal either to the Government railway

or

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- or to the water. They have to pay 4d. a ton to the Bulli Company for permission to run over their line.
1152. Putting these two mines out of the question, is Bellambi in the centre of the coal-field? Yes. The two mines to which I refer are two of the smallest collieries on the coast. One of them before shutting down was employing about forty men, and the other something like twelve or sixteen men.
1153. If a port were made at Bellambi, would any land have to be resumed there? We estimate that 370 acres would have to be resumed. I believe that the owners of that land valued it for taxation purposes at £5 per acre; but for resumption purposes we have valued it at £7 10s. per acre. That, I think, is its outside value.
1154. Do you recommend the resumption of that land? Yes. It is an even piece of land, having a frontage to the bay, and would in all probability be required for the erection of workmen's houses, and to give room for sidings, and for other purposes. There is a road going down to the bay now, the lower part of which has never been formed; but it would not be a very costly thing to finish it.
1155. The cost of the land would not come to more than £3,000? Something under £3,000.
1156. What wharfage accommodation is there at Bellambi? We have a very good jetty belonging to the South Bulli Company. At the end of that jetty there are 24 or 25 feet of water. A little further to the north is the Bellambi Company's jetty, which is shorter than the South Bulli jetty, and runs out into about 18 or 19 feet of water.
1157. Those jetties are only used to load vessels of a limited tonnage? At the South Bulli jetty vessels with a capacity of nearly 3,000 tons can be loaded.
1158. Where does the coal go to;—does it go oversea, or is it taken to intercolonial ports? A great deal of it goes to intercolonial ports. It is generally allowed that the southern coal is 7 or 7½ per cent. better for steaming purposes than any other coal in the Colony. Steamers take it to Hobart, Adelaide, and other places in the Colonies, and a great deal of it is loaded in Sydney into foreign-going steamers.
1159. But there is no direct foreign export trade from Bellambi? No, though indirectly there is a good deal of coal taken by ocean-going vessels.
1160. If the harbour at Bellambi were improved, do you think that large ocean-going vessels and sailing ships would come there to coal? I am sure of it.
1161. What depth of water would there be in the place which it is proposed to protect by a breakwater? There would be about 42 feet at the end of the proposed outer jetty, and about 34 feet at the end of the proposed inner jetty.
1162. That would be a sufficient depth for all purposes? I think so.
1163. Why do you propose to put your breakwater south of the Government breakwater? From considerations of cheapness and of ease of construction. Mr. Carleton, in his report, regrets very much that at Wollongong they have no shoal water in which to construct a breakwater; but the Department when it came to deal with Bellambi, instead of proposing to make the breakwater in shoal water, has looked out for deep water.
1164. How does your proposed site compare with the Government site? We propose to construct the breakwater along a line of reef which has only two breaks in it. These we call the boat-channels, and they have, in my opinion, formed a natural scour for the harbour. That is proved by the fact that the soundings recorded in 1859 scarcely vary from the soundings obtained recently. The depth of water in which our breakwater would be constructed commences with 7 feet at the shore, and runs out into 14 feet, 17½ feet, 21 feet, 19 feet, 12½ feet, 15½ feet, 20 feet, 17½ feet, 19½ feet, 23 feet, 21 feet, 22 feet, 24 feet, 25½ feet, 27½ feet, 28½ feet, 34½ feet, 33½ feet, 31½ feet, 40½ feet, and 41½ feet. The variation in the depth is accounted for by the bumps on the top of the reef. I understand that the reef is 400 feet wide, with a uniformly level surface.
1165. Your proposed breakwater is about two-thirds of the length of the Government proposed breakwater? Slightly less than two-thirds.
1166. *Mr. Black.*] Are the depths you have just quoted the depths on top of the reef or alongside it? The depths on top of the reef.
1167. *Mr. Trickett.*] What are the soundings along the line of the proposed Government breakwater? 8 feet, 15 feet, 17 feet, 22 feet, 23½ feet, 10½ feet, 15 feet, 20 feet, 27 feet, 21 feet, 22½ feet, 25½ feet, 24½ feet, 28½ feet, 51 feet, 43 feet, 44 feet, 45 feet, 48½ feet, and 50½ feet.
1168. What area of water would be protected by your proposed breakwater? I cannot say, but I think at least one-fourth more than would be protected by the proposed Government breakwater.
1169. How far would the proposed new jetties run out? I have here the particulars and estimates of cost in regard to the construction of the two breakwaters, the erection of jetties, the resumption of land, and in fact for the completion of the work. They were drawn up by one of our local engineers. He proposed, in addition to the breakwater of which we have been speaking, to run out a short protecting breakwater still further to the south, connecting the mainland with a small rocky island shown on the plan. This breakwater is referred to as Breakwater No. 1, and the longer breakwater as Breakwater No. 2.

Bellambi Harbour, Breakwater No. 1.

Construction:—First-class blue-metal rubble placed at a batter of 1½ to 1 on the outer slope, and 1½ to 1 on the inner slope; width on top, 30 ft.; height of top, 8 ft. above low-water mark.

Calculation—Two tons to cubic yard, less ⅕ for voids; price, 5s. per ton.

Section.	Length.	Depth of water.	Contents in cubic ft.
1	600 ft.	2 ft.	270,000
2	500 ft.	6 ft.	502,500
3	100 ft.	16 ft.	171,000
4	100 ft.	10 ft.	129,000
			1,072,500

1,072,500 cubic feet = 40,000 cubic yards, at 2 tons per cubic yard = 80,000 tons—less ⅕ for voids = 64,000 at 5s. per yard = £16,000.

Bellambi

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Esq.; M.P.

Bellambi Harbour, Breakwater No. 2.

Construction.—First-class rubble sandstone placed at a batter of $1\frac{1}{2}$ to 1 on the outer slope, and $1\frac{1}{4}$ to 1 on the inner slope, width on top 16 ft., height of top 20 ft. above low-water mark. Calculation 20 Nov., 1896. 1.75 tons to cubic yard, less $\frac{1}{8}$ for voids.

Section.	Length.	Depth of water.	Contents in cubic ft.
1	200 ft. ...	7 ft. ...	286,200
2	700 ft. ...	18 ft. ...	1,808,800
3	400 ft. ...	15 ft. ...	896,000
4	300 ft. ...	21 ft. ...	825,600
5	200 ft. ...	22 $\frac{1}{2}$ ft. ...	638,400
6	200 ft. ...	27 ft. ...	760,400
7	200 ft. ...	33 ft. ...	943,400
Average 24 ft. on top. 8	100 ft. ...	42 ft. ...	682,000
32 " " " 9	100 ft. ...	42 ft. ...	731,600
N. Z. prices from 10	Slope at end. ...	42 ft. ...	416,710
2s. 2d. to 4s. 8d.			
			7,889,100 =

292,200 cubic yards, at 1.75 tons per cubic yard = 511,350 tons— $\frac{1}{8}$ voids = 408,675 tons at 5s. = £102,169, if calculated at 2 tons per cubic yard would equal 467,520 tons at 5s. = £116,880.

Bellambi Harbour.

Estimated cost complete harbour, affording loading accommodation for four of the largest cargo steamers in from 31 to 43 feet of water at low water at low spring tides, and also for vessels of smaller draught at same time.

Breakwater No. 1... ..	£16,000
Do No. 2... ..	116,000
Jetty No. 1, 1,150 feet	26,795
Do No. 2, 1,400 feet	32,620
Eight 20-ton steam cranes	8,000
Fixing steam cranes	4,000
Roads on Jetties	2,000
	206,295
Engineer and assistant	2,063
Wharfingers, house and light	1,000
Two miles of siding	5,000
Resuming 370 acres land	2,775
Do South Bulli Line	5,000
Do Line from Corrimal	100
Do Loop on north side of S. B. Line	100
Making Corrimal Line	2,500
	£224,733

This estimate provides for the carrying out of Breakwater No. 2, a distance of 2,800 feet. Personally, I think that 1,800 feet would meet the case; but if the Government should decide upon the construction of a longer breakwater I would offer no objection.

1170. You claim that your proposal has an advantage over the Government proposal inasmuch as it requires a shorter, less expensive, and more easily constructed breakwater, and allows of two new jetties being erected in very deep water, besides giving an ample area of protected harbourage? I claim all that for it.

1171. Do you think that the Government should have the whole control of this port, or would it do for the Government to work their own jetties and to allow the coal companies to continue to work their jetties? No. I think that the Government should have the concern in their own hands. The cost of maintaining the private jetties along the coast has been so great that I am perfectly certain that the whole of the trade would, in the course of time, naturally find its way to the Government wharf. Then, too, I think that the Government management would be better than that of private companies. It must be borne in mind that we are not asking for the construction of a breakwater, and the erection of jetties for the particular benefit of colliery proprietors, though they will receive a certain amount of benefit from the work. We think that if a charge of 2d. a ton is made upon all coal loaded at the jetties that will pay nearly 4 per cent. upon the expenditure, and we feel sure that a charge of 3d. per ton net profit would be sufficient.

1172. Some of those who have advocated the construction of a harbour at Port Kembla have reported the colliery proprietors as being willing to pay as much as 6d. a ton? I think that is too high.

1173. Why? It leaves such a small margin of profit.

1174. I suppose you are not prepared to lay down any rule as to charges? No. I simply mentioned that that charge has been thought sufficient to meet the interest upon the outlay.

1175. How would Bellambi be sheltered from north-easterly weather, even if you had the breakwater? The contour of the coast from Stanwell Park thoroughly shelters the place.

1176. How far north is Stanwell Park? About 11 $\frac{1}{2}$ miles. A vessel can lie in the bay when it is blowing almost a hurricane from the north-east. On one occasion one of the Illawarra boats lay there for two or three days for shelter when the danger-signal was up at Wollongong. I think that was during a north-easterly blow. I have seen boats put into Bellambi for shelter, when they could not go to any of the other ports. On the south, the reef protects the place to some extent, and it is also protected by the Five Islands and by Red Point.

1177. I understand that vessels have been known to put into Bellambi when they could not lie in Port Kembla. When did that happen? Some eighteen months ago, when Mr. Darley was down there.

1178. Which way was the wind blowing? From the north-east. I do not remember the names of the vessels.

1179. The protection you want is from southerly, south-easterly, and easterly weather? We want protection from the south-east more than from anywhere else. We very rarely get any easterly weather, and a gale from the south scarcely creates any trouble inside the bay.

1180. What is the reason for the short protecting breakwater? It is contended that it would help to take the strain off the larger breakwater.

1181. Was not the Bulli jetty carried away some years ago? Part of it was. It runs out from a little cove about 2 miles to the north of Bellambi, and while it is fairly well sheltered from the south and south south-east, a sea coming more from the east breaks right in there.

1182. Was it carried away during easterly weather? The wind was east south-east.

1183. Was there a steamer there at the time? I am not sure. That place is much more exposed than Bellambi. At the same time the steamer "Mount Kembla" had to be sunk in Wollongong Harbour. The jetties of Bellambi have stood very well for many years, with the loss of only a few piles, and there is very little doubt that the proposed jetties would stand for almost all time if they were protected by a breakwater.

1184. Have there been any shipping casualties at Bellambi? A short time ago a steamer coming from the south got on to the outer end of the reef during the night, and was totally wrecked, but that, in my opinion, was due to carelessness. I do not recollect a single accident occurring in the bay.

1185. What kind of holding ground is there at Bellambi? I never heard that a vessel had broken away from her moorings there. The anchorage is not so extensive as at Port Kembla, and they must take care not to get too near the shoal water, or they will get on to a rocky bottom.

1186. Do vessels ever anchor at Bellambi? Yes, they drop their anchors there often enough.

1187. But the area available for shipping would not be so large as that available at Port Kembla? Certainly not.

1188. I understood you to say that Bellambi was really nearer to the Mount Kembla mine than Port Kembla was? Yes. The Old Kembla Company's mine, so far as the Bulli seam is concerned, is pretty well worked out to the south; in fact, I think they worked it right to the outcrop. Their workings to the north are now rapidly extending towards the Mount Keira Company's property.

1189. *Chairman.*] It is not the pit's mouth, but the body of the coal that is nearer to Bellambi? Yes. I think that if a continuous tunnel were made from one colliery to the other it would save a great deal in the cost of output.

1190. *Mr. Trickett.*] You stated just now that the proposed location of the Government breakwater at Bellambi was a mistake, because it was intended to make the breakwater in deep water;—do you wish to add to that answer? No, I do not wish to impute motives to anyone; but one would naturally think that they would have looked for the shallowest water.

1191. Do you think Bellambi harbour will present other advantages besides that of being a port for the export of coal? I think so. We have there at the present time one of the best seams of fire clay, and of other clay that I have ever seen—clay capable of making the finest kind of pottery. That is at Woonoona, 2 miles from Bellambi. They are at present making tiles there for the Sydney markets. We have also every reason to anticipate the establishment of ironworks in the immediate neighbourhood.

1192. What about the utility of the place as a harbour of refuge? It is the only place that I know of along there which would answer the purpose.

1193. How would it compare in that respect with Port Kembla? Port Kembla is fairly well sheltered from the south.

1194. I mean supposing both places had breakwaters? It is more sheltered than Port Kembla during a northerly blow, and it is equally well sheltered in any other weather.

1195. You have heard that large chlorination works are to be established near Lake Illawarra? Yes.

1196. How would Bellambi suit those works as a shipping place? I do not think that the locality of the port would make any difference to them. Mr. Howell has stated that he has been able to make such satisfactory arrangements with the Railway Commissioners that he does not care for a port at all. I am satisfied that they will never have a harbour at Lake Illawarra. If the Company had wanted the convenience of a port they should have built their works either at Port Kembla or at Bellambi.

1197. In your opinion would it be sufficient to dredge a narrow channel, 15 feet deep, across Lake Illawarra to make a harbour for shipping? No, I think that would be of no use at all, and in my opinion, even if they made the channel 50 feet deep, it would silt up, as the northern rivers do.

1198. What is your idea as to the practicability of opening the entrance to the lake? I have no doubt that it is practicable; but last time I was there there was no entrance at all. Since then I understand that the company have built a kind of retaining wall, and the channel is so altered that that wall is now high and dry on a sand-bank.

1199. Do you think that it is a good idea to propose to make a port at Lake Illawarra? No; I do not. I cannot see how it will be possible for the investment to pay one per cent. South of Mount Kembla the only occupation is dairy farming, and to imagine that the colliery proprietors would send their coal to Lake Illawarra is absurd. It would be almost as easy for them to send it by rail to Sydney.

1200. *Chairman.*] How far is it from Bellambi to Talawera Point? I should say 17 miles.

1201. *Mr. Trickett.*] What do you think of the Port Kembla scheme? Had it not been for its situation I should have advocated that scheme. I admit, without a word of equivocation, that they have the largest area of deepwater, and possibly the best anchorage, though as I said before, I have never heard of a vessel breaking adrift at Bellambi. But, inasmuch as the old Kembla Co.'s mine is 7 miles from Port Kembla, I cannot see that the export of coal from that place is likely to increase to the same extent as it is likely to increase at Bellambi. The Southern Company's prospect was an utter failure. They spent £80,000 or £90,000 and found no coal.

1202. They found burnt coal? The seam was topsy turvy—it varied from a perpendicular to a flat seam.

1203. Do you know anything about the character of the coal there? I know that they have never yet found coal of a payable character south of the old Kembla Company's mine. They have found seams of varying thickness from Kembla to Avondale, and even further south; but they are so intermixed with bands as to be unworkable.

1204. Where an upper seam is found to have been affected by volcanic action, I suppose the same thing will have occurred in regard to the lower seams? I do not know. The coal in our upper seams has been in every case of an inferior quality. The coal out towards Avondale, which they tell me is 7 feet thick,

assays

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assays 51 per cent of carbon, and will not make coke of any marketable quality whatever. Consequently it is useless to say that there is a coal-field to the south of Mount Kembla which will compete with the existing mines.

1205. I understand that all the Illawarra collieries are working the same seam—what is known as the No. 3 seam? Yes; that is undoubtedly the best seam. The North Illawarra Company's seam and the Bulli 4-ft. seam met with a fair market; but the coal was so much heavier than the other coal in comparison with its bulk that the pits are now idle.

1206. Have the eleven mines that you speak of a fair supply of No. 3 coal? Yes, I think there is an unlimited quantity; at any rate sufficient for the next fifty years. I have reason to believe that the Bellambi mine is fairly well worked out, and I believe they are encroaching pretty fast on to the old Bulli workings; but as they are only employing twenty-five or thirty hands, it would not be felt if they closed down to-morrow, because the men would get work at the other collieries.

1207. Do you know the new mine which is being opened up near Lake Illawarra? I was down there once, but it is some years ago. I sent a bag full of the Avondale coal to be assayed by the Department of Mines.

1208. Was it good coal? No, it was very much inferior to the Bulli coal.

1209. We have it in evidence that very large steamers go to Port Kembla for coal. How is it that none of them go to Bellambi? Because the depth at the jetties is not sufficient. Then, too, Port Kembla has splendid loading appliances, and as many of the colliery proprietors as possible combine to send their coal down there in order to expedite the loading. They send coal there from South Bulli, and I have even known it to go from Clifton.

1210. A gentleman who is largely interested in the Southern Coal Company, which company gets its coal from Corrimai, has given evidence strongly in favour of the Port Kembla scheme? I cannot account for that, unless on the supposition of vested interests. Commercially, there is no reason why the Corrimai coal should not come to Bellambi.

1211. Possibly they are influenced by the advantages which Port Kembla offers? The only reason why the big boats go to Port Kembla is that they cannot load at any other place on the south coast.

1212. Some witnesses have suggested that it would be better for the Government not to do anything in this matter until it is seen what the Lake Illawarra people intend to do? I think it is very unlikely that the Lake Illawarra scheme is going to be carried out, and even if it were it would have no effect upon the coal trade.

1213. You admit that Port Kembla has advantages in the way of deeper water, and possibly better anchorage; but you say that Bellambi is more centrally situated and better adapted for the trade? Its central position is undoubtedly its chief recommendation. Then, too, if the breakwater were carried out only 1,800 feet, which I think would be sufficient, the cost of the whole scheme would be less than one-fourth of the cost of the Port Kembla scheme. This in itself should be such a recommendation as no public body could ignore.

TUESDAY, 24 NOVEMBER, 1896.

Present:

THOMAS THOMSON EWING, ESQ. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERT.

The Hon. JAMES HOSKINS.

The Hon. CHARLES JAMES ROBERTS, C.M.G.

The Hon. WILLIAM JOSEPH TRICKETT.

The Hon. DANIEL O'CONNOR.

HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.

JOHN LIONEL FEGAN, Esq.

THOMAS HENRY HASSALL, Esq.

GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

John Barnes Nicholson, Esq., M.P., sworn, and further examined:—

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1214. *Chairman.*] Have you any further statement to make before we continue your examination? Last Friday I made a statement to the effect that two steam colliers had to leave Port Kembla on a certain occasion and go to Bellambi for shelter. At the time I could not give the Committee the names of these vessels; but I have since ascertained that the occurrence took place on the 24th and 25th January, 1895, and that the steamers in question were the "Egmont" and the "Glaucus." In 1892 it was proposed to expend £275,000 in improving the Wollongong Harbour, and in a report upon the proposed scheme the following statement occurs:—"I do not think it at all probable that the port of Wollongong, if improved and made a really safe harbour, can count upon drawing all the southern trade there. Some will undoubtedly go direct to Sydney by rail, and a large quantity will continue to be shipped from private jetties, which in many cases are close to the collieries, the proprietors thereby saving the expense of long haulage." What was nearly correct with regard to Wollongong in 1892, is equally applicable to Port Kembla at the present time, only in a greater degree, owing to the fact that the haulage is considerably longer to Port Kembla than to Wollongong. Consequently, other conditions being equal, the prospects of shipping were greater at Wollongong than at Port Kembla; and for the very same reasons the prospects of shipping at Bellambi are proportionately greater than at either of the other places, as a tabular statement of distances of haulage to the various proposed ports, which I will presently read, will show most conclusively. The same report continues: "I, therefore, think that the utmost trade likely to be drawn to Wollongong for many years to come will not exceed 750,000 tons, or, say, five times the present output. Taking only 3d. per ton net profit on this quantity—as the expenses will be proportionately heavier on the smaller output—the proceeds would amount to £9,325, which would represent 4 per cent. interest on £234,375." If this is a true statement of the prospects of Wollongong, I maintain that the possible increase of trade at Port Kembla would be still less, because Wollongong is more in the centre of the coal field than Port Kembla is. The Mount Keira and the Mount Pleasant mines have for years shipped nearly the whole of their coal at Wollongong. It has only been on special occasions that they have sent coal to Port Kembla to facilitate the loading of deep sea vessels there. Bellambi, however, is more favourably situated than even Wollongong, because the distance from

from the coal mines to Bellambi is less than it is to Wollongong. Another statement which has come under my notice is, that the coal in the northern end of the Illawarra district is, to a certain extent, petering out, and that so much burnt coal has been met with that some of the collieries will very shortly be closed. This statement can only possibly apply to old Bulli and to Bulli "B" pit. Having worked there years ago, I know the circumstances of both collieries. In the old Bulli mine, they worked through the burnt coal, which was adjacent to what is known as the basalt dyke, which runs through the Illawarra coal-field, and got into good coal. Most of the collieries down there are getting into better coal. Mount Keira, Mount Pleasant, and some of the other collieries are now supplying better coal than they supplied in the past, and have better prospects now than they had four or five years ago. As soon as they get through the dyke the coal improves. In the Bulli pit, after we had got through the dyke, we obtained some of the best coal that has ever been turned out in the Illawarra district.

1215. *Mr. Roberts.*] Is it not a fact that during the years 1894 and 1895, and up to the 30th April, 1896, more coal was shipped at Port Kembla than at the Bellambi and Bulli jetties? If you put Bulli and Bellambi together, I cannot admit that that is so; but if you compare Bellambi alone with Port Kembla, I must admit the fact. It is due to this reason, that large steamers have hitherto not been able to come into Bellambi. Vessels which have been unable to complete their loading at Newcastle, because they could not get over the bar there with a full cargo, have gone to Port Kembla to complete their loading. Then, too, as I said last Friday, the appliances for loading at the Southern Coal Company's jetties are of a first-class character. The northern collieries—South Bulli, Bellambi, and very often South Clifton—combine, and send coal to Port Kembla to complete the loading of deep-sea steamers in as short a time as possible. Taking the shipments for some years past, however, I think that Bellambi sent away more coal than Wollongong or Port Kembla. If, at Wollongong, the exportation of 750,000 tons of coal would only give a return of 4 per cent. upon the expenditure upon the harbour works, —supposing dues of 3d. a ton were charged—the return given at Port Kembla, with a similar export, but on a proposed expenditure on works alone of £440,000, would be much less. Besides, it must be remembered that in addition to the cost of the works proposed to be carried out there, there is the cost of land resumption which must be something terrific. The land there is four times as valuable as the land around Bellambi. Then, too, there would be 10 miles of railway to resume as against 1½ mile or 1½ mile at Bellambi. The conditions under which they ship coal now at Port Kembla are such that I think any one would hesitate before saying that the Port Kembla scheme was the best scheme that has been suggested. The Southern Coal Company built their jetty and laid down their railway before prospecting for coal, and when they opened their mine they found no workable coal. To imagine that the Bulli seam extends south of Mount Kembla is utterly fallacious, and the report of the Government Geologist for 1890 states most distinctly that the Bulli seam peters out at Mount Kembla. The Mount Kembla Company have broken through to daylight in Mr. Purcell's estate, and the seam has never been discovered further south than that. I know that coal has been found south of Mount Kembla, and I had about half a hundredweight of a sample which I received from Avondale assayed. The assay gave about 51 per cent. of fixed carbon, and a large percentage of ash. The Government Assayer stated that that coal would not make coke of a marketable quality. They have some good coal down there; but the seams are so thin, and there are so many bands between the floor and the roof, that it cannot be worked at a profit. According to the Government Geologist's report, it would seem that payable coal cannot be expected down there until they sink down 3,400 feet and strike the Greta measures. The Southern Coal Company having failed to find coal in their own land purchased the Corrimal property, since which time I think they have leased the mine to the Adelaide Steamship Company, and, although Bellambi is within 1½ mile of the colliery, they send the coal 8 or 9 miles to Port Kembla. It would be to their interests as well as to the interests of other colliery proprietors if they could ship from Bellambi instead of from Port Kembla or from Lake Illawarra. I have here a table of the rail distances from the various collieries to Lake Illawarra, Port Kembla, and Bellambi:—

	Miles.	Miles.	Miles.
From Clifton to Lake Illawarra	23,	Port Kembla	17, Bellambi
„ Austinmer	19,	„	13, „ 4.
„ Bulli	16,	„	10, „ 1.
„ Woonona	15,	„	9, „ 1.
„ S. Bulli	14,	„	8, „ 1.
„ Corrimal	13½,	„	7½, „ 1½.
„ Mount Pleasant	10½,	„	6, „ 2.
„ Mount Keira	10,	„	5, „ 2.
„ Mount Kembla	7,	„	5, „ 4.
„ Helensburgh	28,	„	23, „ 17.
Totals	156,		103½, 41½.

So that in the aggregate Port Kembla is two and a half times as far as Bellambi and Lake Illawarra three times as far.

1216. *Chairman.*] Have you taken these distances along the tram lines and then along the Government line? From the pit mouth along the tram line to the nearest station upon the Government line. With regard to the Mount Pleasant mine, the distance to Bellambi by their present tramway is much greater than 2 miles, but they could get to Bellambi from their present workings by making a tramway less than 2 miles in length. It has been stated that the proposed Government breakwater at Bellambi was to be constructed along the line of reef, but the plan which I handed in last Friday shows that that breakwater would be a long way inside of the reef, and would take up the deepest and best water. As compared with the breakwater which I suggest, the Government breakwater would lessen the area of the harbour by nearly one-third. All that is necessary at Bellambi is to cap the existing reef with some 1,800 feet of breakwater. Some misleading statements have also been made in regard to the depth of the reef. The outer end of the reef is absolutely bare at low water, and not once, but 100 times have I seen the reef clear of the water in calm weather. In rough weather it is easily discernible by reason of the surf breaking over it. With regard to the Lake Illawarra scheme I am of opinion that it is utterly incompatible with the estimate of expenditure. As a matter of fact, that amount would be barely sufficient to open the entrance to the lake, to say nothing of the cost of making a channel across the lake and the construction of a dock for the reception of vessels. Then, too, the improbability

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of any coal being shipped so far south renders the whole scheme abortive and utterly unworthy of consideration. I have not the slightest hesitation in saying that if the Lake Illawarra scheme were carried out the coal shipped from the lake would not amount to more than 200,000 tons per annum for years and years to come. The amount of coal now opened up in the Illawarra district is sufficient to supply nearly twice the present trade. The various collieries now employ something like 1,400 men, and I am within bounds when I say that they have facilities for the employment of 4,000 men; so that the output could be nearly trebled before the mines would be fully worked. With regard to what has been said by Government officials and others in regard to the possibilities of getting stone in the district, I want to state that we have any quantity of blue-metal close to the South Bulli Colliery, and can open out sufficient at very short notice to construct both the No. 1 and the No. 2 breakwaters shown on my plan. Our local engineer thinks that the sandstone near the Government railway line would be as good for the No. 2 breakwater, because it might be got out in bigger blocks, and perhaps at less expense. There has been some talk for some time past about the Railway Commissioners intending to duplicate the line from Clifton to Port Kembla. If that be so, I believe they would be glad to make an arrangement for the cutting away of the sandstone alongside the line, and if this were done in a workmanlike manner, the road being left level for the laying of the rails, I believe the freightage would be merely of a nominal character. I believe that the stone can be landed at Bellambi for less than the amount estimated by Mr. Carleton, namely, 5s. per ton. I believe we could get it for less than that, whether we got it from near the South Bulli Colliery or from the rocks contiguous to the railway. Mr. Carleton, in his report, says that two jetties have been constructed at Bellambi and two at Port Kembla. Those at Bellambi were constructed under a Crown lease, terminable in 1899, while those at Port Kembla were constructed under Acts of Parliament, which give the companies power to construct other jetties if necessary. Therefore, before anything is done, arrangements should be made to place all the collieries upon the same footing in regard to harbour dues, &c. Scarcely anything was said about the cost of resumption; but we may take it for granted that the cost of resumption at Port Kembla would be four times the cost of resumption at Bellambi. It has been stated by recognised authorities upon the southern coal-fields that Port Kembla is a centrally-situated port; but this is a matter requiring much consideration. With all due respect to the opinion of Dr. Robertson, who is one of the authorities to whom I refer, I think he may possibly be labouring under the delusion that there is a coal-field south of Mount Kembla. I deny the existence of such a coal-field. £75,000 is put down in the estimate of the cost of wharfs, &c., at Bellambi; but if that means the cost of resuming jetties, it must be known that it would not be nearly so great, inasmuch as the leases of the jetties fall in within a very few years. At Port Kembla, for which there is a similar estimate put down, the circumstances are very different, because there the companies have a right to their jetties for all time, and power to construct other new ones. Moreover, I understand that the whole of the land leading down to Port Kembla is the property of the Wentworth family, and the companies shipping coal at Port Kembla have to pay a royalty for permission to run over this land. If I mistake not, it costs the Southern Coal Company £4,000 or £5,000 per annum for the right to run over this land. Therefore, even taking into consideration the interest which they hold, and the very well equipped jetty at Port Kembla, it would serve them better to be able to ship their coal within a mile and a half of their colliery, namely at Bellambi. While they might not gain so much immediately by the change as they might by the resumption of their jetty, they would reap a benefit in the course of five or six years. Mr. Hickson estimates that the cost of protecting Bellambi would be £3,557 per acre, of protecting Wollongong £3,405 per acre, and of protecting Port Kembla £1,256 per acre; but I think this is an unfair estimate, inasmuch as it is proposed to put the breakwater at Bellambi in the very deepest water. Furthermore, the Port Kembla estimate only takes into consideration the construction of one breakwater. At Bellambi, if we availed ourselves of all the water area, we should have one-fourth, and in fact almost one-third more space as is provided by the Government scheme. With the permission of the Committee, I should like to read one or two remarks upon this matter made by Mr. John Evans, junior, who was at one time manager at Mount Kembla, and has since been manager of Bulli: He was of opinion that there must have been close on £250,000 spent in trying to make a harbour at Wollongong, and there never would be a trade there till they had a harbour. If the trade did ever come, the Wollongong harbour would be inadequate for it. The time had arrived when the trade needed expanding. At the meeting held by Mr. Wiley in Wollongong five years ago, it was prophesied that the *Orient* and other large boats would, when the trust got a fair start, be loading there in the course of two or three years. As they all well knew, that had not come about. If they could make a harbour in keeping with modern ways, that was the line they should follow out. . . . He thought that they should try and damn the Kembla scheme right out. He was prepared to wager that a million of money had been spent on the mines from Mount Pleasant to Helensburgh, whereas on the south £100,000 was about all that had been spent, with little results. There is no question that Mr. Evans was in earnest when he made those remarks, and we all know that what he says about the amount of money that has been expended is correct. It would be very hard indeed if the northern coal owners were balked by the construction of a harbour at Port Kembla when, if a harbour were made at Bellambi, it would serve the southern coal owners as well as the northern coal owners. Mr. Eddy has promised to give us practically the same facilities as they have at Newcastle and to create a 10-mile zone north and south. He named Wollongong as the starting point, because the harbour trust was then in existence and good work was expected of it, although, I am sorry to say, it was not done. A 10-mile zone from Bellambi would benefit the colliery proprietors both north and south.

1217. *Mr. Clarke.*] You are of opinion that Bellambi would be superior as a port of shipment for coal to Port Kembla? Yes.

1218. If the breakwater which you propose were carried out, you think that Bellambi would make as good a harbour as Port Kembla? I think there are better prospects for the shipment of coal at Bellambi than at any other place, because Bellambi is right in the middle of the coal-field.

1219. I suppose the trade of Bellambi would be pretty well all coal trade? Yes. There would also be shipments of coke from Unanderra, Mount Pleasant, and Clifton, and I believe that the Bulli Coke-works have recently started again.

1220. Is it safe for sailing vessels to load at Bellambi at the present time? Two gentlemen—an Englishman and an American—visited Bellambi a year ago, and they informed the manager of the South Bulli Colliery that if a breakwater were constructed it would be the safest harbour on the southern coast, and that they would guarantee an increase of trade to the extent of 500,000 tons per annum.

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1221. Is there good holding ground at Bellambi? I never heard of a vessel breaking adrift there. The inner part of the bay is so sheltered that I cannot conceive of the possibility of that happening.

1222. The Committee have evidence that the holding ground at Port Kembla is as good as any in the Colony? That is generally allowed to be the case; but, inasmuch as the holding ground at Bellambi has served all purposes for several years, I fail to see why a comparison should be made. We acknowledge that Port Kembla has the largest area of deep water, the greatest depth of water, and the best anchorage; but we say that a vessel has never been known to break away from her anchorage at Bellambi. At Wollongong, not many months ago, the Kembla had to be sunk inside the basin to prevent her from getting on to the breakwater.

1223. I suppose that Wollongong may be considered to be out of the question? I think so.

1224. A large amount of money has been expended there with very small results? Yes; they have carried out their works in the very best water, just where they should have their wharfs and their loading berths. Even the lighthouse is built in the deepest water.

1225. In the event of a breakwater being made at Bellambi, would the collieries which have access to that port now continue to ship there? Yes; the saving of money which that course would bring about would compel them to do so.

1226. Do you think the Metropolitan Company would ship there? I think they would send coal there, whenever they had an order, because the distance is only 17 miles, as against 26 miles to Darling Harbour, and it is nearly all down grade to Bellambi, there being only one up grade, whereas it is up grade all the way to Sydney.

1227. Do you think that the people would continue to send coal from Clifton and Bulli? I think they would send coal from Clifton, because that jetty is built upon a flat reef, and the very least disturbance of the water renders it impossible to load there. It is only a matter of time when the Clifton coal will come to Bellambi. The South Clifton Colliery has no facilities for sending its coal away except by railway, so that that Company would readily avail itself of a port at Bellambi. With regard to the old Bulli Mine, since the property came into the possession of Mr. George Adams, the jetty has been improved and lengthened, and is so sheltered by a reef upon each side of it, that I have seen vessels loading there when they could not get into the basin at Wollongong. I do not think, however, that they would go to any further expense for repairs at these jetties if there were facilities for shipping at Bellambi. Bellambi could be used for over-sea vessels, both sailing ships and steamers, just as Darling Harbour is used.

1228. Would not the Corrimal coal still go to Port Kembla? I very much doubt it. I think that the cost of repairs to the Port Kembla jetties is so great, and the distance of transit so great, that that coal will ultimately be shipped at Bellambi.

1229. What about the Mount Keira and Mount Pleasant coal? I am doubtful about those collieries; but I think they would be better served at Bellambi than at Wollongong. The country is so easy that the cost of relaying their railways would not be very great, and if a direct line was made, the distance would be much shorter as their present workings go. The great inducement for all the collieries to send to Bellambi would be this: Now, for half their time, they cannot load at their jetties, and for one-fourth or one-third of the time, coal cannot be sent from Wollongong. If, however, a safe port were made at Bellambi, they could load all the time. What we want to do is to select the best possible site for this harbour.

1230. You spoke about sandstone being procurable for the construction of a breakwater? Our local engineer is of opinion that blue-metal might be used for the construction of the outer breakwater, and sandstone for the construction of the inner breakwater, if an agreement could be come to with the Railway Commissioners for obtaining freight at a nominal rate.

1231. Would sandstone do as well as blue-metal? I think so.

1232. I do not think sandstone has been used in other breakwaters when other material has been procurable? I believe that we have sandstone along the Illawarra railway which is almost imperishable. I am not aware that stone perishes more quickly under water than when it is exposed to the air.

1233. Have you given any consideration to Jervis Bay as a port of shipment? From what I have heard I believe that Jervis Bay is a very good port; but it is too far south for the coal owners of Illawarra to be able to avail themselves of it.

1234. I suppose it is not likely that coal would be found south of the Southern Coal Company's mine, except at a very great depth? I am only aware of two small seams, one a foot and the other 18 inches thick, in which the coal is of a quality sufficiently good for market. All the other coal is so much inferior to the Bulli seam that I am sure they could not get a market for it.

1235. *Mr. Lee.*] Your contention is that there is a need for a port on the south coast, and that the best site for such a port is Bellambi? Yes.

1236. You place both Wollongong and Lake Illawarra out of the question, and confine your remarks to Bellambi and Port Kembla? Yes.

1237. Is there not sufficient shipping now going to Port Kembla and Bellambi to meet all the requirements of the trade? No, not half enough.

1238. Could you give the Committee any instance of mining operations being retarded for want of shipping? If I had made notes for the purpose I could have given instances to show that we are losing from one to two days work a week because of the want of shipping during bad weather.

1239. Bad weather interrupts the loading of steamers on the south coast? Yes.

1240. You hold that with a secure harbour the loading of steamers would be very much facilitated, and in addition an advantage would be gained by reason of the fact that sailing vessels could visit the place? Yes.

1241. The trade would then be on somewhat the same lines as the trade of Newcastle? Quite so.

1242. Do you think there is likely to be the same demand for the Illawarra coal in the eastern and other markets that there is for the Newcastle coal? I think that the demand for the southern coal will increase year by year, because it has been proved to the satisfaction of steamship owners that it is better for steaming purposes than any other coal that can be obtained in the Colonies.

1243. If the output of the south coast were to reach your forecast, do you think there would be sufficient trade to carry on all the mines? I think so. If we have a superior article to put upon the market, we must increase our trade as the years go by. There is no coal in the southern hemisphere equal to the Illawarra coal.

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1244. You think that there is no reason to fear a diminution of the trade in the future? None whatever.
1245. The trade is more likely to increase? That is my opinion.
1246. Therefore, you think that the same facilities for loading should be given on the south coast as have been given on the north coast? Yes. I think we have been left in the cold too long.
1247. In the event of either Bellambi or Port Kembla being made into a harbour, you think that in the interests of the country the existing jetties and railways should be resumed, so that a uniform charge might be made for the shipment of all coal? I do.
1248. At Newcastle, the Commissioners charge 10d. a ton for the haulage and shipping of coal coming from distances between 4 and 7 miles? It costs the southern coal-mine owners more than that.
1249. It is natural to suppose that if a harbour is made on the south coast, the trade will concentrate there? Yes.
1250. Therefore, no one colliery should have an advantage over the others there? No.
1251. If the jetties remain the property of private coal-mine owners, it might happen that they would find means of delaying the shipment of coal belonging to a rival company? Yes; that might happen. With regard to the concentration of trade, the captain of any ship who finds that he can get his vessel loaded more quickly at Bellambi than anywhere else will come there.
1252. But I suppose, even if a safe harbour be made at Bellambi or at Port Kembla, vessels will continue to load at the other jetties in fine weather? Possibly so; but I think only for a short length of time. The jetties would soon fall into disuse.
1253. You think that owners as soon as they could make their arrangements would ship the whole of their coal from a secure port? Without doubt.
1254. Is there any general organisation of the colliery owners in your district which has taken up the same position with regard to the construction of a breakwater at Bellambi as you take up? I am not in a position to say; but I know that certain of the managers hold the same views as I do, and I could almost vouch for two or three of the owners. It is so much to their advantage to have a harbour constructed at Bellambi that they can scarcely say anything else, even though they may belong to the Southern Coalowners Association. It is simply a question of £ s. d.
1255. No matter where the port is made, whether at Bellambi or at Port Kembla, some of the mines will be able to get there more cheaply than the other mines? Well, if the zone system is applied that may not be so. If a uniform charge is made for all collieries within a 5-mile radius and a similar charge for all collieries within a 10-mile radius, they will be all on pretty much the same basis.
1256. *Chairman.*] Why should there be two zones? Well, I do not know whether Mr. Eddy would be prepared to give the Southern Colliery the same advantages as the South Bulli Colliery, one being 6 miles away and the other about $1\frac{1}{2}$ mile.
1257. *Mr. Lee.*] Would a 10-mile zone from Bellambi include Mount Kembla? It would include all the collieries with the exception of the Metropolitan.
1258. What rate is to be charged for each zone? Mr. Eddy did not go into any particulars. I suggested the idea to him, and he said that it was the only feasible way out of the difficulty. At the time we were advocating a reduction in the cost of transit for coal in the southern district.
1259. At Newcastle they have a varying rate, the minimum being 6d. per ton for a distance not exceeding 1 mile? That is why I stated that there might be two zones—a 10-mile zone, and another zone inside that.
1260. At any rate if the zone rates are not in excess of the rates charged at Newcastle the colliery proprietors will be prepared to pay them? I think they would be on the same ratio as the Newcastle rates. The grades to Darling Harbour are so heavy that it would cost the Commissioners more in proportion to the mileage to take coal there than it would to take it down to Bellambi.
1261. Do you think that the extra return obtained by the railways would be sufficient to pay the cost of haulage and interest upon the cost of the construction of the proposed works? I would not like to say that it would do so from the start; but I am sure that in the course of two or three years the scheme would pay. I feel certain that it would ultimately pay $4\frac{1}{2}$ per cent. upon the capital invested.
1262. Do you think it would be advisable to have a zone charge and an additional charge of so much a ton to cover the cost of shipment? Well, let us say that 3d. a ton net gain should accrue to the Government.
1263. Do you think a clear gain of 3d. a ton would be sufficient to cover the interest? I think it would be more than sufficient.
1264. That is taking the expenditure as estimated by your engineer? Yes.
1265. Upon the Government estimate it would not be sufficient? No.
1266. I suppose that the trade from a port on the southern coast would be nearly all export trade? We shall not have much import trade for some time to come; but I believe that the district is well situated for the establishment of manufactories.
1267. Do you think that it is necessary to construct wharfs at either Port Kembla or Bellambi? No. I think that two additional jetties will serve the trade for twenty or thirty years to come.
1268. I suppose it would be a costly matter to construct a wharf at Bellambi owing to the shallowness of the water near the shore? I think that a wharf could be put alongside the breakwater in deep water.
1269. Would not that be a dangerous position for it. Would not the surf break over the breakwater on to the wharf? I think that if No. 1 breakwater were constructed, there would not be much sea coming against No. 2 breakwater. Very little sea enters the bay now. I only remember two piles having been disturbed on the outer jetty.
1270. But while there may not be sufficient sea to harm the jetties, the sea might be sufficient to break over the breakwater and interfere with unloading? I do not think so.
1271. You rely upon the No. 1 breakwater to prevent that? No; I rely upon the general direction of the storms. Our storms generally run along past the outer end of the proposed lower breakwater, and do not disturb the bay very much.
1272. If ore were brought to Bellambi could it be loaded into the trucks on the jetty? Yes. Every facility for unloading could be afforded upon either of the two jetties which we propose to construct. Moreover, between the two reefs there would be room to discharge millions of tons of ballast, and this ballast would ultimately form a protection to the inner breakwater.
1273. It matters very little, when a vessel is lying in still water, whether the stuff taken out of her hold has to be run up 10 feet or 30 feet? If she can lay comfortably at her moorings it makes very little difference.

1274. Is it not done at almost every port in the world where there are large vessels? Yes. They have to do it at sea when they bring up coal from the hold for the use of the steamer.

1275. If stuff is being unloaded on to a wharf it has to be hoisted some feet above the wharf before it is swung out? Yes; and it would only take a second more to raise anything 30 feet instead of 20 feet.

1276. Have you seen them taking out ballast at Newcastle and putting it direct into the trucks? Yes; I have seen them doing that on one or two occasions.

1277. Why should it be necessary to erect a wharf in order to allow a vessel to unload ore? I do not think it is necessary at all.

1278. So long as there is calm water, inward cargo can be discharged into the trucks on a jetty without any difficulty? Yes; just as the outward cargo can be put into the vessel.

1279. Sailing vessels will have to discharge their ballast into the trucks? Yes, unless they tip it out before they enter the port. At Bellambi they could discharge millions of tons of ballast between the two reefs.

1280. At any rate, if they can lift the ballast out of the vessel into trucks they could lift ore out? Yes.

1281. *Mr. Wright.*] You come here representing Woronora? I am the parliamentary representative of the Electoral District of Woronora.

1282. Do you oppose the Port Kembla scheme in the interests of your electorate, or in the interests of the whole district? In the interests of the whole district; not only in the interests of my own electorate.

1283. You are not personally interested in this matter? Not a cent.

1284. Is there any possibility of an import trade to the south coast? It will come about in time, and no doubt facilities for unloading would be provided as the trade came. If the jetties were found insufficient we could build a wharf.

1285. You are aware that the Departmental officers in preparing a scheme always put as much into it as they can? Unfortunately that is so. Any expenditure upon wharfs would be premature.

1286. A coal jetty is not a place upon which you can discharge ballast? I have seen coal slung up in baskets from the lower hold of a steamer, and I think it would be easy to sling ballast on to the jetty.

1287. But 15 or 20 feet of extra hoist every time means a good deal in the aggregate? Yes; it does make a difference.

1288. You believe that Bellambi has all the advantages which Port Kembla is said to possess? Well, the area of protected water and the depth of water would not be so great. It has been a harbour of refuge ever since I have resided in the district, and I believe ever since there have been vessels on the coast.

1289. The harbour is deep enough to load any merchant vessel? It can load vessels of 3,000 tons there now.

1290. And if your scheme were carried out there would be sufficient water for any sized vessel? Yes.

1291. I suppose you have some knowledge as to the amount of room required by shipping? Yes; I was at sea for a few years in my early life.

1292. Do you think that at either Bellambi or at Port Kembla there would be room for twelve 3,000-ton vessels to swing at their anchors? Yes, for twenty.

1293. Of course you are aware that at a coal port there must be anchorage for other vessels besides those loading at the jetties? Yes; but there is ample room for that at either place. I advocate Bellambi only because it is the more central, and the construction of a harbour there would mean a larger export of coal.

1294. You stated that the Bulli seam does not extend south of Mount Kembla? Yes.

1295. In the mines further north, are there not three or four workable seams under the Bulli seam? No; not of a payable character. They tried the 4-foot seam at Old Bulli, but it was knocked out of the market. The North Bulli seam is similar. Its density as compared with its bulk is greater than that of the Bulli seam.

1296. What about the deep seam there? We suppose that they are on the same seam, though the coal differs in appearance and quality as it gets deeper.

1297. There is no payable seam below the present seam? I believe not.

1298. We have been told that there are several good seams under the Bulli seam? There is any number of seams below the Bulli seam, but the quality of the coal is not good enough for the market.

1299. As far as you know there is no payable coal south of Mount Kembla? No; either the quality of the coal is poor, or there are so many bands that it does not pay to work it.

1300. Do you know of payable coal in the mountains at the back of Jamberoo? No. I believe there is no payable coal as far south as Jervis Bay. At any rate, there has been no development up to date to warrant us in thinking so.

1301. *Mr. Fegan.*] To whom does the foreshore at Bellambi belong? A township was surveyed there some years ago, and several allotments were purchased, so that there are two or three owners of the land around the bay, if not more.

1302. To whom do the jetties belong? To the South Bulli Coal Company and the Bellambi or Woonona Company. The leases of both companies terminate in 1899.

1303. Does not part of the foreshore belong to the Crown? *Mr. Darley* told me that the Government did not own a foot of water frontage around Bellambi. He said that that was the only thing against Bellambi as a place for a port.

1304. Have the companies a lease of the approaches to the jetty? They may own that land themselves, or they may pay royalty for running over it. Several land-owners in the district obtain royalty in that way.

1305. What objection have you to the breakwater proposed by the Government? We object to it because it runs out into the deepest water, and lessens our harbour area, while the cost of construction is greater than need be.

1306. What is the distance between the two breakwaters you propose to construct? I believe that at the extreme ends they are about 2,000 feet apart; but they start from the same shelf of rock.

1307. What is the distance between the Government proposed breakwater and your proposed inner breakwater? Something like 200 feet at the starting point, the distance widening as the breakwaters go out.

1308. If your scheme were carried out, we should have as good a harbour at Bellambi as we could have at Port Kembla, a harbour that would be much cheaper to construct and which would be sufficient for the trade.

J. B.
Nicholson,
Esq., M.P.
24 Nov., 1896.

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trade for fifty years to come? Yes. The estimated cost of protecting Bellambi is less than one-half of the estimated cost of protecting Port Kembla.

1309. I understand that you take some exception to a number of soundings at Bellambi on the Government plan? At Port Kembla they have the very best soundings, while at Bellambi they have taken soundings in the deepest water. They have either made a great mistake at Bellambi, or there has been something like undue influence.

1310. What should they have done? They should have looked for the shoal water as they did at Port Kembla.

1311. We have been told that the bottom at Port Kembla is clay, while at Bellambi it is rocky? At Port Kembla they have undoubtedly a good anchorage; but at Bellambi they can anchor very well, except in the shoal water, and a vessel would never get close in shore to anchor.

1312. How long have you been living in the district? Over fifteen years.

1313. Therefore you think that you would have heard of any objection to the anchorage at Bellambi? I think so.

1314. Have you heard of any vessel breaking away from her moorings there? No. I have been there times out of number, and have seen vessels loading in all sorts of weather.

1315. I believe that was part of your work at one time, when you represented the miners of the district? Yes, my work took me there occasionally, but my own interest in the place brought me there much oftener.

1316. It has been stated that they gave up working at the Bulli Colliery, because they met with cinder coal. I understand from you, however, that they got through that bad coal? Yes, years ago.

1317. What seams in the southern district are workable? The Bulli seam is the only payable seam.

1318. What thickness is it? It varies from 8 to 10 feet, though at places it may be less than 8 feet and more than 10 feet.

1319. Whilst there are high seams to be worked it does not pay to work low seams? Certainly not. That is why the Bulli "B" pit is at present shut down. The burnt coal has cut out the bituminous coal to such an extent that it does not pay to work the bituminous coal. We have only the Bulli seam and a 4-ft. seam working, and it is a moot point whether the seam that has been worked at North Illawarra and at Clifton is the Bulli seam or not, it varies so much in thickness. I hold that there is a difference. The 4-ft. seam is 16 or 20 feet below the Bulli seam.

1320. Is it inferior coal? Yes.

1321. At present there is no coal being worked under tidal waters? No.

1322. Where the coal is not under tidal waters the greater portion of it can be recovered under good management by bringing back the pillars? Yes.

1323. There is not one-third of the coal left in the mine? Not one-fourth, I should imagine.

1324. Is this 8 or 10 feet seam clear coal? Yes. There is not a bit of dirt in it that I have seen, though in parts I have noticed a slight layer of dirt between the coal and the roof.

1325. You do not know anything about seams further down? No.

1326. Are there people in the district desirous of having a harbour at Port Kembla? As a matter of fact, there are no residents in the immediate vicinity of Port Kembla. Wollongong is, I suppose, the nearest place to it.

1327. Have you an analysis of the coal obtained by the Illawarra Land Corporation? No, but I will procure it for the Committee.

1328. We were told that it was exceptionally good coal? If the bagful sent to me was a good sample, and I presume that it was, it was not good coal. There were pieces of bright stuff mixed with it, but generally it was dull, and I should take it to be a dirty coal.

1329. Would it be good steaming coal? No. In my opinion it was scarcely good enough for domestic purposes.

1330. Are we to understand that that coal is almost valueless at the present time? I think so.

1331. Will not the smelting company use it? I am very much afraid that it is not good enough.

1332. If both Port Kembla and Bellambi were equipped with the necessary loading appliances, would not most of the trade go to Port Kembla? No, I do not think so. I do not think people would send coal 10 miles when they need only send it 4 miles.

WEDNESDAY, 25 NOVEMBER, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.	HENRY CLARKE, Esq.
The Hon. JAMES HOSKINS.	CHARLES ALFRED LEE, Esq.
The Hon. CHARLES JAMES ROBERTS, C.M.G.	JOHN LIONEL FEGAN, Esq.
The Hon. WILLIAM JOSEPH TRICKETT.	THOMAS HENRY HASSALL, Esq.
The Hon. DANIEL O'CONNOR.	GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

David McCulloch, Esq., Statistical Clerk, Department of Mines, sworn, and further examined:—

1333. *Chairman.*] You desire to put in some returns? Yes. The following statement shows the total output of coal from the collieries within the Illawarra basin, from the opening of the field to the end of 1890, and supplements the return I have already given to the Committee:—

D. McCulloch, Esq.
25 Nov., 1896.

Year.	Mount Pleasant Colliery, Wollongong.	Mount Kembla, Wollongong.	Osborne, Wollongong.	Mount Kilsno, Wollongong.	Bulli A and B pits, Bulli.	Coal Cliff, Clifton.	Illawarra.	Broker's Nose, Wollongong.	Metropolitan, Helensburgh.	North Illawarra, North Bulli.	South Bulli.	Wollongong Coal, Wollongong.	Bellambi, South Bulli.	Ceyrnul, (late Broker's Nose), Wollongong.	Total output.
Prior to 1874...	Tons. 35,749	Tons. 8,000	Tons. 38,422	Further details not available.		Tons. ...	Tons. ...	Tons. ...	Tons. ...	Tons. ...	Tons. ...	Tons. ...	Tons. ...	Tons. ...	Tons. 137,062
1874...	35,095	1,000	37,796	38,506		...	...	...	...	...	...	...	...	...	136,287
1875...	Details not available														
1876...	51,575	...	47,000	101,709	...	...	...	...	...	...	...	...	...	...	200,284
1877...	50,277	...	45,271	121,802	...	...	...	...	...	...	...	...	...	...	216,940
1878...	57,623	...	40,367	124,737	15,226	...	...	...	...	...	...	...	...	...	238,553
1879...	62,520	...	48,444	120,119	35,935	...	...	...	...	...	...	...	...	...	267,018
1880...	68,000	...	33,896	96,071	51,446	...	...	...	...	...	...	...	...	...	240,211
1881...	...	...	72,000	85,703	28,705	50,559	...	...	...	...	...	...	...	...	252,067
1882...	...	...	82,026	131,120	48,590	53,971	...	...	...	...	...	...	...	...	315,709
1883...	...	21,522	87,011	131,392	50,000	65,986	...	...	...	...	...	...	...	...	355,911
1884...	...	91,013	66,464	116,783	51,500	70,981	...	...	...	...	...	...	...	...	395,741
1885...	...	90,324	108,579	136,873	48,500	69,841	...	...	...	...	...	...	...	...	444,117
1886...	...	51,704	77,356	93,923	56,623	71,913	1,611	...	...	...	...	...	...	...	359,250
1887...	63,935	99,790	73,678	31,161	36,773	57,119	439	...	...	...	...	...	...	...	362,895
1888...	...	162,850	121,825	77,042	82,157	100,704	For continuation see Contd.	4,220	123,440	90,000	24,500	...	...	...	776,817
1889...	82,611	122,558	118,652	63,299	61,930	...	...	14,571	116,576	100,000	...	...	14,736	8,690	701,572
1890...	79,010	107,063	95,709	48,436	20,182	...	...	55,249	13,500	102,640	...	...	40,737	28,841	582,447

Charles Joseph Byrnes, Esq., Managing Director, Mount Pleasant Coal Company, sworn, and examined:—

1334. *Chairman.*] Where is the property of your company situated? At Wollongong.

1335. You wish to make a statement with regard to the question now under the consideration of the Committee? Yes. During the existence of the Wollongong Harbour Trust, the desirability of getting a deep water harbour on the south coast was mooted. I was Chairman of the Harbour Trust at the time. Accordingly meetings were held at Bellambi, Wollongong, and Kembla, at which the whole matter was discussed, and it was ultimately resolved that in order to avoid any collision and the risk of not obtaining any harbour at all, to refer the whole matter to the Government, and to abide by the decision of the Government.

C. J. Byrnes, Esq.
25 Nov., 1896.

1336. Who were at the meeting at which this determination was arrived at? Representative men from Bellambi, Kembla, and Wollongong. I was there as Chairman of the Harbour Trust, and most of the other members of the trust were present. Among others Mr. Vickery was there, and so were Dr. Robertson and Mr. Ewing.

1337. And the meeting agreed to leave the whole matter to the Government? Yes; and I am prepared to adhere to that decision. I do not wish to offer any opinion upon the question at all.

1338. For what reasons is a port necessary on the south coast? At the present time it is impossible for the southern collieries to enter into competition for the foreign trade, because it is impossible to load sailing ships on the south coast, and it is in sailing ships that the great bulk of that trade is done. At Wollongong, vessels up to about 900 tons can be loaded, at Bellambi vessels up to 2,000 tons, and at Port Kembla, I suppose, almost any sized vessel—I am speaking of steamers only. We cannot load sailing-ships at any of these places. But if we had a commodious harbour, suitable for the accommodation of any kind of vessel, I think we should be able to do double our present trade. My own colliery has frequently had to refuse orders because we were not in a position to load the coal at Wollongong, and the railway rates to Port Kembla prevent us from shipping there.

1339. You have discussed this matter with Dr. Robertson? I have discussed it with Dr. Robertson, and with most of the coal people down there.

1340. You think that in any statement which he may make with regard to the matter your own views will be fairly well set out? I have read Mr. Vickery's evidence, and that of several other gentlemen, and I quite concur with what they have said.

1341. You feel that at this stage you have nothing to add to that evidence? Nothing. I am here quite disinterestedly. I want a deep-water harbour, and as the representative of the Mount Pleasant Company, I should be glad to get one, wherever it may be decided to make it.

Dr.

Dr. James Robert Millar Robertson, Engineer to the Bellambi, South Bulli, Coalcliff, and Mount Kembla Collieries, sworn, and examined:—

Dr. J. R. M. Robertson.

1342. *Chairman.*] You desire to make a statement to the Committee? Yes; I have embodied my opinions in the following statement:—

25 Nov., 1896.

In the purchase and development of the various collieries in Illawarra proper upwards of £1,000,000 of money has been spent; probably more than £200,000 has been spent in railways, sidings, and jetties.

On account of the inadequacy of Wollongong Harbour, where only vessels of 800 tons can load, and on which large sums of public money have been spent, the more recently-developed collieries have been obliged to build long lines of railway to the coast, and to erect very expensive jetties, which they have built and maintained at their own cost, for the purpose of loading a larger class of vessels than is possible at Wollongong. But for the existence of these jetties two-thirds of the present output from Illawarra proper would be lost.

For the past fifteen years I have been impressed with the necessity of a protected harbour for Illawarra, in order to foster the trade and safely accommodate the ever-increasing size of vessels that take our coal from the Colony. The tendency of the trade has been, and is, to drift into a larger and longer class of vessels.

At that time it was obvious to me that no ordinary expenditure would ever make Wollongong a harbour capable of accommodating the large class of ships that were offering, and after many visits to Bellambi and Wollongong it became apparent to me that Port Kembla was the most suitable spot, not only as a natural harbour which would require comparatively little protection, but was the most suitable site for the Illawarra collieries present and prospective.

In consequence, the subject of a breakwater to protect the jetties was on several occasions discussed by the Mount Kembla directors here, who, however, for various reasons, delayed taking action with respect to this desirable object; but seven or eight years ago they authorised the expense of soundings and a plan and estimates for a breakwater on a rather less pretentious scale than that proposed.

The breakwater then proposed began a little further east than the one proposed by Government engineers, and instead of running nearly north for 2,500 feet, followed the reef in a north-westerly direction, ending at a shallow patch about 1,900 feet from the point, a direction which I think preferable to that now proposed.

The ever-increasing size of vessel, and the persistent tendency of the steam coal trade to expand outside the Colony, induced me, five years ago, to go to London, and in person to urge the Board of Directors there to engage in the construction of this work, providing a Bill authorising its construction was obtained from the Parliament of New South Wales. The failure to obtain the co-operation of all interested parties decided the Directors to delay consideration of a scheme they were unanimous in their approval of. In the report I then presented the following sentences occur:—

"The proposal to construct a breakwater at Five Islands Point, Port Kembla, is not new. It has been more than once brought before your notice. This site has for years been recognised as the most feasible and suitable for a harbour of refuge in the district. Ten or eleven years ago Mount Kembla Colliery was connected with this point by railway, and erected a capacious jetty, at which large quantities of coal are daily shipped. Some years later the Southern Coal Company erected another jetty, at which large vessels have loaded.

"During recent years the character of the steam coal trade has changed. Formerly the coal was all sent to Sydney in colliers of moderate size, but of late the coal of Illawarra has grown in favour in the southern Colonies, and large inter-colonial steamers now go to the jetties at Port Kembla for cargoes. This trade is increasing.

"At the present moment vessels can load at Port Kembla when the more-exposed harbour of Wollongong, 3 miles north-west, is unapproachable.

"Loading is only rendered difficult, or, for a short time, impossible, after a protracted south-east or easterly gale, or when a heavy ground swell sets in as a result of a storm some distance out seaward. It is seldom that loading is stopped for ordinary colliers at Port Kembla. * * *

"At present steamers carrying about 3,000 tons load at Port Kembla, while Wollongong Harbour, a few miles distant, on which upwards of £130,000 has been spent, can only admit steamers of 700 tons, leaving at high tide. Under the advice of the late Sir John Coode, preparations have been begun to spend about a million of money in extending this 'pool' that ought never to have been made—to make this dangerous basin more dangerous—and to fit it for the trade of two collieries, the traffic from which could just as easily be accommodated at Port Kembla, where steamers of any size could load with perfect safety at one-tenth of the cost, and where treble the quantity of coal could be shipped.

"A reef of rocks runs from the point east of our jetty in a north-westerly direction towards Wollongong. On this reef there are from 18 to 20 feet or so of water for about 1,600 feet. The breakwater proposed would follow this reef, and have deep water close up to it on the west. The point and the islands to the south and east would protect the breakwater from the force of the seas which, however, would run almost in its course.

"A survey of this reef and a plan of the proposed breakwater accompany this.

"Every yard of breakwater built would benefit the adjoining jetties.

"If this work were carried out the distance stated the loading staiths would be protected from all winds and seas, and several hundreds of acres of excellent anchorage would be protected, and could be used as a harbour of refuge, which would be the only one on the whole coast.

"The advantages to the district collieries would be—

1. Steady and continuous loading.
 2. Ability to load large sailing ships, and, in consequence, a large increase of trade to the district.
- "To the ship or trader the advantages would be—
- (a) Saving of two handlings of coal, which would be despatched in better condition and avoid much loss. The coal would be larger.
 - (b) Saving of the present freight to Sydney and cost of transhipment.
 - (c) The ship would be loaded continuously and without an hour's delay as fast as the cargo could be received, a all collieries would join.
 - (d) Saving of the more expensive Sydney tramage, wharfage, and pilotage.

"The cost of the proposed breakwater would be from £70,000 to £90,000. [The estimate of the engineer was considerably less; but I think that he was entirely wrong.] The consent of Parliament would of course be necessary before the work could be begun, and to authorise the levying of anchorage, wharfage, pilotage, or lights dues.

"The revenue would be sufficient to recoup the cost. Upwards of 200,000 tons of new trade would be captured by the district collieries."

The jetties that have been erected have cost very large sums of money to erect and maintain. The life of a jetty, without repairs, may be reckoned at fifteen years. In consequence of the changing trade and the necessity of providing for a larger and larger class of steamers in an open though sheltered roadstead, these jetties have involved a large expenditure of capital that the companies can ill afford. The jetties, however, are probably the fastest loading jetties in existence; but for this the collieries could not possibly dispose of their outputs. As it is, stoppages occur from the range of the sea when large steamers load, less frequently from stress of weather. But we are totally unable to load sailing ships for ocean voyages.

This, in these days of fierce competition, prevents us from competing in foreign markets and in many eastern ports where our coal would command a ready sale.

I calculate that with suitable protection for sailers we could sell from the Illawarra collieries to markets from which we are at present debarred on account of the expense of conveying and transhipping at Sydney, and its consequent destruction of the coal, a quantity approaching 200,000 tons a year, if not more, of new trade.

This would not compete with Newcastle. Illawarra is not a rival of Newcastle. A steam coal is no rival to a gas coal; each has its separate uses and markets.

The present collieries are capable of a largely-increased output, and the proposed breakwater would give not only steadier work but enable a large number of men being employed.

It would be a valuable harbour of refuge. Its anchorage of clay without rocks is all that can be desired. No vessel ever drags her anchors or losses them at Port Kembla.

Metallurgical or other works would be built in the vicinity of a deep-water sheltered harbour, and I am of opinion that an eastern breakwater will give us all the shelter we require.

I would use the breakwater for discharging cargo and loading sailing ships or very large steamers.

Being

Being intimately acquainted with the whole of the coal properties in the district, I find, that after making ample allowance for waste and loss from all known causes and carefully considering the geological and mineral conditions, the upper coal seam of Illawarra contains, available for sale, 117,000,000 tons of steam coal. To that quantity I would be disposed to add, say, one-fifth of the coal available from the present plant of collieries outside of the district to the north, or say in all 125,000,000 tons.

Dr. J. R. M.
Robertson.

25 Nov., 1896.

Returning to Illawarra proper. About 5 per cent. of the whole could not under present conditions be worked to a profit, but of course it will be worked in the future under different conditions to those that at present prevail. Twenty-five per cent. of the whole available coal may be expected to go by rail out of the district, or be shipped at jetties or at Wollongong into a smaller class of vessels than would load in the proposed harbour.

Of all the available coal in the upper seam of Illawarra proper the coal-field situated south of Bellambi Colliery contains about 90 per cent., and if you take Port Kembla as a centre, and the mine of that name as a radius, about 70 per cent. of this coal would come from adits within or about that radius. The great bulk of the available upper coal is therefore contiguous to Port Kembla. The Wollongong group of collieries is really nearer to Port Kembla than is the mine that gives the port its name. Approximately, about 45 per cent. of this coal would be within the same radius of Bellambi, but about 70 per cent. of the whole available steam coal in Illawarra will come from mines virtually within an equal radius of Port Kembla.

Of the whole coal-field about one-half of the whole coal will be drawn from land leased from Government, and this will yield from the upper seam alone royalties exceeding £1,000,000, or from all the coal seams upwards of £3,000,000. The Government being principal owner would simply be giving an enlarged market and an outlet for their own minerals.

There are six lower coal seams of a quality distinctly inferior to the upper, but these so far have been neglected; at present they are not worked, the whole demand being for steam coal. Little is known about the condition of these coal seams. Undoubtedly large patches may be found workable, but these will not be worked while the superior upper seam can be easily obtained. It may be safe to say that these seams will yield north of Kembla a quantity equal to the upper seam, or 117,000,000.

South of Kembla the lower coal seams in places improve, and it is also quite safe to estimate, notwithstanding the disturbed character of part of this district from basalt intrusions, that south of Mount Kembla other 117,000,000 tons are available, or, together, 350,000,000 tons, with Port Kembla as a centre.

Considering that upwards of £200,000 of private money has been expended on jetties and approaches in the district, and that by means of these the bulk of the present output has been secured, and from these jetties solely the large vessels that load are despatched, and that Government have done nothing whatever to promote the southern coal industry except to build at great expense what is known as Wollongong Harbour, and as private enterprise is now exhausted, and can do nothing towards enabling existing collieries to load sailing ocean-going ships and increase their foreign trade, I am of opinion that, considering the national character and importance of this work, that the southern collieries may hope to obtain the boon of a breakwater, at a spot where any ship, no matter how large, could safely shelter, discharge, or load and leave at any time without risk.

A very small charge upon the coal shipped, altogether outside of the large revenue to be derived from inward cargo, and from the advantages to the railways of the large settlement it would induce, would pay handsome interest on the cost of an eastern breakwater.

Lake Illawarra scheme, so long dangled before our eyes, is apparently as near fulfilment or as distant as it was at the beginning. If constructed it would never prove of any material benefit to our trade in coal, nor would the construction of that harbour remove the necessity for the one proposed. The depth of water proposed at Lake Illawarra would not admit almost any of the vessels that trade to Port Kembla when light.

To make it deeper would involve more than treble the expense stated. It would necessitate tugs to tow vessels across the lake, and dredges to keep it free of sand. From the absence of any rivers falling into it it would have no scour. The sea-walls are so close and the channel so narrow that no vessel or steamer could go out or enter during a heavy wind or sea, and the same danger would exist all across the lake. It would probably take double as much annually to keep the channels dredged as it would to pay interest and keep on Port Kembla works. The expense of conveying coal over the Government railway, and then over a private branch line and then to be shipped by cranes in a small pool would far exceed in expense what the trade could pay or afford—that is, assuming the depth of water would permit of vessels larger than coast colliers entering. Under no circumstances that I can see could this canal be of any use as a harbour of refuge, or to the Illawarra collieries, which must have a harbour where coal can be shipped into the very largest class of steamers or sailers afloat, at the very smallest cost per ton, and at any time irrespective of weather. In the competition of the present day it is a question of pence, whether we can keep our collieries going steadily or in the irregular way we have been doing for the past two or three years. The coal trade can afford no margin; it is a race for life in the truest sense.

While Lake Illawarra scheme can never foster our coal trade nor remove the necessity of a harbour to the north, my opinion is that if Port Kembla harbour was formed Lake Illawarra would never more be heard of.

Since 1887, Mount Kembla Colliery has shipped about one and a half millions of tons at Port Kembla. The Southern Company have shipped large quantities also. Upwards of 300,000 tons will, I calculate, be shipped here during 1896.

Mount Kembla Colliery can double its present output on short notice. Mount Keira, Mount Pleasant, and South Bulli can also largely increase their outputs without additional expenditure.

By joining Mount Keira and Mount Pleasant lines with Port Kembla along the beach, upwards of 500,000 tons a year could be shipped at once, at an expense practically little in excess of what the collieries paid while the Wollongong Harbour Trust was in existence. This quantity would steadily increase year by year.

We have lost large orders recently on account of our inability to load sailers, and the inability of buyers to pay the extra charge of conveying coal to Sydney. These orders would have kept hundreds of men employed regularly, instead of intermittently, and would have been of equal benefit to the district.

Protection from seas is the one essential necessity to inaugurate a period of prosperity and activity, and to give an impetus to the coal trade in the district of Illawarra.

I would suggest that the land contiguous to the point be resumed for public works and settlement purposes; that the existing jetties be resumed as well as the rail connections with the main line; that a mineral line be constructed along the beach to connect the Wollongong group of collieries with the extensive siding at Port Kembla; and that all collieries within certain zones, or delivering their coal within those zones, pay similar rates. By so doing the resurrections would from the first be revenue-producing, and ensure a large trade at once.

Wollongong would then be the commercial centre of the whole trade, and would at once be benefited by the connection. Port Kembla would be the port of Wollongong.

The advantages of this site are, in my opinion:—

Lower first cost.

Larger deep-water area.

Greater shelter and better anchorage than at any other site on the coast.

Greater capacity of present jetties to load.

It is the most central and convenient, and the only site that at a low cost will suit for all time the exigencies of the district collieries.

It is the only harbour that would serve large ships.

It is the only harbour of refuge.

It is the one harbour that would enable the district to obtain a large annual additional trade, and enable us to compete successfully in foreign markets from which we are debarred because of the expense of conveyance and transhipment.

At present southern collieries require to maintain inclines, long railways, numerous locomotives, and seven large jetties, the expense of which Newcastle is relieved of.

1343. *Mr. Clarke.*] You are pretty well acquainted with Port Kembla and the other harbours on the south coast? I am intimately acquainted with them.

1344. Are you of opinion that it is absolutely necessary, to ensure the future prosperity of the southern coal trade, and in the interests of the general community, to have a harbour at Port Kembla? I consider that

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that it is absolutely necessary that there should be a deep-water harbour for Illawarra, and in my opinion Port Kembla is the most convenient spot for such a harbour. The necessity for this harbour has been apparent to me for many years, and is becoming more apparent every day. Five years ago our inter-colonial trade could be measured by about 10,000 tons; but this year it will amount to almost 100,000 tons. A few years ago we had no steamer of more than 700 or 800 tons loading coal there; but now we have vessels taking 7,500 tons, and we hear of inquiries for a larger class of vessels. The shipping trade is not standing still. Every day we are getting surprises in the shape of larger and larger vessels, and I suggest that Port Kembla is the only place, and the most convenient at which these large vessels can be loaded.

1345. *Mr. Black.*] Is this new trade, or is it that coal is now shipped at the jetties at Port Kembla into vessels which were previously loaded in Sydney Harbour by coal brought up there by rail? The increase is all new trade. A few years ago our utmost foreign trade did not exceed 10,000 tons. This year it will run into between 90,000 and 100,000 tons.

1346. *Mr. Clarke.*] Do you think that the proposed eastern breakwater, or the breakwater which you have suggested would be sufficient to make Port Kembla a harbour of refuge? I think that the eastern breakwater will be quite sufficient for our requirements for many years to come. The construction of two breakwaters as proposed, would prevent the place from being used as a harbour of refuge, inasmuch as a vessel would have a difficulty in sailing in and sailing out again without assistance. If only the eastern breakwater were constructed, however, a vessel could do that in almost any wind, and it is a *sine qua non* with any harbour of refuge that vessels should be able to enter it unaided.

1347. An entrance 800 feet wide is allowed? Yes; but that would not be sufficient for a harbour of refuge.

1348. The port could be used at all times by steamers? I do not think that the northern breakwater is required at all.

1349. If the proposed eastern breakwater were constructed, I presume that sailing vessels would be able to load at the port for all parts of the world? Certainly.

1350. Is the greater part of the foreign coal trade carried on by sailing vessels or by steamers? A great proportion of it is still conducted by sailing vessels; but they are continually getting bigger and bigger in order to be able to compete against steamers.

1351. It is absolutely necessary to have a harbour of refuge for the protection of sailing vessels to increase the trade? I think it is almost indispensable that the port should have a holding ground which is beyond doubt. We must anticipate that a large fleet of vessels will lie there while awaiting their turn to load.

1352. The holding-ground at Port Kembla is undeniably good? No better holding ground could be imagined.

1353. It is much better than that at Bellambi? Undoubtedly. Bellambi is full of ridges of rocks, and numbers of vessels have lost their anchors there.

1354. Do you think it would be desirable for the Government to resume the present jetties and railway lines and a certain amount of land, supposing the proposed work is carried out? I would suggest that that course should be adopted. In my opinion it would work much more satisfactorily than any other.

1355. Can you give us any idea of the value of the land in the neighbourhood of Port Kembla? It is comparatively valueless land—very indifferent grazing ground. Its value could be estimated at so many years' purchase as grazing ground together with a fair allowance for the rents and dues which the owners receive for way-leave. It should be resumed on a rental basis.

1356. This way-leave gives it an additional value? Undoubtedly.

1357. What quantity of coal is shipped from Port Kembla by the Mount Kembla Company? Our output this year will approach 200,000 tons. For the last two or three years the average output has rather declined in consequence of an arrangement made with the other southern collieries. Our output has averaged between 150,000 and 180,000, or 190,000 tons. We have an arrangement whereby all the collieries gave percentages. There is a vend scheme in operation.

1358. What quantity of coal is shipped at Port Kembla from Corrimal? This year the amount shipped will probably be 70,000 tons, while the remaining collieries make up the total output—300,000 tons.

1359. Why should there be an extension of the trade because of the construction of a breakwater? An extension of the trade will be almost certain. We are continually refusing orders now to load sailing ships, principally for India, the Straits, Rangoon, and the Eastern markets. These orders we should be able to supply if we had a breakwater.

1360. *Mr. Hoskins.*] Does not the Japanese coal come into competition with the southern coal? To a certain extent, and the construction of the breakwater would enable us to compete more successfully with the Japanese coal. Our coal is of better quality than Japanese coal, and at Singapore we would get 2s. 6d. a ton more for it. If we could save 2s. in transit that would enable us to compete with them. The freight from this Colony to Singapore is greater than the freight from Japan to Singapore.

1361. *Mr. Clarke.*] Can you give us an opinion as to the quantity of coal available for export south of Mount Kembla? No person can give more than an approximate estimate because the various leaseholds have never been proved; but I know sufficient about it to know that I am very much within the mark when I put the amount at 117,000,000 tons.

1362. It has been stated that it is doubtful whether the coal south of Mount Kembla could be profitably worked? The principal seam, which consists of the steam coal at present worked, does not exist in a workable state south of Mount Kembla; but the lower seams rather improve in quality. This coal could not compete with the coal at present being worked; but the day is rapidly approaching when it will be used. That day would be here if we had metallurgical or other industrial works established in the district.

1363. Would that coal be at a greater depth than the present workings? No, it could all be won by means of adits.

1364. Would it be good enough for smelting purposes? It would be good enough for steam raising in the district, but not for export.

1365. *Mr. Wright.*] Would it do for manufacturing purposes? Yes; but a coal which will do for manufacturing purposes on the spot will not necessarily be taken for foreign markets, where there is a great amount of prejudice prevailing, and where double the value of the coal has to be paid in the shape of freight, none but the best is exportable.

1366. *Mr. Clarke.*] I suppose the coal shipped at Port Kembla goes mostly to foreign parts? Up to five or six years ago the Mount Kembla mine did a Sydney trade entirely; but now almost two-thirds of the output go to places outside the Colony. The trade is changing very rapidly.

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1367. Where does the coal go to? To New Zealand, Fiji, a large quantity to Victoria, and to South Australia.

1368. And to California? Yes, a few cargoes when favourable freights offer. It also goes to Bombay and Singapore. We can only send our coal away now by steamers, and it is only in the off season, when there is no wool trade, that steamers are available. If we could get sailing ships, they would be available when steamers were not.

1369. And they would carry coal at a cheaper rate? Yes.

1370. Do you think that if the proposed scheme were carried out coal would continue to be shipped from Bellambi, Bulli, and the other jetties along the coast? Yes. I estimate that 25 per cent. of the whole available coal would be sent away from those jetties; but it is very probable that every year more and more trade would find its way down to the deep-water harbour. The difficulty of maintaining the jetties becomes greater and greater every year. If there were two outlets for the coal—one a very great outlet, the tendency of the trade would be towards the great outlet.

1371. I suppose it injures the coal to send it to Sydney for transhipment? Yes, it breaks it up, and causes a lot of loss.

1372. You think that ultimately a great deal of the coal which is now sent to Sydney for transhipment will go to Port Kembla? I am confident that all the export trade will be done at whatever deepwater harbour we have on the south coast. It may be a question with steamers requiring bunker coal whether they will run down the coast to get it or be coaled in Sydney harbour; but I daresay the tendency will be for them to come down the coast for it and so save the cost of freight to Sydney and get the coal in better condition.

1373. Are you of opinion that some of the Mount Keira and Mount Pleasant coal will still be sent from Wollongong? Yes. They would have both outlets. It would be a great advantage to these collieries to have a deepwater harbour. They could use Wollongong for small vessels, and send whatever coal was intended for large vessels to the deepwater harbour.

1374. A railway along the beach from Wollongong would facilitate the trade to Port Kembla from Mount Keira and Mount Pleasant? Yes. Such a railway would take a large amount of coal to Port Kembla. These collieries have a large foreign connection, because they are well and favourably known abroad. I should say that quite half of their coal is shipped or could be shipped to foreign ports.

1375. Do you think it would be advisable to construct a breakwater at Bellambi? I do not think that Bellambi is the place where a breakwater should be made. It is only nominally the centre of the coal-field, because some of the collieries near it are only collieries in name; they are not actually working. North of Bellambi there is very little coal at the present time. Seventy per cent. of the coal is nearer Port Kembla. South Bulli no doubt, is a very fine colliery, and contains a large quantity of coal, but it is practically the only colliery near Bellambi. That coal, too, is not so well suited for export as the coal from some of the collieries further south. It is a very fine coal, but does not bear rough usage as well as the larger coal from Mount Pleasant, Mount Keira, and Mount Kembla.

1376. What about the Metropolitan Mine? That is outside the Illawarra district altogether. I think I am quite safe in saying, however, that one-fifth of that coal will be shipped at some future time from the proposed harbour.

1377. I suppose it would be as cheap to send that coal to Port Kembla as to send it to Sydney? Yes; the mine is nearer to Port Kembla than to Sydney, and the trade to Port Kembla is all in favour of the load, whereas the grade to Sydney is all against it. A railway along the beach from Wollongong would make the distance to Port Kembla still less.

1378. What do you think would be a fair charge for wharfage, &c., independent of any charge for haulage? I think that 3d. or 4d. a ton would be a very fair charge.

1379. One gentleman has said that his company would be prepared to pay 6d. a ton? If his company send their coal exclusively to intercolonial and foreign ports, I daresay they could afford to pay 6d. a ton; but for companies which have to supply the local market that is too high. Besides, small vessels do not do so much damage as large vessels. That should be taken into consideration.

1380. Jervis Bay is a good harbour? Yes, and so are Nagasaki and Christiana Fiords good harbours. Even though Jervis Bay be a good natural harbour, I doubt very much if you could make it suitable for the shipment of coal for less money than you propose to expend at Port Kembla.

1381. Has coal been found in the neighbourhood of Jervis Bay? Coal is said to have been found near there, but there is some slight mystery about it. A little further away there is coal; but I question whether it is suitable for shipping. It would be quite suitable for manufacturing and industrial purposes, but I think there would be great difficulty in finding a market for it in foreign parts.

1382. You seem to be of opinion that Port Kembla is the most suitable place for a coal harbour? I am certainly of that opinion.

1383. *Mr. Lee.*] Wollongong is midway between Sydney and Jervis Bay? Yes; about midway.

1384. Therefore, it would be as cheap to send coal from this district to Sydney as to send it to Jervis Bay? Yes.

1385. For that reason we must put Jervis Bay out of the question? I think so.

1386. I understand that coal has been found in the neighbourhood of Jervis Bay; but that it is of an inferior quality? I cannot speak of it from personal experience.

1387. I presume that in dealing with this question we are confined to Bellambi and Port Kembla? Yes.

1388. You are not aware of any more suitable place? No.

1389. Do you know Bellambi personally? Yes, I am engineer for the South Bulli Colliery.

1390. It has been suggested that two breakwaters should be constructed at Bellambi, both of them to the south of the proposed Government breakwater? I think the Government scheme is the correct one. I question if you could construct the other breakwaters. I think they would disappear as fast as they were made.

1391. It has been said that by taking the breakwater further south the stone could be dumped upon a reef which goes out a long way? Yes; but there is a frightful surf upon that reef. I am quite sure that the Government officers had all the facts before them. They made a most careful survey of all these ports, and I am sure that they would have been put in possession of all the information. The proposed substitutes leave the shipping place perfectly open to the east, north, and north-east. 1392.

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1392. You suggest that the Government proposal should be departed from at Port Kembla? My proposal was one which was made privately to the Mount Kembla Company.
1393. The sketch of a breakwater which you have drawn upon the map, was one which you submitted for the approval of the Mount Kembla Company? Yes; to enable them to take advantage of the foreign trade.
1394. But you are not prepared to say that the Government proposal is not better? I have no fault to find with the Government proposal; but, if I may be allowed to make a suggestion, without wishing to criticise it unfairly, I would say that it might be improved if the breakwater were swerved a little to the north-west, in order to take it into the shallow water upon the patch of reef to which I have referred. It would then be more in the run of the sea. In all other respects I would leave it as it is.
1395. Would that alteration increase the length of the breakwater? No; it would decrease it a little. The same protection would be given, with a lesser length of breakwater. No doubt Mr. Darley has put out the breakwater to protect the place from the north-east; but if the breakwater swerved to the north-west a little the same protection would be afforded, with a lesser length of breakwater, and all the area included would be deep water. In making the breakwater they could adapt it for the discharge of ore, and for loading sailing vessels; and therefore it is most essential that all shallow spots inside it should be removed. This I consider indispensable.
1396. Could the breakwater be used with safety as a place for discharging cargo? I would not think of making a breakwater that could not be used from the first day in this way.
1397. Would not the seas break over this breakwater? Not at all. There are no seas at Port Kembla. The islands to the south-east break up the seas; but they get entangled now at the shore-end, and that causes them to swerve round on the jetties. We have loaded at Port Kembla during the strongest south-east gales.
1398. How would you propose to unload at the breakwater;—would you erect wharfs alongside it? I would erect short jetties.
1399. In that way you would get deep water? Yes; you would have 40 feet of water. It has been stated, I think, that the existing jetties could be used for the discharging of vessels; but in my opinion they are not suitable for that purpose. They were made to load coal, and coal can be loaded from them with a rapidity with which it can be loaded from no other jetties; but they are not suitable for discharging cargo. I would bring incoming vessels alongside the breakwater to discharge, and then haul them over to one of the jetties to load. At the jetties we can load five tons to every ton loaded by any crane that was ever made.
1400. Therefore the erection of hydraulic cranes at Port Kembla will not be necessary? No; except for unloading. You cannot improve upon the high-level jetties for loading. Three men and a boy can easily unload sixty-six waggons in an hour.
1401. *Mr. Wright.*] Do you use side-door waggons? No; waggons with butterfly doors in the bottom.
1402. *Mr. Lee.*] If you ran out short jetties from the breakwater you would not want the proposed wharf shown on the plan? No; it would not be necessary. In my opinion you will have stiller water close to the breakwater, especially if the breakwater is swerved a little to the north-west. You could load any sized vessels alongside the breakwater.
1403. If it were possible to do away with the proposed wharf, between the existing jetties, it would very considerably diminish the cost of the proposal? I do not think you would have enough still water at the proposed wharf. It would, in my opinion, injure the wharf.
1404. And the harbour would have to be dredged in order to make the water deep enough? You do not want to do any dredging in a harbour of 200 acres. The trade of the Southern Hemisphere could be done in that harbour.
1405. How would you construct your roads to these short jetties, and how would you work them? In the same way as we do now—with a high and a low level. The Southern Company have a different way of doing things from Mount Kembla, possibly because of the physical features of their ground. We had to build a new jetty on top of the old one, and we had a great many difficulties to overcome, so that we adopted a plan for running out the full waggons and running back the empty waggons without the aid of locomotives. All that we require is a sufficient number of men to lift up the doors. We can load 500 tons in an hour from our jetty.
1406. If the port were improved and the trade increased, could all the coal still be shipped from those jetties? A few alterations might be required by-and-by, but we could ship 1,000,000 tons a year from those jetties with the greatest ease.
1407. It would not be necessary to construct a new jetty? No; except to load sailing ships. Any new jetty I would construct on the same principle as our present jetty. In that way you save both cranes and locomotives.
1408. You think that when the trade develops to sufficiently large proportions it will be time enough to consider the expediency of constructing other jetties? Yes. We are travelling at such a pace just now that we do not know what class of vessels will come to our shores in three or four years' time. Who would ever have supposed three years ago that we should have a 13,000-ton vessel coming to Sydney in 1896.
1409. If the direction of the breakwater were altered as you propose, would not that considerably diminish the area of protected water? Not considerably, for this reason: the whole of the western side of the breakwater would be available for discharging and loading berths.
1410. Do you think there will be any danger of the place silting up if the southern breakwater is constructed? No.
1411. It might appear at the first blush that with the constant roll of a north-easterly sea into the basin there must be an accumulation of sand? There is no north-easterly roll into Port Kembla? It requires a north-east wind to blow for two or three days at a time to stop us from loading, and it never blows for more than three days. There is practically no sea coming in there at all. It is the ground swell that prevents us from loading.
1412. From what part of the beach does the sand pile? It does not pile with us at all. Seven or eight years ago, after a very unusual storm, we found about a foot of sand under the piles at our loading stage; but it all disappeared in a week.
1413. It often happens that when you interfere with natural currents you bring about something which you never contemplated? Yes; but Port Kembla is out of the run of the current. The current goes to the east of the island, and is miles outside of Port Kembla.
- 1414.

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1414. It would not be necessary to leave openings in the breakwater to create a scour? No; that would spoil it. There will be no seas actually striking the breakwater. They will run along it. Wollongong, 3 miles to the north, is fairly exposed to the south-east, but we are miles within the direction of such a gale. We load at Port Kembla when the danger signals are flying at Wollongong.

1415. Do you know whether coal is ever sent to Sydney to be loaded into sailing vessels there? Yes; we loaded a sailing vessel in that way last week, and I am not sure that we are not loading another at present.

1416. But that breaks up the coal a good deal? Yes; it destroys the quality of the coal, increases the risk, and lowers the price. It is a brutal way of treating coal.

1417. I suppose very little coal is transhipped in sailing vessels? Yes.

1418. Are you of opinion that if the proposed works are carried out the Government should assume absolute control of the railways and jetties? I think so; but unless they treat us differently in the future from the way in which they have treated us in the past they will destroy the coal trade.

1419. Would you be satisfied if you were treated in the same way as the Newcastle coalowners are treated? That is better. They charge much higher rates in the south than they do in the Newcastle district. They charge the Mount Pleasant Company or Mount Keira for coal shipped at Port Kembla 1s. 3d. a ton. The haulage is only about $3\frac{1}{2}$ miles, and that of course did not include shipping. That is no encouragement to us. We can haul coal $7\frac{1}{2}$ miles for 1d. a ton, including shunting, marshalling, and weighing, though no calculation is made as to interest on the money expended.

1420. You admit the equity of making some charge? Certainly. A charge should be made which would give an ample return for the capital invested and the work done; but the rate should not be excessive.

1421. If the Government do not exercise complete control, do you not think that private interests might sometimes clash? I do not think so. If the Government cannot do the work on pretty much the same terms as private individuals, why not let private individuals do it and thus stimulate trade.

1422. If the Government did not resume the jetties the owners of the jetties could make their own terms? Well, I think they would be most liberal with the shippers, but I do not propose that they should keep the jetties. They might be required to give guarantees.

1423. Do you think it would be advisable for the Government to assume complete control? I think that the Government must assume control, though they should be amenable to reason if we think that we are being charged too much, and can point out where economies could be effected. Possibly it might be advisable to adopt the plan which has been adopted at Home. There, before any scheme is adopted by Parliament, they publish the schedule of dues and rates. I believe, too, that they have a permanent Railway Commission, something like this Committee, to whom any aggrieved trader may submit his grievance, and whose decision is binding upon the railway concerned.

1424. Remembering how finely the coal trade is at present worked, anything in the shape of an excessive rate would be prohibitive, and would be contrary to the object aimed at in constructing the harbour? Certainly, and the present traction rates charged are prohibitive.

1425. Therefore, if the whole of the jetties and railways were in the hands of the Government, such rates should be struck as would enable colliery proprietors to use the port? Yes. I have not given the matter any previous consideration; but it occurs to me that if the owners of private lines were allowed to retain their lines Parliament might impose a maximum rate beyond which they could not go. Probably they could deliver the coal at the harbour for much less than the Railway Commissioners would charge.

1426. At any rate you do not apprehend any difficulty from that source? None whatever. We are only too anxious to get an outlet for our Illawarra coal.

1427. It would make very little difference whether the railways belonged to the Government or to private individuals so long as there was a fixed and a general rate? Yes; that is the principal thing in the coal trade. There must be no favouritism.

1428. *Mr. Wright.*] Is the southern coal trade likely to expand largely? Undoubtedly.

1429. It has been stated that that trade at present amounts to about 900,000 tons, and that the construction of the proposed harbour would possibly double it? I think that before the harbour is finished the trade would have very largely increased; but whether it would have doubled I can hardly say.

1430. Do you think the construction of the proposed harbour would increase it by 500,000 tons per annum? I am clearly of that opinion. While the present export trade would be practically doubled, the whole trade of the district would be increased to quite the extent you mention, because I am certain that industrial concerns would be established in the district which would consume a quality of coal for which there is no foreign demand.

1431. You consider that for all purposes Kembla is a better port than Bellambi? Yes, and it is the place to select for a national work of this kind.

1432. I understand you to be in favour of a scheme which will not only give a shipping port but a harbour of refuge? Yes.

1433. If what is required is a harbour of refuge, would it be wise to diminish the area of the harbour as you propose? The breakwater which I have pencilled on the map is one which I suggested to the Mount Kembla directors. I think that Mr. Darley is quite right to take his breakwater out further than I then proposed.

1434. A closed harbour, such as shown on the map, would not do for a harbour of refuge? No, I do not think so. We do not require two breakwaters.

1435. Are you of opinion that the eastern breakwater could be constructed for less than £158,000? I have not gone into the question of expense further than I see that, in the amended scheme, for 1,600 feet Mr. Darley's estimate practically agrees with the estimate which I made to my directors five or six years ago, though, probably, I based my calculations upon higher prices. From the ease with which stone can be obtained there, I am sure that the work could be carried out for the sum estimated by Mr. Darley.

1436. As an engineer, you have some knowledge of these matters? Yes, a considerable knowledge.

1437. Are you familiar with any big breakwaters facing the open sea? Yes, I know a number of such breakwaters.

1438. Do you know any places where there are wharfs alongside the breakwaters? Nearly all the fishing harbours on the east and west coast of Scotland use their sea-walls for wharfage.

1439. But Mr. Darley proposes to construct a rubble breakwater? Yes. You would have to run out small jetties from the breakwater. A straight wall of concrete or faced stone could be brought up from below high-water mark, and from that I would run out short strong jetties, at which heavy vessels could lie safely and discharge. The drag of a big vessel upon an exposed wharf is enormous.

- Dr. J. R. M. Robertson.
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1440. What height should the breakwater be above sea-level? I understand that it is to be 20 feet above sea-level, probably more.
1441. Is not that an unusual height for a breakwater? I do not think so. It would have to be quite 20 feet high to make it suitable for loading purposes.
1442. Do you know the Plymouth breakwater? Yes.
1443. It is about 4 feet high? Yes; but it is used only as a breakwater. Madras breakwater is about the same height, but I have seen a vessel washed bodily over that breakwater. The Colombo breakwater is higher; I should say that it was fully 20 feet high. It is exposed to the full force of the monsoon. The breakwater at Port Kembla would get no sea at all.
1444. Is not there a very heavy ground swell there? There is a heavier ground swell after an easterly gale than after a south-easterly gale.
1445. With a heavy ground swell, would not the sea break over the breakwater? No. It only rises 7 or 8 feet upon our jetty.
1446. But your jetty is protected by the point? Well, in many ways we could load better if it were not, because the sea, running around there, gets entangled and swerves on to the jetty. I believe that two or three hulks filled with stone and sunk would enable us to load nearly the whole year round.
1447. It is only rarely that you have to stop loading? Only at very rare intervals.
1448. During southerly and south-easterly gales? It is after the gales that we stop loading, when the swell comes in. Of course we cannot load sailing vessels at any time. They are helpless craft in a harbour; but steamers always keep steam up and can get away.
1449. Is there not a current with a northerly set on the coast? There is no current at all at Port Kembla.
1450. Therefore, there is no danger of silting up? No. Our jetty has been erected for sixteen or seventeen years; but there is the same depth of water now to an inch that there was when it was first built.
1451. You say that coal-owners would be willing to pay 3d. a ton as a shipping charge? Threepence or 4d. Possibly it would be better to charge so much for small vessels and so much for large foreign-going vessels.
1452. Would you be prepared to pay 3d. a ton for every ton of coal shipped? Yes.
1453. If you shipped 500,000 tons, that would mean about £6,000 a year? Yes.
1454. That would give practically 4 per cent. upon the cost of the breakwater;—whatever money we could make beyond that would go towards paying for maintenance and labour? Yes, and for the repayment of capital.
1455. Do you anticipate any large import trade? I think there will be a large import trade. I think that different industrial concerns will be established in the district.
1456. Would the smelting works use this port? Yes; and I think that other smelting works will be established.
1457. I understand that you are of opinion that the attempt to make Lake Illawarra a harbour for large vessels will not be successful? I think so. The scheme will never benefit the coal trade, and I said so when the Lake Illawarra people approached me first some years ago.
1458. If they fail to make a good port for the shipment of coal, they cannot make a good port for the unloading of ore? That is so. Vessels bringing ore would draw 20 or 23 feet of water. What is the use of talking about 15 feet.
1459. Then the smelting works are bound to use Port Kembla? Undoubtedly. It will not pay them to expend an enormous sum of money in improving Lake Illawarra.
1460. In what part of Illawarra do the large iron deposits exist? In Mr. Mitchell's brain, I think.
1461. You think there is no possibility of the iron industry springing up in Illawarra? I have not seen any iron deposits of moment or any limestone in the district. Besides, I do not think you could make the industry pay without a protective duty. I do not anticipate anything from the iron industry there; but I anticipate trade from other industrial concerns. Our industries have all to be founded yet.
1462. Do you think that the establishment of smelting works at Lake Illawarra will lead to the establishment of other similar works there. Yes; I think that they will act as the focus of attraction.
1463. Therefore, the Committee are justified in believing that the carrying out of the proposed scheme will attract a large trade to the place besides the coal trade? Yes. Undoubtedly.

THURSDAY, 26 NOVEMBER, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHRY.	HENRY CLARKE, Esq.
The Hon. JAMES HOSKINS.	CHARLES ALFRED LEE, Esq.
The Hon. CHARLES JAMES ROBERTS, C.M.G.	JOHN LIONEL FEGAN, Esq.
The Hon. WILLIAM JOSEPH TRICKETT.	THOMAS HENRY HASSALL, Esq.
The Hon. DANIEL O'CONNOR.	GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

Dr. James Robert Millar Robertson, Engineer to the Bellambi, South Bulli, Coalcliff, and Mount Kembla Collieries, sworn, and further examined:—

- Dr. J. R. M. Robertson.
26 Nov., 1896.
1464. *Mr. Fegan.*] I understand that you consider the northern breakwater unnecessary, and that you think that without it the harbour would be much safer, and much easier to enter and to leave? Yes. From the first time that I directed my attention to Port Kembla as a possible deep-water harbour for the south coast, I have had always in mind the total absence of a port of refuge upon that part of the coast, and, in fact, on the whole coast of New South Wales. I could see that by a small expenditure in the construction of an eastern breakwater, not only would a port of shipment be obtained, but you would also get a port of refuge. In my opinion, the construction of the northern breakwater would destroy the place as a harbour of refuge, for several reasons. A vessel ought to be able to enter a harbour of refuge under

under any conceivable circumstances, and to make safe anchorage within it. I can scarcely conceive it possible, however, that a disabled vessel could make a safe entrance into Port Kembla if there were two breakwaters. Her condition would probably not allow her to steer such a fine course as would be necessary in order to get through the opening. Then, too, the two islands lying to the east would increase the difficulty of entering. Again, supposing a vessel did get in there—that is, a sailing ship—she would not be able to leave without assistance, supposing the northern breakwater were constructed. With only one breakwater the place would be an ideal harbour of refuge. Personally, and I daresay I speak for others connected with the coal trade of Illawarra, I think that all the advantages required would be obtained by the construction of the proposed eastern breakwater. We would not like to call upon the Government to expend money upon the construction of a northern breakwater until the necessity for that work actually arises.

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1465. But you think that the proposed eastern breakwater should be turned a little to the north-west? Yes; I think that that would be an advantage, though I do not for a moment presume to put my opinion in opposition to that of Mr. Darley. I should, however, like his attention to be directed to the circumstance that if the breakwater were swerved a little to the north-west, it would take in a shallow patch of rock that might otherwise be a menace to the large vessels coming to the port, and would give stiller water alongside the breakwater.

1466. And the only wharfs required should be made along the breakwater? Yes. The present jetties could easily ship 1,500,000 tons of coal a year; and by utilising the breakwater to provide wharfage, we could deal with several million tons at the place annually.

1467. Mr. Byrnes yesterday spoke about the people in the Illawarra district having agreed to leave the decision of this matter to the Government? Those interested in the formation of a deep-water harbour in Illawarra met once at Bellambi, once at Port Kembla, and a third time, at the invitation of the chairman and members of the Wollongong Harbour Trust, at Wollongong. At the Wollongong meeting, after an opportunity had been given for hearing the views for and against the different proposals, it was mutually and satisfactorily arranged that we should advance none of our own views, but join in a deputation to the Minister in Sydney to ask him to undertake the necessary surveys, we agreeing to abide by the result of the surveys. I am very sorry that some of the parties to that agreement are not honorably carrying it out.

1468. Yesterday you said that no vessel lost their anchors at Port Kembla;—have any lost their anchors at Bellambi? Certainly. They cannot avoid doing so. The bottom there is very irregular and rocky, and many anchors have been lost.

1469. There may be only a cover of rock? No, it is solid sandstone.

1470. Mr. Darley referred to the bottom at Bellambi as sandy? Well, our divers report that they have great difficulty in travelling over the bottom there, because of the large ridges of rock. Sometimes they drop suddenly down into holes 6 or 7 feet deep.

1471. Why do you employ divers there? To look after the piles of the jetties, and to see to the moorings.

1472. How deep is the clay at Port Kembla? I have no idea of the depth of the clay further than this: that the Southern Coal Company drove the piles of their jetty from 15 to 18 feet into sand and clay without touching bottom. There is no foul ground there at all. The bottom is perfectly smooth without any rock.

1473. You chiefly represent the Mount Kembla Company? No, I am equally a representative of the South Bulli, Bellambi, and Coalcliff collieries.

1474. I notice that the output of Mount Kembla has been gradually decreasing;—in 1892, it was 177,269 tons; in 1893, 156,992 tons; and in 1894, 127,155 tons? The reason of that is that, early in 1893, an association of the southern coal-owners was formed, and an arrangement came to whereby each colliery got a certain percentage. Of course, in arranging a vend someone must give way, and it so happened that for the first two or three years the Mount Kembla colliery suffered more than some of the rest. Then, too, the severe depression of 1893 affected Mount Kembla more than some of the other collieries. Mount Kembla, however, is putting out more to-day, by a great deal, than it ever did before.

1475. That is for the working days of the colliery? Yes;—we work fewer days now than we did in 1892.

1476. Have you anything to fear from the Japanese coal trade? We suffer from that competition.

1477. Is it because of the cheapness of that coal? Yes; simply because of its cheapness. The Japanese coal is a very free burning coal; but it has not the calorific power of the Illawarra coal, and so to some extent the Illawarra coal is preferred, notwithstanding the higher price. On the other hand, the Japanese are able to send their coal away at simply nominal rates compared with the low rates that we have to pay. It is further from the Japanese collieries to Singapore than from Australia to Singapore; but their freight is less than 4s. a ton, while ours is as much as 9s. and 9s. 6d. a ton. The reason for this is that very large steamers go out to China and Japan, and they take coal as a return cargo at nominal freights.

1478. Then, too, you cannot send your coal away in sailing ships? No. For that reason we are practically precluded from troubling about the trade. In the old times, before the Japanese coal came into the market, we very often got sailing vessels at practically nominal rates.

1479. What is the difference between the price of your coal per ton and the price of the Japanese coal? According to the latest advices, the price of the Japanese coal at Singapore was about 12s. or 12s. 3d., and of Australian coal, 14s. and 14s. 6d. a ton.

1480. It is not the cost of getting the coal to the pit's mouth that makes your coal dearer, but the freight? Yes. If by any means we could reduce the price of our coal at Singapore, we would capture the trade. According to the best information we get, the Japanese are unlikely to sell their product for less money than they sell it for at present.

1481. *Mr. Hoskins.*] Their coal is inferior to the Illawarra coal? Rather inferior, and to that extent we get the preference. Of course, for some purposes consumers in Singapore would give as much for Japanese coal as for our coal; but for steaming purposes, the Japanese coal is distinctly inferior to our coal. For smelting purposes, they would give as much for Japanese coal as for our coal.

1482. *Mr. Fegan.*] If you could load large sailing vessels, you would, in all probability, be able to capture that trade? I think so, considering that the Japanese coal is unlikely to be sold more cheaply than it is sold at the present time. Any alteration in the value of the dollar would be in our favour. In my time, in the east the dollar was worth 4s. 2d.; now it is worth only 2s. 2d. or 2s. 3d.

1483.

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1483. It is only the freight that keeps you from competing with the Japanese coal? Yes. We have two freights at the present time. We have the freight up to Sydney, which we want to avoid, and the freight from Sydney to the port of destination, which, of course, we shall still have to pay. Probably, at the same price our coal would command the market.

1484. How long do you think your best seam will last, supposing the present yearly output is trebled? Sixty or seventy years.

1485. And then you will have to face Japan? I know sufficient of Japan to know that our difficulties will be theirs long before that. They will very soon find that they cannot keep up their present high pressure; in fact, I have seen some reports to the effect that the Japanese Government are very much alarmed at the present moment because they cannot get a decided and decisive opinion as to the amount of available coal. If we had one-third of their difficulties we could not work our coal.

1486. What are those difficulties? Their coal is steep, there is an enormous quantity of water in the mines, and the seams are very faulty. Of course they surmount these difficulties, because the wages they pay are practically nominal; but when they have to cut through these faults, and go in a long way from the pit's mouth, they will find it necessary to raise the price of their coal.

1487. They have an immense extent of coal land? Yes; but it is very much broken up. A coal field is of value, not so much by reason of its extent, as by reason of the accessibility of the coal. In Japan, they are developing their industries at such a prodigious pace that a great part of their output is consumed locally.

1488. You do not know what their yearly consumption is? No; but it is increasing month by month.

1489. Do not geologists suppose that there are several seams below the two seams which they are at present working in Japan? There is a large number of seams there, and I do not know that there are more than two collieries working the same seam. Some of the principal collieries are practically done, so far as an export trade is concerned. Takashima, the largest coal mine in Japan, has virtually been stopped from exporting, because the Government have ordained that the whole of the coal shall be kept for public purposes, and I believe the same edict affects two other of their collieries.

1490. That being so, this Colony has nothing to fear from the Japanese coal trade? I do not know that. I think that in the long run we shall come out on top; but when a man is hanging by the neck, two or three years is a long time to hang. Besides, I am not oblivious to the fact that there are very large coal-fields in some of the East India islands. I had the duty of investigating them at one time. In Tonquin there are large collieries, the coal from which competes with ours at Singapore; but the conditions of the French settlement are such that we are able to compete successfully.

1491. Is it not a fact that the miners of this country hew more coal per man than any other miners in the world? Yes, and there is a reason for that. Probably the collieries here are better equipped than those in any other part of the world, and the conditions under which the coal is found are better. We have beautiful roofs, very little water, very few faults, and very few difficulties to contend with. Besides that we have excellent miners. I should be very sorry indeed to hear the miners of Australia compared with those of Japan.

1492. There is less expense incurred in the production of coal here than in any other country? I do not know that I should quite say that. There ought to be less expense, if we were put under exactly the same conditions as the people of other countries. We pay much more for labour than is paid elsewhere; but if we were put under exactly the same conditions as, say, Germany, France, or Great Britain, we could produce coal at less cost than any other country in the world. Some of our operations are done at less cost than similar operations in other parts of the world, simply because of our favourable surroundings. I think that we require a little encouragement. We have just arrived at a point when every one's hand is against us, and unless we get some encouragement, I do not see how we can hold up our heads against collieries in other parts of the world, which are given great encouragement.

1493. You have been in the coal trade for some years? All my life, and my forefathers before me.

1494. You are manager and owner of some mines? No.

1495. A part owner? No; I do not hold a share in any mine.

1496. You advise people to buy or to sell mining properties? I have advised people to buy, and I have advised a large number of people to sell such properties.

1497. You say that we are not on equal terms with collieries in other parts of the world, and yet in face of that you advise people to buy large coal estates? I said that I had advised people to buy; I did not say that I was advising people to buy now, although if I were asked I might say that under certain conditions this would probably be a favourable time to buy.

1498. Large coal properties have been bought because you see a great future in store for us? Well, we are not going to be wiped off the roll of nations just yet.

1499. You say that there are six seams beneath the seam which you are at present working in Illawarra? Yes.

1500. What is the thickness of those seams? They are of various thicknesses. The lower seams in Illawarra will come in to fill the blanks when the top seam becomes scarcer and more difficult to work. I hope that long before there is any scarcity of top seam coal, industrial works will be established here, which will take a large surplus from the lower seams. The lower coal is very well adapted for manufacturing purposes; but for export it cannot compete against the upper coal. The thickness of the lower seams varies in every colliery; but over the whole district it varies from about 4 feet to 6 feet 7 inches. I discard altogether the seam which is spoken of as being 30 feet thick, because there is only from 4 feet 9 inches to 5 feet 6 inches of coal that could be worked, and there is no use in deluding the public into the supposition that the seam is 30 feet thick. It is a soft friable bituminous coal—not a steam coal, and it would be admirably adapted for manufacturing purposes.

1501. It is much inferior to the coal that is now being worked? Yes; for steam purposes. The first seam is called the 4-foot seam, and lies from 30 to 50 feet below the upper seam, varying in thickness from 2 feet 9 inches to 4 feet 3 inches. It is a very fair manufacturing coal; but it is not suitable for export, because it would not stand the rolling of a vessel and the severe handling it would get in trimming and transhipment. The next seam is what is known as the 30-foot seam. In that seam there are about 5 feet which could be worked. The rest of the seam is composed of alternate bands of stone and clay. Below that there are various other seams, and amongst them occurs the Hartley shale. With regard to the lower seams I can give very little definite information. They have been opened up at Mount Kembla,

but

but beyond saying that they contain fair second rate manufacturing coal, I can give no information regarding them.

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1502. Do you know anything about the Greta series? The position of the Greta series has never been correlated to a given horizon. I could not go into the witness box and say that that coal was 2,000 feet or 3,000 feet below the Newcastle series, because there has never been a bore put down intercepting the Greta series at any certain point. That coal lies a long way below the Newcastle coal, but how far, no man can tell.

1503. Do you not think that it would be wise to test it? I think it would be very wise to test it. The only bore that may have intercepted that seam is the bore put down at Dempsey Island; but no man could really identify the Greta coal there. They may have been rather perfunctory in their manner of boring. They did not know what they were looking for, and possibly they may have passed through it.

1504. How many sailing vessels were loaded at Port Kembla and at Bellambi last year? No ocean-going sailing vessels have ever been loaded at either place; but we load small schooners sometimes, especially when we have had a steamer at hand ready to tow them out.

1505. You said yesterday that steamers could go into Port Kembla in all kinds of weathers? That being so, why do you want a breakwater? Because we want to be protected from the ground swell. Vessels cannot load when there is a heavy swell. The large vessels lying alongside the jetties probably range backwards and forwards 10 or 15 feet, when to an ordinary observer the sea is absolutely calm. In heavy weather we cannot attempt to load a large steamer, because the direct impact of the wind and the waves might cause her to destroy our jetties.

1506. Is it not a fact that during the last coal strike at Newcastle several vessels went to Port Kembla and had to leave there before they could load? That continually happens. I do not know that any vessel left Port Kembla; but vessels have to lie off for a day or two until the weather moderates. A few weeks ago a very large steamer had to lie off for two or three days until the range moderated, so that we could safely take her alongside the jetty.

1507. You lose a considerable amount of trade in not being able to load regularly? Not only that, but we lose a great deal of time at the mine. There is plenty of work for the men to do; but they cannot do it, because the waggons are all full, and waiting to be unloaded.

1508. There is a loss to the owner of the vessel: to the owner of the coal-mine; to the wage-earners connected with the mine; and to everybody concerned? Yes. Of course when a vessel is kept waiting for three or four days she tries to avoid the place in future.

1509. Do you think the Government should resume the private railways and jetties at Port Kembla, or would you leave the jetties in the hands of private companies? Personally, unless I had an assurance that the maximum rate would be only so much, I should be disposed to allow the private owners to provide traction, binding those owners to very moderate charges. To charge the present Government rates of haulage would destroy the trade. The whole object of the Commissioners seems to be to take the coal away from its natural output to bring it to Sydney.

1510. What about the control of the jetties? That is a different matter. I think the Government should resume the jetties, and charge rates according to the accommodation given. A little more might be charged for foreign-going vessels than for small and insignificant coasters, because small vessels do not cost anything like so much for moorings, or do so much damage as large vessels. They lie 10 or 12 feet off the jetties: but big foreign-going vessels, in order to get the ends of the shoots over their hatchways, have to go in close against the piles, and with any movement of the sea would draw down the jetties.

1511. If the Government resumed the jetties at Port Kembla, should not they also resume the jetties at Bellambi, so that all the coal would have to come to Port Kembla? I do not know that there would be any objection to that, provided that we had proper assurances that reasonable rates would be charged. The collieries within a certain radius should be charged the same rates, as is done at Newcastle. I know that private owners would draw the coal to the port of shipment for much less than the Government at present charge.

1512. I understand that the Government charge only $\frac{1}{4}$ d. a ton for the coal going over the Mount Keira line? Yes; but the Mount Keira Company supplies the haulage. I think that is quite enough when the Government only provide the roadway and keep it in excessively bad repair.

1513. Are you surprised to hear that that rate does not pay the Government? I have heard the Commissioners say that the Newcastle trade does not pay them; but I would be only too happy to organise a syndicate to work that trade at the present rate. If the Newcastle coal trade does not pay the Commissioners, there is something very much out of joint. I simply do not believe the statement.

1514. Do you not think that the area of Bellambi Bay is sufficient for the trade of the next fifty or 100 years? I do not think that Bellambi is the right place for a coal port. It is not in the right position. I hope that there will be no second attempt to spend money uselessly in Illawarra in trying to make a harbour at the wrong place. We have had quite enough of that.

1515. Is the land surrounding Bellambi Government or private property? It is private property.

1516. I understand that there is a 100 feet reservation? I do not know anything about that.

1517. There is no reservation at Port Kembla;—must we not take into consideration the probable cost of land resumption? I do not think that should weigh at all. It would be no burden to the country if resumed on a rental basis.

1518. What do you think is the value of the land at Port Kembla? I should think that the land at both places was about the same value. I do not think that any of the land at Port Kembla is worth more than £7 or £8 an acre at present prices. I would not give more for it. It is poor land.

1519. Were your views ever taken in regard to the Lake Illawarra scheme by the Select Committee which investigated it? No. Some one representing the promoters—I think the engineer and the Melbourne syndicate were very anxious that I should inform them as to what quantity of trade we would give them, and my answer was that I could not see any possibility of our giving them any trade; that we had a very much superior port of our own; and that under no combination of circumstances would we ever send a ton of coal to Lake Illawarra. The opinion that I then expressed is my opinion now. Lake Illawarra as a harbour would be of no use to our coal trade.

1520. Do you think that the Government scheme should remain in abeyance until the time within which the Lake Illawarra Company have to carry out their works expires? No. I think that it is simply trifling with a great industry to think of Lake Illawarra. The whole history of the Lake Illawarra scheme is sufficient to justify me in saying that. They cannot do anything for want of money. They have raised

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no money, except to pay for a railway, on debentures secured over the land, and, according to the latest advices that I have received from London, they are very unlikely to raise any.

1521. *Mr. Hassall.*] What do you think would be the probable increased output of Port Kembla if the proposed breakwater were made? The output would increase to the extent of upwards of 200,000 tons a year at least in addition to what it is at present.

1522. For how many years will the coal supply of the district last? Practically 200 or 300 years, because as one seam is exhausted another will take its place. The upper seam will probably last from eighty to 100 years, with an output of 1,500,000 tons a year. Of course it may last very much longer if a large part of the National Park district is worked.

1523. The Corrimal, Mount Pleasant, Osborne-Wallsend, and Mount Kembla Collieries all ship at Port Kembla? Yes.

1524. Does South Clifton? Occasionally. It belongs to a group of collieries which will always send a large part of their coal to Sydney to supply the railways and the inland demand. Besides South Clifton is a small holding, a small freehold.

1525. What is the output of the various collieries I have named? Corrimal about 120,000 tons, Mount Pleasant about 90,000 tons, Osborne-Wallsend about the same, and Mount Kembla, nearly 200,000 tons. About 300,000 tons of coal will be shipped at Port Kembla this year.

1526. In the event of the Government spending money in the construction of the proposed breakwater, would the coal companies be willing to pay the same charges as are paid at Newcastle? Most assuredly.

1527. Irrespective of the resumption of the jetties? No; the Newcastle people do not provide their own jetties.

1528. Would it be absolutely necessary for the Government to go to the expense of resuming the existing jetties? I think the Government will be obliged to resume the existing jetties. They will have to provide accommodation for sailing ships.

1529. What is there to prevent them from having a jetty of their own, besides the private jetties? Nothing at all; but there would then be competition between the private jetties and the Government jetties, and the Government would lose, because private people can conduct their operations with less expense than the Government can. The resumption of the jetties would give a good return from the start, because we are doing an absolute and certain trade, and they would be resumed on a revenue basis.

1530. You think that as a speculation it would be to the advantage of the Government to resume the jetties? Yes; if we have an assurance that fair traction rates will be charged, I say by all means put these works into the hands of the Government.

1531. You think the Government should resume the railways, jetties, and everything? I think myself that the resumption of the railways might be allowed to remain in abeyance, it being provided that the owners of the railways should arrange for the haulage of all coal at a very small charge per ton. I think that that would save the shippers considerably and enable coal to be shipped at lower rates.

1532. The less the expense of this harbour the lower will be the necessary charges? Certainly. I think it is not necessary to resume the railways; but, in any case, there should be a beach railway to connect Port Kembla with Wollongong. I am very doubtful whether the Commissioners would give us a rate anything like as low as the present cost of our haulage. I am sure that if the Government allowed the colliery proprietors to make a railway from Port Kembla to Wollongong, they could run down the coal for one-fifth of what the Commissioners would charge.

1533. Would it not then be well to leave the jetties in private hands? That would be quite feasible; but I think that Parliament would be inclined to resume the jetties. These jetties belong to particular collieries, but I presume that if the breakwater were made other colliery proprietors should have an equal right to use them on payment of certain charges.

1534. You think that otherwise the present owners of the jetties would place restrictions in the way of other collieries using them? You would have to make some provision allowing other collieries to use the jetties upon payment of fixed and moderate charges.

1535. If you have a breakwater, I suppose a good holding ground is not absolutely necessary for a port? Yes; it is very necessary. If vessels knew that they were liable to lose their anchors they would not care to use the port, and it would be no harbour of refuge.

1536. How far are you from Jervis Bay? Well, Jervis Bay cannot be considered a harbour of refuge any more than Sydney harbour is. Vessels cannot sail out of the bay without assistance, and on several occasions we have been obliged to send down steam colliers to tow out vessels which have taken refuge there. With an ideal harbour of refuge, you must be able to go in and come out unaided.

1537. Could vessels do that at Port Kembla? Yes, with almost any wind, because there is so much sea-room.

1538. Is not the entrance to Jervis Bay pretty good? It is moderately wide; but vessels cannot always get out, and they cannot always get in.

1539. Would Lake Illawarra make a harbour of refuge? Never.

1540. Would your company ever use Lake Illawarra if a harbour were made there? No; we have a much better harbour at Port Kembla as it is at present.

1541. In the event of Bellambi being made a harbour would it be used by your colliery? No; it would not be used by the Mount Kembla, or by any of the southern collieries unless special traction rates were made.

1542. Would it be used by Corrimal? Yes, under certain circumstances; but not so readily as Port Kembla.

1543. You think that Corrimal, Mount Pleasant, Osborne-Wallsend, and Mount Kembla would certainly ship at Port Kembla if a safe harbour were made there? I am certain of it. Some of these collieries, if a harbour were made at Port Kembla, would double their output. It would be an especial advantage to Corrimal and Mount Keira and Mount Pleasant, because they would then have two outlets for their coal—Wollongong for small vessels, and Port Kembla for large vessels.

1544. Would these collieries be willing to pay a shipping charge of 4d. per ton? I am certain of it.

1545. Fourpence a ton would require an export trade of 564,000 tons to give 4 per cent. upon an outlay of £235,000? Yes; but I do not think the outlay should be as large as that. You do not want cranes or elaborate wharfs.

1546. *Mr. Hoskins.*] You would require cranes for the discharge of inward cargo? Yes; but not expensive cranes, such as those required to swing heavy coal-waggons.

1547.

1547. *Mr. Roberts.*] An important witness who brought forward the claims of Bellambi laid great stress upon the fact that that place was more centrally situated than Port Kembla. Do you agree with that opinion? No. Ninety per cent. of the available coal of Illawarra is south of Bellambi. Seventy per cent. of the coal is within $7\frac{1}{2}$ miles of Port Kembla, while only 40 per cent. of it is within the same distance of Bellambi. Mr. Vickery, the owner of the South Bulli mine, the largest, and practically the only colliery near Bellambi, is in favour of the Port Kembla scheme, and his opinion is of more value than that of an outsider. Bellambi Colliery is practically done—it will be finished in a few months.

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1548. Are not most of the mines that are working nearer to Bellambi than to Port Kembla? No. The two principal mines in the district—Mount Pleasant and Mount Keira—are nearer to Port Kembla, and they would be very much nearer if there were a direct railway from Wollongong to Port Kembla. Such a railway should be made at comparatively little expense. The mines north of Bellambi are practically done.

1549. The witness to whom I refer said that Bellambi was more sheltered naturally than is Port Kembla? Bellambi, like Wollongong, is exposed to the full force of the south-east gales, while Port Kembla is $2\frac{1}{2}$ miles inside them. His statement is contrary to fact.

1550. Do I understand that Bellambi is more exposed to south-easterly weather than Port Kembla? Yes. It is in full range of the south-easterly seas, while Port Kembla is protected by the Five Islands. We can continue loading at Port Kembla in a south-easterly gale when the danger signal is up at Wollongong. We have no heavy seas at Five Islands Point.

1551. You do not think that there is any place along the coast to compete with Port Kembla? No. At Wollongong the sea strikes the beach and comes back into the harbour. Some time ago, we had to scuttle a vessel there, because a sudden storm came up at low water, when she could not get out, and drove her about the harbour to such an extent that she ran the risk of being destroyed. Long before the Government determined on the last occasion to improve Wollongong Harbour, I went to Wollongong with the intention of advising the people there not to pitch good money after bad; but to ask the Government to connect them by a beach railway with Port Kembla. If money is expended in improving Bellambi, it will not be of any advantage to the largest coal-mines in the district, and will utterly ruin the vested interests of Wollongong. The improvement of Port Kembla, however, would not do that; it would be the deep-water port of Wollongong.

1552. You want to obtain a sailing-ship trade? Yes, and to ensure the regular and undisturbed loading of the largest steamers.

1553. Have you known cases in which large ocean-going steamers have had to leave your jetty, because of the approach of a gale? On several occasions steamers have had to leave the jetty and lie out in the offing until the gale abated.

1554. I suppose that tends to retard the development of the trade? Yes. Nearly all that trade is arranged for in London, and if the steamers are delayed the owners shun the port afterwards.

1555. Do you think that a large import trade would spring up upon the construction of the eastern breakwater? Yes; it would give an assurance to persons wanting to establish industries in the district.

1556. If there were a large import trade, would not the northern breakwater be necessary? So far as we can see, and so far as we are advised by experienced ship-masters, the eastern breakwater would be sufficient; but if future trade demanded the construction of the northern breakwater, the breakwater could be made. With all due regard to Mr. Darley's opinion—and we are bound to show great respect for his views—I do not think the northern breakwater is required, especially if the eastern breakwater is swerved a little to the north-west. There is never any bad weather from the north; during westerly and north-westerly weather the bay is quite calm; and it is only very seldom that we get a black north-easter.

1557. But if the direction of the northern breakwater were modified as you suggest, would not the harbour area be contracted largely? It would only make a difference of a few acres, which would be comparatively nothing, considering the large extent of the bay.

1558. *Mr. O'Connor.*] Is there any difference in the quality of the coal obtained from the various collieries? There is practically no difference in the quality of the coal taken from the upper seam throughout Illawarra. At South Bulli and at Old Bulli there is a splendid quality of coal; but it is more easily fractured than coal from the southern mines, and is therefore less suitable for over-sea transit.

1559. I understood you to say that if the proposed scheme were carried out it would be a great advantage to the surrounding collieries; but that that would not be the case if a breakwater were made elsewhere? Yes.

1560. Your opinion is entirely a disinterested one? Yes. I have not a shilling invested in any mine in Australia. As a matter of fact, I am more interested in Bellambi than in Port Kembla, because I am engineer to three collieries in the northern part of the district, and for only one in the south.

1561. You take the view that this is a national work, and you regard it as a hideous piece of lunacy to talk about improving Wollongong? Wollongong is very centrally situated, but you could never make it a harbour equal to Port Kembla. Wollongong should have been connected with Port Kembla from the first, and I daresay there are very few old residents there who would not say amen to that. I am sure they have seen the folly of spending money on the swimming bath, which is virtually all they have produced there.

1562. *Mr. Black.*] Are you aware that at the time it was proposed to construct Wollongong Harbour no objection was raised by the residents of the locality? I was not in the Colony when the Wollongong Harbour was made. It is only sixteen years since I came here.

1563. There has been a number of improvements carried out in that time? I do not think so. I think that the late expenditure has left matters worse than they were. That is through no fault of the Harbour Trustees; but because of monetary difficulties they could not carry out their scheme.

1564. You have had no opportunity to try, in the way of adverse criticism, to prevent the waste of public money there? Before the last expenditure took place at Wollongong, I went there with the intention of advising the Wollongong people to swallow their local sentiment, and to recognise that there was a good port, within a few miles of the place, to which they could be connected by railway along the beach.

1565. You have said that a number of gentlemen interested in the southern coal trade have agreed not to advance their views in regard to this matter;—do you not think it was unwise for them to decide that they would deprive the Government of valuable local experience? No; we are giving you that experience.

1566. But if you are holding anything in reserve? We hold nothing in reserve. We simply came to the conclusion to abide by whatever scheme the Government favoured. The Government favour Port Kembla, and it so happens that Port Kembla is reckoned by us as the best place for a harbour.

1567.

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1567. It would be rather awkward if, in the case of this scheme, as in the case of Wollongong, criticism were deferred until it had proved itself a failure? I think all are agreed that Port Kembla is the best place for a harbour.
1568. But you think that some of the arrangements which the Government engineer proposes to make should be dispensed with? Yes; modified and probably cheapened.
1569. Will not a larger amount of money be required to construct wharfs and cranes for the landing of cargo? I do not think so. Small T-headed jetties, run out from the breakwaters, would serve the purpose.
1570. If Port Kembla became, not only a place for the shipment of coal, but a place of large importation, would there not spring up in its neighbourhood a great commercial centre, or port of distribution? Yes, from Wollongong.
1571. Do you think that Wollongong would distribute the goods coming to Port Kembla? The goods required for particular works would go direct to those works; but goods required by the general community would go to Wollongong for distribution.
1572. Then you do not think it likely that a large township would spring up in the neighbourhood of Port Kembla? I do not anticipate any such thing, though I think that land should be resumed for the establishment of manufactories, and that a beach railway should be made to connect Port Kembla with Wollongong. I think that Wollongong would still remain the commercial centre. Wollongong would always benefit from this work. For one thing the collieries near Wollongong instead of working intermittently as they do now would work constantly.
1573. You do not think it necessary for the Government to resume 10,000 acres of land in the vicinity of Port Kembla for the purpose of establishing a township there? No, I should think 500 or 1,000 acres would be sufficient.
1574. I suppose the value of that land is given to it by its position? Yes.
1575. *Mr. Humphrey.*] You spoke about 70 per cent. of the coal of Illawarra being within $7\frac{1}{2}$ miles of Port Kembla. Will you name the collieries within that radius? I think it would be rather invidious to do so, but by the aid of a pair of compasses you could ascertain which they are. Such a radius would approach Corrimal and would include Mount Pleasant, Mt. Keira, and Mount Kembla. These collieries contain the great bulk of the coal.
1576. You give that opinion as the result of close observation? Certainly, from personal knowledge.
1577. You are quite clear that Port Kembla is convenient for the shipment of 70 per cent. of the available coal of Illawarra? Yes.
1578. You are speaking of the great output and the coal which may be obtained? I am speaking of the whole of the available coal from the upper seam.
1579. And only 43 per cent. of the coal is equally convenient to Bellambi? Yes.
1580. You spoke about large deposits of coal existing upon Crown lands? The Mount Kembla Company, in addition to their freehold, lease a large quantity of Crown land to the north, probably 2,500 acres. Mount Keira leases probably 1,000 acres of Crown land; Mount Pleasant about 1,300 acres; and South Bulli about 2,000 acres. In addition to that there is a large amount of coal in Crown lands not at present leased.
1581. What is the total acreage of Crown land to which you refer? I cannot tell you from memory.
1582. What royalty is paid for the coal obtained from this land? 6d. per ton.
1583. How much has been paid to the Crown up to the present time? Not very much, because the collieries have not got through their freeholds yet. In the future the coal will come almost entirely from the Government land.
1584. Can you say how long it will be before the greater part of the output is obtained from Government land? A good deal of coal is obtained from Government land at present, and the quantity is increasing every year. South Bulli, Mount Kembla, Mount Keira, and Mount Pleasant Collieries will all be into Crown land within a couple of years.
1585. Therefore the Crown will receive a large and increasing revenue? Yes. The Crown is the principal landowner in Illawarra, and in making this harbour they are only providing a proper outlet for their tenants. Without a good outlet, we cannot afford to work a large quantity of coal, and, therefore, we will not pay so much in royalties.
1586. An increased output will mean, in addition to wharfage charges, so much royalty? Yes, undoubtedly. Before the proposed harbour can be made, all the collieries will be paying large sums to the Crown in the way of royalty.
1587. You have expressed the opinion that the coal connected with the smelting works at Lake Illawarra was suitable for smelting purposes, though not as valuable as the coal in the northern part of the district for export purposes? Yes.
1588. Have you seen their workings? Yes. I know the coal. I knew it long before the company took it up.
1589. Have you seen a seam of coal opened up not very long ago by Mr. Brown? Yes.
1590. Will you describe it? I would rather not. I think it is sufficient to say that while the coal is suitable for manufacturing purposes, it would not at present pay to export.
1591. Therefore, even if the Illawarra harbour scheme proved a success, there would not be much coal exported from these mines? None.
1592. How long is it since you inspected these seams? I saw them fifteen years ago, and I saw them about ten days ago.
1593. What is the present cost of maintaining your jetties and buoys at Port Kembla? We put everything down to the cost of the coal; but I should think that $\frac{1}{2}$ d. or 1d. a ton would amply cover the cost of renewals and repairs to the jetties.
1594. And the maintenance of the buoys? Yes. That is a small matter.
1595. How much of that would be saved by the construction of the proposed breakwater? The expenditure in maintenance and repairs would be practically the same as it is now.
1596. *Chairman.*] Do you know what it costs you to ship your coal when you have it upon the jetties? That is a variable quantity. We are sometimes stopped from working in bad weather, but, taking bad and good weather together, $\frac{1}{2}$ d. a ton would more than cover the expense. If we could work continuously, $\frac{1}{4}$ d. a ton would cover it.

1597. What does it cost per ton per mile to bring coal along your railway? $1\frac{1}{2}$ d. or $1\frac{3}{4}$ d. a ton for $7\frac{1}{2}$ miles. That is for railway traction. Say 2d. a ton for everything.
1598. Could all the rolling stock in the district use the present loading appliances in connection with the Port Kembla jetties? Yes; except that a slight alteration would have to be made to provide for the Mount Pleasant trucks. An expenditure of £200 would probably accommodate all the rolling stock.
1599. All the lines are of the same gauge? Yes; with the exception of the Mount Pleasant mine, which has a narrow gauge.

Dr. J. R. M.
Robertson.
26 Nov., 1896.

ADDENDA.

Sir,

40, Pitt-street, Sydney, 27 November, 1896.

In supplement of the evidence I gave relative to the necessity of a deepwater harbour for Illawarra collieries, and especially with reference to certain questions you addressed to me, referring to our costs for conveying and shipping coal from Mount Kembla mine, I have looked at our costs, and find that on an average of years the actual costs are as follows per ton:—

Length— $7\frac{1}{2}$ miles.	
Or, '722 of 1d.	1. Shipping coal—allowing for and including broken time $\frac{1}{2}$ d. and '93—say, $\frac{3}{4}$ d.
'550 „	2. Locomotives, stokers, drivers, cleaning..... $\frac{1}{2}$ d. and '24
'830 „	3. Fetting, including relaying rails and sleepers..... $\frac{3}{4}$ d. and '3
2'102d.	<u>2'04d.</u>
	Or, together, say 2 $\frac{1}{4}$ d.
	Repairs and renewals of jetty* $\frac{1}{2}$ d.
	Rails, sleepers, bridges, renewals 1d.
	<u>3$\frac{3}{4}$d. per ton.</u>

These apply to the whole line, half of which is to the west of the Government railway.

With an increased and steadier trade, the above cost would be proportionately decreased, as items 1 and 3 would be the same for double the output on which the costs are estimated.

Mr. Humphery required some figures relating to Government land and freehold. This I will be pleased to supply to you on Monday on my return from the south coast.

I have, &c.,

JAMES R. M. ROBERTSON.

The Secretary, Parliamentary Standing Committee on Public Works.

Sir,

40, Pitt-street, Sydney, 1 December, 1896.

In reply to the question put by Mr. Humphery regarding the relative area of Government and freehold land south of Bellambi Colliery, on which I based certain calculations, on examining my notes, I find that of the upper coal 8,240 acres are owned by Government, and 7,470 acres have been alienated and are freehold.

I confined my estimates to land which, from our prospecting and mining works, we feel certain contains the upper seam of workable thickness. I have indulged in no fanciful estimates, but have confined myself to actual and ascertained facts. A little further west than the present leaseholds an extensive tract of intrusive basalt (igneous rock), so far as we know, cuts off the coal seams, and this for a broad yet undefined space. The basalt that cuts off the coal in Bulli and Bellambi Collieries apparently connects with this main basaltic belt, which, further south, occupies the valley of the Cordeaux.

None of the existing collieries can reasonably be expected to win any coal west of this intrusive (igneous) basalt, even should the continuity of the coal be ascertained within a moderate distance of it to the west—which it has not. I, therefore, limit my calculations to known ground—proven by the works of existing collieries.

With respect to the second inquiry of Mr. Humphery's—In what proportions will the coal from these two classes of holdings be won?

In reply, I would point out that the collieries all opened on old grants or purchased freeholds, and have been since working on these freeholds. The whole of the collieries embraced in the before-named area have secured large leaseholds and have either commenced to work them, or are rapidly advancing their winning-out places towards or into these leaseholds, so that from this date an ever-increasing proportion of the whole of their outputs will be drawn from Government land, and will pay royalty at the rate of 6d. per ton. In one or two cases the whole output of the collieries will be drawn, within a few years, from Government leaseholds, their freeholds being almost exhausted.

Practically, the whole of the coal in the lower seams south of Mount Kembla is leased from Government. The same remark applies to the large area of coal land north of Coal Cliff estate, and on which the Metropolitan Colliery, on the extreme southern margin, has been opened.

You will, however, recollect that I only calculate on one-fifth of the coal opened up by the existing plant being shipped at the deepwater harbour proposed.

If I have not replied fully to the inquiries, or if I can be of further service to you in connection with the present inquiry, I shall be very pleased to hear from you.

I have, &c.,

JAMES R. M. ROBERTSON.

The Secretary, Parliamentary Standing Committee on Public Works.

Sir,

40, Pitt-street, Sydney, 3 December, 1896.

I am unable to obtain at the Lands Office any district plan of the collieries; but I have dotted on one of my own plans what I think may yet be found to be the course of the basaltic intrusion that exercises such a potent influence, not only on the coal-field a few miles west of the principal collieries, but has had such a disastrous effect upon the collieries north of South Bulli, and offshoots from which probably destroy much of the coal from south of Stanwell to the Metropolitan shafts.

It is only within recent years that the influence of these basalts have forced themselves on the attention of thoughtful managers, and it is only at collieries north of South Bulli (where it is joined by a large and broad intrusive dyke of igneous rock, coming from the S.E., and that completely cuts off Bellambi, Bulli, and Bulli Pass to the west) that its influence for evil has been felt. The collieries south of Bellambi are not likely in the present generation or the next to feel its effects. I had this steadily in view when I calculated the available areas and quantities.

To this is due the fact that only 41 per cent. of the available coal exists within a given radius of Bellambi—because here and to the north the coal is destroyed to the margins of the present workings, while within a similar radius of Port Kembla adits exist from which at least 70 per cent. of the available upper coal will be drawn.

I have, &c.,

JAMES R. M. ROBERTSON.

The Secretary, Parliamentary Standing Committee on Public Works.

FRIDAY,

FRIDAY, 27 NOVEMBER, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHREY	HENRY CLARKE, Esq.
The Hon. JAMES HOSKINS.	CHARLES ALFRED LEE, Esq.
The Hon. CHARLES JAMES ROBERTS, C.M.G.	JOHN LIONEL FEGAN, Esq.
The Hon. WILLIAM JOSEPH TRICKETT.	THOMAS HENRY HASSALL, Esq.
The Hon. DANIEL O'CONNOR.	GEORGE BLACK, Esq.
FRANCIS AUGUSTUS WRIGHT, Esq.	

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

Captain Francis Hixson, President of the Marine Board of New South Wales, sworn, and examined:—

Captain
F. Hixson.
27 Nov., 1896.

1600. *Mr. Lee.*] I presume that you have a good general knowledge of harbours along the coast? Yes.
1601. Are there any other places upon the south coast besides Port Kembla which could be taken into consideration in connection with the matter into which the Committee are now inquiring? There is a good indentation at Shell Harbour; but I do not think that it is as good a place for a harbour as Port Kembla.
1602. You think that, if it were deemed necessary to make a harbour on the south coast Port Kembla would be the best place at which to centre the trade. Yes.
1603. For what reasons? It is a fairly good natural harbour, and the construction of the proposed eastern breakwater would make it an excellent harbour.
1604. Do you think that the proposed breakwater would afford protection to sailing ships anchored within it in any weather? Certainly.
1605. How would vessels be affected by a north-easterly blow? The proposed breakwater would not give much protection from the north-east; but our north-easterly weather is scarcely ever bad enough to endanger the safety of a ship. I do not consider that there would be any danger to sailing ships anchored in Port Kembla if a breakwater were constructed as proposed.
1606. It would appear from the contour of the coast that the place is fairly well sheltered from the north, and partly from the north-east? Yes.
1607. Do you know whether there is any particular roll on the sea into Port Kembla? The ordinary ocean swell would sometimes roll round there under present conditions; but the proposed breakwater would stop it.
1608. It has been asserted that the Five Islands are a great protection to Port Kembla? They are to a certain extent. At the same time, the sea passes between the islands round the point, and rolls on to the coast in the vicinity of the Port occasionally.
1609. Have you noticed whether the inlets on the coast are liable to silt up after severe gales? I think they are; but the action of the sea has not always that tendency. Occasionally it clears them out. Thousands of tons of silt and sand are periodically being moved along the coast. This causes silting up in certain places at times, and then it is cleared away again.
1610. What do you think would be the effect upon Port Kembla in that respect if the proposed breakwater were constructed? There might be a little silting up at the head of the bay; but I do not think that the proposed breakwater would cause any great silting up.
1611. You do not wish to speak on this matter from an engineering point of view? No: I am speaking only in generalities, and from a cursory knowledge of the place.
1612. If the proposed breakwater were constructed, would sailing vessels be able to enter and to leave the port with safety? It would depend upon the size of the vessels. Small vessels certainly could; but large vessels would have some difficulty. There would be no difficulty about entering; but if large vessels had to work out they would find the water space contracted.
1613. If a very large over-sea traffic sprang up there, a tug service might be necessary? Certainly.
1614. How is our tug-service carried out? The Government subsidise the vessels, and the owners work them in their own interests as well as they can.
1615. Is there any charge made for the use of the tugs? Yes, a charge of 4d. a ton. The Government subsidise the service, and insist that only this charge shall be made to the vessels requiring towage.
1616. Has not the trade been recently reduced? No. Fresh tenders have lately been called for; but the conditions in regard to the charge remain unchanged.
1617. Does the Government retain a tug service at every port? At most of the ports. There are very few tugs on the South Coast. There is one at Wollongong.
1618. What about Newcastle? The tug service at Newcastle is self supporting. The policy of the Government is to help the tugs while the trade is insufficient to maintain them; but as soon as the service becomes self supporting the Government withdraw the subsidy.
1619. You are of opinion that if the proposed breakwater were carried out at Port Kembla we should have to have a tug service there? Yes, as the trade of the place increases.
1620. I suppose for towing out, for towing in, and for moving from one place to another within the harbour? Yes.
1621. The removing of vessels from one place to another is a very important matter? Yes. Of course, if there were no room alongside the jetties a vessel would have to lie off at anchor till a berth was ready.
1622. What would be the cost of a tug service there? The cost of the tug service varies all along the coast. At Wollongong we pay £300 or £400 a year. At the Richmond River we pay £1,770 a year. The Government call for tenders, and the tenderers understanding the trade, the risk, and so on, offer accordingly. The Government accept the lowest eligible tender.
1623. Have the Marine Board at any time considered the propriety of constructing a harbour on the South Coast? The Marine Board would scarcely consider that matter came within the scope of their functions. They have only to do with the trade when it has been created. The policy of the Government on a matter of this sort does not concern the Board officially.

1624.

1624. Would a pilot service be required at Port Kembla if the proposed breakwater were made? That would depend upon the growth of the trade. The pilot at Wollongong occasionally gives his services there, and the tug stationed at Wollongong occasionally goes there to help vessels.

Captain
F. Hixson.

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1625. Pilots are not so much required for steamships? No.

1626. If there were a large sailing-ship trade at Port Kembla, a pilot service would be absolutely necessary? Yes.

1627. Is the pilot service self-supporting? I can scarcely say that. An Act recently passed has greatly reduced the pilotage fees. As a rule the pilot service has been self-supporting. The Marine Board, instead of being a drag upon the country, has contributed considerable revenue to the Treasury.

1628. Are there any other contingent charges which would add to the cost of shipping coal from the proposed port? I can scarcely answer that question. At the present time the jetties and moorings, and all the paraphernalia necessary for maintaining the trade there are private property.

1629. If the Government make a harbour there, would not they have to see that a proper area of deep water was conserved, that proper moorings were laid down, that a tug service was supplied, a light-house erected, and all the requirements of the port met? Yes. These charges all grow as the trade of a place increases. The Marine Board would not advise the Government to incur expenditure in prospect. They would wait for the trade to grow, so that the necessity for this expenditure might be established.

1630. The inference is that a very large trade will spring up at this place? I think that is very probable.

1631. If a large trade did spring up all these necessaries would be required? Yes; and I am sure that the demand for them would be met by the Government and by the Marine Board. Some little time ago the agent for the P. and O. vessels came to me to know if I would advise him to use Port Kembla as a coaling-place for those vessels. My reply was, that Port Kembla might answer very well for five or six times, and then the steamers might not be able to get there because of the bad weather, and thus be unable to fulfil her engagement. If there were a breakwater at that place I should have no hesitation in telling him he could coal there with as great facility as at Sydney.

1632. What is the average depth of water that the general run of P. and O. boats would require? There would be quite sufficient water at Port Kembla for them. If there were much sea a greater depth would be required. With a breakwater the present depth would answer fairly well.

1633. I suppose a good deal depends upon the steadiness of a vessel when alongside a jetty? Yes. If there is what we call a "sand" a vessel must have 5 or 6 feet of water under her keel; but if the water is perfectly smooth she need only have 1 or 2 feet under her.

1634. Under any circumstances the P. and O. vessels would go to Port Kembla only for bunker coal? Yes, that is all.

1635. Have you given any attention the construction of the proposed breakwater? No; only a general glance at the plan.

1636. It has been asserted that there is no roll of the sea round Red Point into Port Kembla? I am pretty sure that whenever there is a heavy ground-swell it rolls round that point into Port Kembla; but not perhaps to the same extent that it would do at other places.

1637. If the proposed breakwater were constructed, would it be possible to utilise it for loading coal from short jetties inside it, and to unload at such jetties? Yes; it would be perfectly feasible to load and unload at such jetties.

1638. Would there be any danger of the sea rolling over the breakwater, and thus preventing unloading? I do not think that the sea would roll over the breakwater except in very heavy weather.

1639. I suppose if it did the breakwater could be raised? Yes; that could be done.

1640. Do you know the various jetties along the coast which are used for shipping coal? Yes.

1641. I suppose that steamers would continue to use those jetties in fine weather, even if the proposed work were carried out? Yes; if the mines are nearer to those jetties than they are to Port Kembla, as I believe many of them are.

1642. Are you of opinion that if the proposed breakwater were constructed the whole of the sailing-ship trade would be done at Port Kembla? Well, the sailing vessels that carry coal at the present time are very small, and they go to Wollongong. Some of them might go to Port Kembla.

1643. But if the proposed port were made larger vessels might be attracted from the over-sea trade? I have no doubt that that would be so.

1644. We may fairly assume that all those vessels would go to Port Kembla? I think it is a fair thing to assume. But if a ship brought her cargo to Sydney she would require a certain amount of "stiffening" to make her seaworthy, and the question would be, would it not be better for her to continue her loading in Sydney rather than go to Port Kembla to fill up.

1645. But possibly vessels may go straight to Port Kembla in ballast as they go to Newcastle? Yes, they might do that. Ships that come to Newcastle under those circumstances come from long distances.

1646. Do you care to offer any opinion as to the merits or demerits of Bellambi? I have already said that Port Kembla is the best place, so that I do not think that there is any occasion to go into the merits or demerits of Bellambi.

1647. Would Port Kembla offer any advantages as a harbour of refuge? Certainly. We have now to warn vessels from entering Wollongong and Kiama in bad weather. These vessels, if Port Kembla were a safe harbour, could go there.

1648. What sort of a harbour would Port Kembla make if the two breakwaters were carried out? It would make a perfect harbour.

1649. Would the construction of both breakwaters put anything in the way of ships entering the place in stormy weather? I do not think so. At the same time I do not think that the proposed northern breakwater is necessary. I think that the proposed eastern breakwater would be quite sufficient, and would make a reasonable port.

1650. If at any future time it was found to be necessary to make a closed harbour, the northern breakwater could then be constructed? Yes.

1651. Is the anchorage at Port Kembla good? I am not familiar enough with the place to say much about that; but from the little knowledge that I have I should say that it was sandy and good.

1652. Does it possess any advantages over Bellambi in that respect? Yes; Bellambi is not so sandy, and there are shoals of rock there.

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1653. Are there any remarks of a general character that you would like to offer in regard to the scheme before us? I think that I have said everything that I can state, beyond pointing out that Port Kembla is midway between Sydney and Jervis Bay, and therefore in a good position for a harbour of refuge.
1654. Has the question of defence any bearing upon this scheme? I do not think it has any special bearing upon it. No doubt if an enemy came out here, he would be in want of coal, and would endeavour to get it somehow.
1655. Unless Port Kembla were defended he would always get coal there? Well, I would be inclined to make the port harbour first, and fortify it afterwards if necessary.
1656. I suppose the guns at Wollongong would be of little use for the defence of Port Kembla? They would be of no use at all.
1657. Does it follow that if this harbour is made it will have to be defended? Perhaps. I think that there is more need to defend our coal stations than any other place along the coast.
1658. There is no coal shipped at Jervis Bay, so I presume that place would not come within the category of ports to be defended? There is no coal at Jervis Bay; but it is a place which would afford shelter to the enemy. I think we should have a defence force afloat to prevent the enemy getting coal and getting shelter. If we had a naval force, we could follow the enemy's ships; but guns on the coast are only able to defend certain positions.
1659. *Mr. Wright.*] There are no rocks at Port Kembla? I think not.
1660. Could a ship of 3,000 tons hold to her anchors there in a north-east gale, supposing the breakwater were constructed? I think so, in any ordinary gale.
1661. Can you tell us anything about the set of the current along the coast? The current is very fickle. Sometimes it sets strongly to the south, and sometimes you have no current at all. Occasionally, close in to the shore, you have a northerly current. When I have been surveying the coast I have found a northerly current in some places, and a southerly current in others.
1662. You find the northerly current close in to the shore? Yes. The southerly current is in the offing; but close in to the shore there is often a kind of eddy to the north.
1663. Would there be any necessity to have a pilot at Port Kembla, supposing the breakwater were made? Not immediately. If the trade of the port grew, and the need arose, no doubt a pilot would be sent there.
1664. Could not an ordinary master bring his ship to anchor within the port without a pilot? Yes; but a stranger might be disinclined to run the risk.
1665. Could an ordinary ship make an offing in a strong south-east breeze there? In a south-east breeze she could fetch off.
1666. So that there would not be a great necessity for a tug-boat? Even if there were no great necessity for a tug-boat, I think that one would be used to facilitate the work of the port.
1667. All that would be wanted in that case would be a small tug to move a vessel from her moorings? That is about all.
1668. *Chairman.*] The tug stationed at Wollongong could work both Wollongong and Port Kembla? Yes; for some time to come.
1669. *Mr. Wright.*] It would not be necessary to have a tug to tow vessels in from outside? I do not think so. It would depend upon the character of the man in charge of the ship. A bold navigator would come right in, while a timid man might remain 10 or 12 miles off. Of course, if a man had local knowledge he would probably come right in.
1670. You think that an ordinary sailing-ship could beat out of the port in any weather, and secure an offing? Not in any weather. Small vessels could go out with facility; but big ships are so unmanageable in narrow waters that they would find great difficulty in working out of this place. Many of the big ships at the present day do not work at all. Instead of "staying" as they used to do, they all "wear" now.
1671. Could a ship of 3,000 tons beat out? Yes, with a very smart crew.
1672. With a south-east wind? Yes.
1673. That is the prevailing wind? It is a frequent wind.
1674. It is a strong wind? Yes, we get strong winds from that direction sometimes.
1675. Do you think that a harbour of refuge is required along the coast? I think that a harbour of refuge is a very desirable thing to have; but, as a rule, harbours of refuge are made more of than is justifiable. No man should think of running for a harbour of refuge unless he were in difficulties.
1676. No man would think of running to a harbour of refuge if he was within 50 miles of Port Jackson, and had a good offing? No, I do not think so, unless he happened to be going away from Sydney.
1677. The proposed harbour might occasionally give safety to a ship, but it would not often be used as a harbour of refuge? Yes.
1678. There are long stretches in the English Channel where they have no harbours of refuge? Yes.
1679. Do you think that the proposed port would be a great convenience to the coal trade? Yes.
1680. Do you think it would be largely used by sailing vessels? I am not so sanguine about that. I think it is more a place for steamers. If ships brought a cargo to Sydney, and unloaded here, they would probably prefer to take in a new cargo at Sydney, instead of going down to Port Kembla.
1681. No ship master would take in 600 or 700 tons of ballast at Sydney, and then run down to Port Kembla for coal? No.
1682. But ships might go to Port Kembla in ballast from Victoria and Queensland? Yes, and I think that in bad weather the Melbourne steamers might get their coal there, and thus save the trip on to Newcastle.
1683. The southern coal is said to be better steaming coal than the Newcastle coal, and therefore is more sought after for that purpose? I believe that it is getting a very good character. It requires knowledge to use it to the best advantage; but when people understand it it is a very good coal.
1684. Can you give the Committee a rough estimate as to what it would cost to lay down moorings at Port Kembla? No. If we put down moorings there, they would have to be very heavy and very costly.
1685. What would a dozen separate moorings cost? Good moorings would cost about £500 or £600 each. You would want a big buoy, two very large anchors, and strong chains.
1686. *Mr. Fegan.*] You gave evidence before the Select Committee which inquired into the Lake Illawarra scheme. I believe you thought that Lake Illawarra would make a very good harbour? I said that I thought it was possible to make a harbour there as they proposed.

1687. Then do you think it would be right to carry on any work at Port Kembla until the time given to the Illawarra Corporation for the carrying out of their scheme has expired? I do not think that the improvement of Port Kembla will interfere with the Lake Illawarra scheme.

1688. Do you think that there would be sufficient trade for two harbours? I think that Lake Illawarra could do a trade with small vessels and Port Kembla would be used for larger vessels.

1689. You have taken soundings on various parts of the coast? Years ago I was engaged in surveying the coast; but I have never surveyed this part of the coast.

1690. You regard Bellambi as inferior to Port Kembla, because of its smaller area and its inferior holding-ground? I think that Port Kembla is naturally better sheltered than Bellambi, and I believe that its holding-ground is much better.

1691. You think there is no need to take the question of naval defence into consideration in dealing with this scheme? Scarcely, at the present time, though I said that I thought that if the enemy came to this coast his great need would be coal, and that a mobile force would be an advantage for purposes of defence. We have so many places where coal can be obtained, that I think we want vessels to follow any enemy, and defend any places that are attacked.

1692. But if a number of vessels were anchored at Port Kembla it would be necessary to protect them from the foe? Yes; but any guns that you placed at Port Kembla would only defend that particular place, whereas with a movable fleet you could protect any place that happened to be attacked or used by the enemy.

1693. You think that there is no place on the coast which will compare with Port Kembla as a harbour? Port Kembla is the place *par excellence* for a harbour in that locality.

1694. *Mr. Hassall.*] How long have you held your present position? Thirty-four years.

1695. Do you think, from your experience, that it is necessary to provide a harbour of refuge between Sydney and Jervis Bay? I would not say that it is actually necessary, but it would be a very desirable thing to have.

1696. For what reason? To afford shelter to shipping in the locality.

1697. Is Jervis Bay suitable as a harbour of refuge? Yes; it is a splendid natural harbour, and therefore a good harbour of refuge.

1698. Is Port Jackson a harbour of refuge? Certainly. They are both very suitable harbours of refuge.

1699. Do you think the proposed breakwater should be carried out 1,600 feet, 2,200 feet, or 2,800 feet? 1,600 feet would make an excellent harbour; but if you went out further you would get a better harbour.

1700. Do you think that the trade will require a harbour area of 260 acres? Perhaps not at first. The breakwater could be extended as the trade grew. I would not go in for a very large expenditure at first.

1701. Do you think that 1,600 feet of breakwater would be sufficient for the present? Yes; and you could extend it at any time.

1702. Do you think the same amount of trade would be done at Bellambi as at Port Kembla if a breakwater were made? Well, I am thinking of both places simply as harbours. Port Kembla is naturally better sheltered than Bellambi, by reason of the Five Islands to the south, and the configuration of the coast to the north, and the holding-ground is better. Bellambi is a risky place to let go an anchor, because there is a danger of its getting under the rocks and being lost.

1703. Do you think it probable that Lake Illawarra may be made a harbour of refuge? No. Lake Illawarra can only be made a place for the reception of small vessels; that is, unless a gigantic sum of money is expended there. The foundation of the breakwaters at Lake Illawarra would not be so good as it is at Port Kembla, where you run out from a rocky point.

1704. Have you any doubt as to the suitability of Port Kembla as a harbour? No; and I think it would be of very great assistance to trade to have a harbour made there.

1705. Would Jervis Bay make a good harbour for the south-coast trade? It is a most excellent harbour.

1706. Is there deep water there? Yes.

1707. Pretty well close to the shore? Yes; in most places. Yes; it is a fine, bold, sheltered port.

1708. A suitable place for shipping? Yes.

1709. What distance is Jervis Bay from Sydney? Eighty to 83 miles.

1710. Would Jervis Bay be as suitable for the trade as Port Kembla? Jervis Bay already affords the same facilities as a harbour of refuge as Port Kembla would give when improved.

1711. *Mr. Roberts.*] If the proposed breakwater were constructed would it be necessary to have a light-house at Port Kembla? If the port drew a large trade, I think there would have to be a light at the extremity of the breakwater.

1712. What are the nearest light-houses to the north and to the south of Port Kembla? There is a light at Wollongong, 5 miles to the north, and at Kiama, 10 or 12 miles to the south.

1713. *Chairman.*] The light you speak of would not be a light-house; it would be simply a harbour-light? Yes.

1714. *Mr. Roberts.*] What is the draught of the P. and O. or Orient vessels? Their maximum draught is 27 feet; but if they were going down to Port Kembla for coal they would draw about 20 feet.

1715. What is the draught of the "Orlando"? About 26 feet is her maximum draught.

1716. Is 27 feet the maximum draught of any vessel that has entered Port Jackson? Yes, I think so. The eastern channel has a depth of 27 feet at low water, and we have never been unable to take a vessel in or out since it has been dredged to that depth.

1717. You think there would be plenty of water in Port Kembla for vessels of any size? Yes, and you could always get deeper water by running the jetties further out.

1718. *Mr. Clarke.*] Jervis Bay is too far south to suit the Illawarra coal trade? Perhaps so. What I said with regard to Jervis Bay was altogether from a nautical point of view.

1719. Is not the water on the northern side of the bay very much exposed to northerly winds? No; though the south-eastern portion of the bay is rather exposed to such weather.

1720. You do not consider that Port Kembla is as necessary as a harbour of refuge as for ordinary purposes of trade? It would combine the two advantages.

1721. If both breakwaters were completed there would only be an entrance 800 feet wide;—would that be sufficient to enable vessels to get in and out? I think so. The opening in the Portland breakwater is only 500 feet; but I have not heard of any accidents happening there. We do not want the gap to be

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- Captain
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- be too wide, or you would let too much sea in ; but if the entrance is too narrow, it would interfere with the passage of ships in and out.
1722. I suppose that something must be done to Port Kembla before it can be used as a shipping place for sailing vessels? Yes ; I would not like sailing vessels to go there under present conditions.
1723. Even with a tug it would be rather dangerous? Well, a tug to some extent converts a sailing ship into a steamer for the time being ; but I would not advise sailing ships to go there at the present time without a tug in attendance.
1724. If the eastern breakwater were constructed, could sailing vessels go there and load? Yes.
1725. Do you not think that the Illawarra coal proprietors are entitled to as much consideration as the Newcastle colliery proprietors? Yes, I think so ; especially as they have established a trade there already. I believe in helping those who help themselves.
1726. Do you think it would be possible, without a large expenditure, to make a port at Lake Illawarra? No, and I do not think that Lake Illawarra could ever compete with Port Kembla.
1727. *Mr. O'Connor.*] At the present time only vessels of small tonnage can enter Lake Illawarra? I think scarcely anything can get in there now.
1728. Would the money it is proposed to expend at Port Kembla be equally effective if spent at Lake Illawarra? No ; Port Kembla would be three or four times better than Lake Illawarra.
1729. *Chairman.*] The northern end of the proposed breakwater is two-thirds of a mile from the shore. Supposing that the breakwater were drawn round, so as to bring the end within half a mile of the shore, would the port be a dangerous one to enter? No. That would contract the harbour area a little ; but it would give better shelter for the port.
1730. Would it be as good a port to enter as with the breakwater as proposed? Yes, for all practical purposes.
1731. By bringing the end of the breakwater one-sixth of a mile nearer the shore, you have a pretty well protected port? Yes.
1732. Though you sacrifice a considerable area of deep water, do you regard that as a serious matter? No. If I had drawn the breakwater I would have carried it round in the way you suggest.
1733. Would the water out at the end of the breakwater be used for shipping? I think there would be a sufficient area of protected water by carrying the breakwater out in the way you propose. I am inclined to think, too, that a breakwater carried out in that way would resist the sea better.
1734. A south-easterly sea would run along it? Yes.

Charles Edward Rennie, Esq., Chief Draftsman, Department of Lands, sworn, and further examined:—

- C. E. Rennie,
Esq.
27 Nov., 1894.
1735. *Chairman.*] You have a further statement to make to the Committee? Yes ; I have had all the deeds looked up, and I find that the area of 100 feet reservations within 10 miles of Bellambi is 123 acres.
1736. Is there any reservation at Port Kembla? There are 65 acres reserved within 10 miles of the port ; but nothing within 2 miles of it. The area reserved within 10 miles of Bellambi is 123 acres ; within 10 miles of Wollongong, 100 acres ; and on the shores of Lake Illawarra, 27 acres. That is on the northern side of Mullet Creek. The area reserved on the shores of Jervis Bay is 88 acres. These reservations are shown on the map by means of black circles.

TUESDAY, 1 DECEMBER, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.	HENRY CLARKE, Esq.
The Hon. JAMES HOSKINS.	CHARLES ALFRED LEE, Esq.
The Hon. CHARLES JAMES ROBERTS, C.M.G.	JOHN LIONEL FEGAN, Esq.
The Hon. WILLIAM JOSEPH TRICKETT.	THOMAS HENRY HASSALL, Esq.
The Hon. DANIEL O'CONNOR.	GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

John Barnes Nicholson, Esq., M.P., sworn, and further examined:—

- J. B.
Nicholson,
Esq., M.P.
1 Dec., 1896.
1737. *Mr. Roberts.*] Having heard the evidence you have given, I am under the impression that you are very strong in your advocacy for Bellambi as the best position for a harbour on the South Coast? That is so.
1738. Have you arrived at that conclusion on account of Bellambi appearing to be the most central place for the reception of coal? Not only because it is the most central, but because it has been, and is still, the best natural port in the district.
1739. It is the best sheltered from southerly gales? Yes, from any gales, more especially from northerly or north-easterly gales.
1740. Is it a fact that the lay of the coast to the north of Bellambi affords admirable shelter in the case of a north-easterly gale? Yes.
1741. Will you explain how it is, if Bellambi is the most central port for the shipment of coal, that more coal appears to have been shipped at Port Kembla, according to a return furnished by the Custom House

at

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at Wollongong, during the last five years. For instance, in 1896, whilst the shipment of coal at Bellambi was 90,880 tons, at Port Kembla it was 133,924 tons; and in 1895, whilst at the Bellambi jetty there were shipped 175,506 tons, at Port Kembla there were shipped 220,328 tons. On looking through the return I find that in every year, except in 1892, the shipment of coal at Port Kembla far exceeded the amount shipped at Bellambi? I was not aware that prior to 1892 the shipment of coal at Port Kembla had been greater than at Bellambi. I am aware that it was from 1893 to 1896 inclusive. I explained the reason when I was here before. We have had a number of large steamers which have come from Newcastle to complete their loading, and they could not do it anywhere but at Port Kembla, owing to the fact that we had not water deep enough at any other place. I may add that certain collieries to the north of Wollongong have been conducive to the shipment of coal at Port Kembla, by sending their coal to help to load the big ocean boats in as short a space of time as possible. They have even sent coal there from Clifton, simply to oblige the Southern and the Old Port Kembla Company to get the large boats away. That is the sole reason they show a greater shipment than we do at Bellambi.

1742. Referring to the plan you laid before the Committee—you see the breakwater you suggest to the east of the Departmental breakwater? Yes.

1742½. Does not that appear to you to contract the harbour of Bellambi very much compared with the Departmental scheme? Quite the contrary. It not only increases the area of water, but it will be sufficiently protected from all gales. The outward end of the reef is supposed to be nearly in juxtaposition to the outer end of the proposed breakwater, and it amply protects the harbour. We only want to cap that reef and then we have protection for the whole of the shipping which can be stowed in the bend.

1743. But when we have bad weather from the south-east the wind frequently veers to due east, and a violent easterly gale blows;—in a case like that does it not appear to you that the breakwater, as shown on your plan, would not afford the same protection as the Departmental breakwater? I have never heard of an easterly gale blowing into Bellambi Bay since I have been a resident on the coast.

1744. What is the estimated cost of your breakwater? £132,500, which is more than one-half less than the Departmental cost.

1745. Have you given any consideration to Wollongong as being suitable for a harbour on the south coast? That is the place where I should have liked to see the harbour really built, had it been built on the original scheme as proposed by Sir John Coode.

1746. Would not Wollongong be more central than Bellambi? No; I am not aware that we have any coal whatever of a marketable character within easy access to the south of Mount Kembla. I am also aware that the Mount Kembla Company did not work up to their southern boundary, because the coal petered out.

1747. How would you place the schemes? I prefer the Bellambi to any of them, from the simple fact that the Wollongong harbour would not pay 2 per cent. interest on the money which would have to be expended. If that is a fact there, it is a greater fact at Port Kembla. If we can reduce the expenditure by bringing it to Bellambi, it must, as a matter of course, be the better place.

1748. Then you put Bellambi first, and Wollongong second? Yes; Wollongong has been so messed up that they have built the lighthouses and jetties in the water which should have been used for loading-berths. The whole of that work would have to be undone in order to make Wollongong a decent port.

1749. Is it true that at the present time there appears to be a large number of residents on the south coast who are favouring what may be termed the Jervis Bay scheme? I have heard some talk about it. Nevertheless, Jervis Bay would not serve as a shipping-place for coal.

1750. *Mr. Hoskins.*] Is there any coal to ship? Not that I am aware of.

1751. *Mr. Roberts.*] What is your main objection to it? The distance. It is about 12 miles from Nowra, which, I suppose, would bring it from 50 or 60 miles from the centre of the coal-field.

1752. I wish to refer you to a statement on page 3 of the report furnished by the Under Secretary for Public Works: "Shortly afterwards, viz., in February, 1895, as the result of a meeting held at Wollongong of the supporters of the rival claims of Wollongong, Bellambi, and Port Kembla, a further deputation waited upon Mr. Young, and requested that an officer might be appointed to report on the most suitable site for the harbour. They stated that the advocates of the various sites had agreed to leave the decision of the matter in the hands of the Department." Can you tell the Committee why the advocates of the various sites have altered their opinion on the subject? No doubt the idea was advocated. It was thought that whatever official was sent there his judgment on the schemes should be final. I think I got up and said that that was impossible. I pointed out that the matter would have to be submitted from him to the Department, then to Parliament, then to the Public Works Committee, and then again to Parliament, so that any agreement of that kind was abortive.

1753. Was the gathering a representative one? Undoubtedly.

1754. In the event of the Committee not quite agreeing with the opinion you have formed on the subject of Bellambi or Wollongong, may I ask whether you think it a wise expenditure of public money to put the eastern breakwater at Port Kembla? Certainly not.

1755. Am I to understand that if the Committee cannot see their way to take up the position you have taken up with regard to Bellambi, you are of opinion that the Committee would be very unwise in recommending the expenditure of public money in erecting a breakwater at Port Kembla? I do not like it put in that fashion; but I would feel disposed myself to oppose it on the ground of undue expenditure.

1756. Will you make it clearer as to how it would pay to put the breakwater at Bellambi, and how it would not pay to put it at Port Kembla? The other day, when I was here, I gave a tabulated statement of the transit of all the coal from the various collieries to the various proposed harbours. I admitted at the time that I might be wrong 2 or 3 miles in the aggregate; but in each case Bellambi totalled up to something like 41½ miles. Allowing every possibility for a mistake, it would not exceed 45 miles—that would be 4 miles and a fraction for each colliery. With regard to the other two, one went up to 103 miles, and the other—Lake Illawarra—went up to 156 miles. You can see for yourself that the port easiest of access must, as a matter of course, get the preference so far as shipment is concerned.

1757. Have you formed any opinion upon the Lake Illawarra scheme? I think it is a fallacy from start to finish. I cannot see how it can be made an effective port of shipment equal even to the cost of Port Kembla. Again, it is further south from the centre of the coal-field, and would attract less shipping than Port Kembla. It is the worst scheme of the three.

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1758. Is that on account of the shallow water? Yes; there are only about 10 feet of water in the lake.
1759. What is the minimum depth of water which you regard as necessary for a harbour on the south coast? I should like to see 35 to 40 feet.
1760. We have no steamers drawing that depth of water? Quite so; but the greater the depth the more secure shipmasters generally feel, if they have a good anchorage.
1761. Having in view the fact that the draught of the largest steamer which has yet entered Port Jackson is 27 feet, would not you regard 28 or 30 feet as a sufficient depth? It certainly could be utilised, and I think with every degree of safety; but it would be much better to have a greater depth.
1762. You have referred to good anchorage;—does not Port Kembla enjoy the reputation of being the best holding-ground on the coast? Yes; but I have never heard a complaint against Bellambi.
1763. Do you regard Bellambi as equally good? I am only speaking from reports with regard to either of them. From all I have heard Port Kembla has the best holding-ground.
1764. *Mr. Humphrey.*] What is the distance from Port Kembla to Kembla colliery? It has been called 7 miles.
1765. Dr. Robertson has told us that, within that radius, 70 per cent. of all the available coal would be nearer to Port Kembla than Bellambi? I certainly cannot credit such a statement, from the fact that the Mount Kembla Company had never worked their ground to its extreme southern boundary. We have no coal proved to the south of Mount Kembla which is of a marketable character.
1766. Do you question Dr. Robertson's statement? Yes.
1767. Upon what ground? Because I know the locality, and Mount Kembla is the only colliery nearer to Port Kembla than to Bellambi.
1768. Do you question the statement that not more than 42 per cent. of the available coal would be within a similar radius of Bellambi? If the Metropolitan Company could see their way to send their coal to Bellambi, which is nearer by 9 miles than to Darling Harbour, we should have, at least, from 60 to 75 per cent. of coal available for Bellambi, as against 25 or 30 per cent. to Port Kembla.
1769. But the Metropolitan mine would not come within the radius? But I presume special terms could be arranged.
1770. The contention is that 70 per cent. of all available coal is within a radius of 7 miles of Port Kembla; a statement has been made to the effect that 42 per cent. only of all available coal is within a similar radius of Bellambi;—do you question that statement? I do.
1771. Do you say that more than 40 per cent. of available coal would be within a similar radius? I do. We have three of the best collieries—South Bulli, Mount Pleasant, and Mount Keira—within a radius of $3\frac{1}{2}$ miles of Bellambi Bay; each is from 7 to 9 miles to the northward of Port Kembla.
1772. Are they at present shipping from Bellambi? No; not one of the three.
1773. Is there any reason why they do not ship at Bellambi? Yes; the two jetties at Bellambi are private jetties.
1774. But, as a matter of fact, steamers of from 2,000 to 3,000 tons can ship from Bellambi? Yes.
1775. And not more than 800 or 900 tons from Wollongong? Yes.
1776. Why should not the collieries you have mentioned ship coal for over-sea from Bellambi, which at present they are unable to do from Wollongong? I cannot account for that.
1777. If Bellambi is so suitable for a shipping port, would not it be used to a greater extent than it has been? These shipping-places have been available at Wollongong for the two collieries I have alluded to—Mount Pleasant and Mount Keira—long before there was a private jetty built. Consequently, with these facilities already existing at Wollongong, and the tramways being laid to Wollongong, it was scarcely likely an agreement could be arrived at whereby they could benefit their position.
1778. Is there any difference of gauge which would prevent them using Bellambi? None whatever.
1779. Do you not perceive that the trading collieries would be limited to vessels of between 800 and 900 tons? It has been so.
1780. Whereas by using Bellambi they could do an over-sea export trade by vessels of 2,000 or 3,000 tons? Yes; but take the Mount Keira Company. They have had their own steam colliers of different tonnage, and the Mount Pleasant Company had what they called the old "mosquito" fleet running. It appears to me that they have got into a certain groove of work, and have kept in it when there was possibly a chance of bettering their condition by connecting with Bellambi. But the two jetties at Bellambi were private property, and I am not aware that any arrangement was attempted to be made in connection with them.
1781. Have the collieries to which you have referred used the jetties at Port Kembla? Only when completing the loading of a big steamer such as I have referred to.
1782. Are the facilities available for these collieries for shipping at Port Kembla greater than those which exist at the present time at Bellambi? Undoubtedly.
1783. Did I understand you to state, in answer to Mr. Roberts, that the deputation desiring harbour connection on the north coast did not accept the agreement which appeared to have been arrived at with regard to the officers of the Department selecting the site? It was one of those kinds of acceptances of a very nugatory character. I do not think half those present gave the matter any consideration at all.
1784. Do you say the matter was not understood? Yes.
1785. What interests do you represent in putting forward your views in favour of Bellambi? No interest but that of the general good of the community.
1786. You are not representing the views of proprietors of collieries? No.
1787. Then you are only giving your individual opinion? Yes.
1788. Assuming that the whole of the colliery proprietors on the south coast are content to accept the proposal put before the Committee by the Department, are we to ignore their views in favour of the view expressed by yourself in favour of Bellambi? It is scarcely a fair way of putting it. If I had a certain amount of vested interest to consider, I might possibly be induced to talk differently.
1789. Do you not think that if Bellambi were regarded by the owners of coal properties as the more suitable harbour for shipment, the evidence would have been in that direction instead of in the direction of Port Kembla? I am not aware how many coal-owners, or those interested in the southern coal-mines, have given evidence. But I can always read between the lines; and I have seen public works advocated where the evidence has not always been up to the mark, or what we might strictly call of a truthful character.
1790. Why is that so? Because there are certain interests to conserve or to preserve.

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1791. Have you any objection to state the interests which you think will be most prominently conserved by the construction of the harbour at Port Kembla? The interests of the Southern Coal Company and the Mount Kembla Company; also the interests of the Wentworths as landed proprietors around Port Kembla.

1792. Do you think those interests have influenced the Department in placing this work before the Committee? I do not wish to say that; but I cannot possibly account for the extraordinary evidence which has been given before the Committee, unless it has been to conserve the vested interests of people down there.

1793. Are you speaking now of the evidence given by the Departmental officers? I am speaking, in the first place, of the report of Mr. Carleton, which is, on the whole, most unfair and unjustifiable. There is also a short report by Mr. Darley, and one by Mr. Hickson.

1794. Are we to understand that you are of opinion that the Department, in placing this scheme before the Committee, has been biased? I cannot help thinking so.

1795. Why? From the fact that when Mr. Darley was there about twenty months ago I was present. When he visited Bellambi he, in my presence, and in the presence of Mr. J. C. Jones, the manager of the South Bulli Company, Mr. H. S. Fry, J.P., and one or two others, said that, in his opinion, Bellambi was the most suitable place for a port in the district, and that it was a great pity that there was not a lot of Government land fronting the bay. Afterwards when we visited Port Kembla, he admitted a great objection to it, namely, that it forms almost a letter V, and is directly open to north-easterly gales. Again, the survey in 1859 tallies exactly with that in regard to Bellambi Bay. Whilst we have every natural protection and facility there, all we want is to have our reef capped in order to have a thoroughly good harbour for the next fifty years. I have no reason to suspect any Government official or Minister of the Crown of undue partiality. I look upon it as one of the errors of judgment which may be committed by anybody.

1796. *Mr. Egan.*] When I examined you last you mentioned that the coal at Old Bulli was not bad, and that there was no cinder coal? I said that Old Bulli and Bulli B pits were the only places where we had to contend with cinder coal.

1797. Do you not think that that has a bearing upon the necessity for constructing a harbour at Port Kembla? None whatever.

1798. Do you know what is the output of the Bulli Colliery? No; it has not been working regularly since Mr. Adams purchased the colliery.

1799. Prior to Mr. Adams purchasing the colliery, I believe it was stopped for some time? Yes; the estate was in liquidation.

1800. Did you give Mr. Roberts the names of the men who agreed to accept the survey made by the Government officials? I could not think of the whole of them.

1801. I want to know if these people had an interest in accepting the conditions? I do not think there was any interests under consideration. I think every one present at the meeting was of opinion that we should have a harbour on the south coast, and they were all willing to have any place the Government might decide upon.

1802. I understood you to say on a former occasion that no vessels anchoring in Bellambi Harbour broke from their anchors or moorings? Not to my knowledge.

1803. Would you be surprised if the witness had stated that several had broken away? It would be news to me. I can conceive it possible if a large steamer were lying at the South Bulli jetty that she might have to be released from her moorings to keep clear of the jetty; but I cannot conceive the possibility of any ship breaking from her anchorage there.

1804. In reply to Mr. Humphery, you have stated that some people have advocated Port Kembla as against Bellambi on account of having certain interests there? I said I could not conceive any other reason why such evidence could have been adduced.

1805. Is it not a fact that the greater portions of Mr. Vickery's interests are at Bellambi, and he advocated Port Kembla? I do not know what position he stands in with regard to the Mount Kembla Colliery.

1806. Has not Mr. Vickery greater interests at or near Bellambi than at Port Kembla? No; I cannot persuade myself that he has. I know that he has been a part owner at Port Kembla. I also know that he purchased, to a certain extent, the South Bulli Colliery. I also know that he purchased Clifton. Of course I do not know whether these are his properties entirely, or to what extent.

1807. Mr. Vickery stated that, if he were to advocate his own interests, he would advocate the opening up of Bellambi as a port;—therefore, he spoke rather against his interests? Apparently so.

1808. Now we come to another witness—the English representative of Corrimal? The sole interest they have there outside the Corrimal Colliery is the big jetty.

1809. What are their vested interests at Port Kembla? They have sunk something like £90,000 in machinery, shafts, and sinking for coal there.

1810. If they have not found coal they have not much interests there? They built the jetty before searching for coal.

1811. We want to know what their interests there are? When I state that this company pays the Commissioners £5,000 per annum in order that they can load their coal at the Southern Coal Company's jetty, and when I tell you they could load their coal at Bellambi for less than one-fifth of that amount, you can see that they have some interest, and the interest is in the good jetty they have already constructed.

1812. A company in order to make money will naturally go to the cheapest place, and if you say it is cheaper to load at Bellambi than at Kembla, we want to know the reason why? They could take the coal to Bellambi at one-fifth the cost at which they should take it to Kembla.

1813. Why? From the fact that they have a jetty at Kembla at which they could load a steamer, and they have not one at Bellambi. The fact that they have vested interests to such a large amount at Port Kembla, and none at the other place, must incline them to use that port as long as they can.

1814. What interest has Mr. Yuill there? Manager of the Adelaide Steam Navigation Company.

1815. Mr. Yuill stated that Bellambi was not to be mentioned in the same breath as Kembla as a harbour of refuge? Then he knows nothing about the respective positions.

1816. Then you think that if a witness only knows one port and not the other his evidence is not worth much? Yes.

1817. Then I suppose the same may be said of Mr. Franklin, the engineer? He is an old resident, and ought to know as much about one place as the other.

1818. Do you think it strange that a witness of his standing should know very little about Bellambi? He seems to like to talk about his experience in India and Ceylon.

1819.

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1819. There is a possibility, I suppose, of men not knowing certain things because they think them beneath their notice? Where he has passed Port Kembla once, he has passed Bellambi fifty times. I think he knows everything about Bellambi. Any man in the district knows did he but care to say so.

1820. The jetties at Bellambi and Kembla are, I believe, sufficient to cope with the present trade? They are not. Again, when they have an extremely heavy gale vessels are not able to come to load at either place.

1821. But we have evidence that in the fiercest gales steamers have been able to come to Port Kembla? I am sorry to say such evidence is utterly incorrect.

1822. If vessels can come in during the fiercest gale, ought that not to be sufficient to satisfy the present trade? The evidence is exaggerated to a great extent. The present facilities for loading coal at either place are not sufficient for the requirements of the district.

1823. I understood you to say that if a harbour were constructed, whether at Kembla or Bellambi, the trade would double itself? In proportion to what it has done during the past ten years.

1824. Is it not a fact that for some years you have been going back in your output? Yes.

1825. Seeing that there is a difference of opinion amongst the people of the southern district as to whether Port Kembla or Bellambi should be made a harbour of refuge, and seeing that you have facilities at the present time for shipping the trade you have, and which you are likely to have, do you not think that this matter ought to lie in abeyance? Certainly not. Our facilities are not of the character they ought to be. They cannot at all times load coal, consequently we have lost a large portion of our trade.

1826. *Mr. Hassall.*] Do you think the plan of the survey of Bellambi Harbour, as submitted to the Committee, is the best, or do you think that it might have been made better? I think it could have been made much better.

1827. I understood you to say that there was a reef, called the inner reef, 4 feet 6 inches under water, and you thought the breakwater might have been carried along it? Yes.

1828. What direction would that breakwater take from the coast? It is indicated in pencil on the plan. We should have a larger area of water. If our limits are circumscribed by one-fourth, it will reduce the cost materially. Again, the survey of the Government is in our deepest water, where we want our jetties and loading berths for sea-going vessels. Consequently the cost of construction can be reduced at least one-fourth. In the first place, because we shall have less depth in which to build, and also because there is no necessity for carrying it out 2,800 feet. I think 1,800 feet is sufficient.

1829. Then the calculation submitted to the Committee in regard to the cost could be materially reduced, and the anchorage-ground enlarged;—therefore, the cost per acre would be proportionately less than the cost submitted to the Committee? Yes.

1830. Would the breakwater, running practically in an easterly direction, stand the south-east gale? I feel sure it would, because the inner reef is protected by an outer reef which, at the extreme eastern end, is bare at low water.

1831. Then the outer reef would act as a kind of natural breakwater to any breakwater constructed on the inner reef, and would, to a great extent, protect it? Yes.

1832. What collieries would use Bellambi as a shipping port—would Coalcliff? I could not say positively. Coalcliff has a jetty of its own on a flat reef; but it is not available in rough weather.

1833. Would the South Clifton Company use it? Yes.

1834. Would the North Illawarra Company use it? That colliery is at the present time idle and has been since Mr. Mitchell gave up his lease.

1835. I understand the output of the Bulli Company is small;—what is the reason? Slackness of trade, I think. A short time ago they went to the expenditure of lengthening and strengthening their old jetty.

1836. I believe the output at South Bulli is considerable? Yes; and they have a jetty in Bellambi Bay.

1837. Do you know whether the Bulli seam has been discovered south of Port Kembla? It has not; and I do not believe it ever will be.

1838. Do you think the position of Bellambi would be more central for the southern coal-field than any other point which might be selected? Yes.

1839. Do you think the cost of shipping to owners would be less than the cost of shipping at Port Kembla? Yes, from the fact that the transit is so much shorter from all the collieries.

1840. With regard to the resumption of land;—what is the difference between Bellambi and Kembla in that respect? I assume that at Port Kembla we should have something like $10\frac{1}{2}$ miles of railway to resume; at Bellambi we should only have the necessity of resuming $1\frac{1}{2}$ to $1\frac{3}{4}$ mile, and to construct two loop lines to connect the Government railway with the South Bulli tramway, one on the southern and one on the northern side to connect with the coal-owners north and south. Taking all things into consideration, I am certain that the cost of resumption of railways alone would be less than one-fifth at Bellambi as against Port Kembla. With regard to the land fronting the foreshores at Bellambi, we propose to resume 370 acres, and we assume that it can be purchased for £7 10s. per acre. At Port Kembla the land is worth double that money, and if they had to resume an equal quantity, it would cost double the amount.

1841. The jetties at Port Kembla would have to be resumed? Yes.

1842. Whilst at Bellambi the leases fall in in 1899? Yes.

1843. Do you think that, in the event of the harbour being constructed at Port Kembla, the northern collieries of the Illawarra district would use Port Kembla as a shipping port? Some might. I have very little doubt, for instance, that if anything occurred to prevent Mr. Vickery loading South Bulli coal at Bellambi he would take it to Port Kembla.

1844. In the event of the harbour being constructed at Lake Illawarra, would it be a strong opposing factor to any trade which might be carried on at Port Kembla? Not the slightest.

1845. *Chairman.*] I believe the Illawarra coal-field ceases at Kembla on the south? Yes; according to all presumptive evidence.

1846. If the Illawarra coal-fields ceased at Bulli on the north, it would be immaterial whether Kembla or Bellambi were chosen? I do not think we should require a harbour at either place if that were the fact.

1847. You contend that Bellambi is the more centrally-situated port? That is my contention.

1848. Your next contention is that in expending the Government money the best result should be obtained, and that best result would be brought about at Bellambi? Yes.

1849. You also contend that by making the port at Bellambi you save extra haulage of coal? Yes.

1850. Those are your three strong points? They are.

1851. Do you think the port is required for the coal-field? I do.

William McIntyre, Esq., Chief Electoral Officer, Chief Secretary's Department, sworn, and examined:—
1852. *Chairman.*] Do you hand in a statement with regard to population? I do. The following return shows the population within the Registration Divisions of Electoral Districts extending from Helensburgh to the Shoalhaven.

W. McIntyre.
1 Dec., 1896.

Electorate.	Division.	Population, 1896.
Woronora	Clifton	2,550
	Bulli	6,035
Illawarra	Wollongong	5,950
	Dapto	1,875
	Albion Park	1,800
Kiama	Kiama	5,000
Shoalhaven	Berry	2,530

The area embraced by these divisions is shown on maps of Electoral Districts, copies of which I hand in for the information of the Committee. The population in sections is as follows:—Helensburgh to Bulli, 8,585; Wollongong to Dapto, 7,825; Albion Park to Berry, 6,800. These figures were furnished by the police.

1853. What maps do you produce? Maps showing the extent of the divisions of electorates within which the population is located.

WEDNESDAY, 2 DECEMBER, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.

The Hon. JAMES HOSKINS.

The Hon. CHARLES JAMES ROBERTS, C.M.G.

The Hon. WILLIAM JOSEPH TRICKETT.

The Hon. DANIEL O'CONNOR.

HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.

JOHN LIONEL FEGAN, Esq.

THOMAS HENRY HASSALL, Esq.

GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Construction of a Deepwater Harbour at Port Kembla.

Henry Deane, Esq., Engineer-in-Chief, Railway Construction Branch, Department of Public Works, sworn, and examined:—

1854. *Chairman.*] Do you desire to make a statement to the Committee? No; I merely wish to preface what I have to say by mentioning that I was instructed by the Secretary for Public Works to send an officer to Illawarra to inquire into the possible means of railway connection with the proposed harbour at Port Kembla. I accordingly picked out Mr. Alexander, who knew the district, to do the work. Mr. Alexander has furnished me with the following report:—

H. Deane,
Esq.
2 Dec., 1896.

I beg to report that I have examined the several routes by which Port Kembla might be connected with the main south coast railway, including the existing connection by the coal line of the Southern Coal Company, and I would now, in advance of a report in detail and an estimate of the probable cost of making the connection, beg to submit a short summary of the subject and of the recommendations I have to make.

Port Kembla is already connected with the main line by the Southern Coal Company's railway, which takes off from the main line at a point some miles south of Wollongong station—thus, by this route, the total length of haulage, from all collieries situated to the north of Wollongong to Port Kembla, would be very much greater than would obtain by any of the other routes that have been proposed.

The length of line belonging to the Southern Coal Company that would have to be resumed or purchased is 4 miles 13 chains. The railway has been well and solidly constructed, the grading especially having been carefully done, and, with some alterations and additions, will be quite suitable for the heavy traffic it would have to carry. It is not a light line, however. Considerable work has been done on it, and hence the cost of it to the Government must be high. The line passed altogether through private land, which had to be purchased by the colliery company, and for which they must be reimbursed if the line is resumed by the Government.

The Southern Coal Company's coal line is laid out alongside the railway belonging to the Mount Kembla Colliery Company, which leads from the Mount Kembla mine to their own jetty at Port Kembla. This line (Mount Kembla Company's line) is not connected with the main line of railway, and the operations of the Mount Kembla Colliery are carried on independently of those of the Southern Coal Company.

One of the alternative routes is by way of a new construction altogether, taking off the main line just south of the Wollongong station, passing to the east of Tom Thumb's Lagoon, and crossing the entrance to the lagoon by a bridge.

This is the shortest connection that can be made, but by a few chains only. That advantage and that the take-off from the main line is so close as to be fully under control from the station are the only points in its favour. There is little room at the junction with the main line, and that a deep embankment only, where the necessary siding accommodation for coal-trucks can be formed. Some resumption of valuable land will be necessary for the construction of the line, some works of construction will be entailed, an embankment and a bad gradient (in favour of the road, however) to get up to the level of Wollongong station.

In view of other advantages shown by this route this extra expense in construction might be justified but for our other objection which may be taken to be fatal to this route.

The Wollongong station is approached from the north on rising gradients of 1 in 150, and 1 in 75, as given below:—
From 48 miles 11 chains to 48 miles 21 chains—10 chains 1 in 50; from 48 miles 21 chains to 48 miles 57 chains—36 chains 1 in 75.

The other rise, which is all against the load, is therefore 36 feet in 46 chains. This rise would have to be overcome by all the coal from all the collieries that may be at work to the north of Wollongong.

In this place it should be pointed out that these same gradients will operate adversely to the loads in course of transit to the Southern Coal Company's line should that route be eventually chosen as the connection with Port Kembla. They will rule the weight of the trains over the whole extent of line as far as Port Kembla and the cost of working the traffic. They must therefore have consideration in estimating the suitability of the Southern Coal Company's line for the connection with the port.

Another

H. Deane,
Esq.

2 Dec., 1896.

Another route is by way of Mount Keira railway, which is now between the main line and the port the property of the Government, and in complete working order as far as the port of Wollongong, and is connected by a loop with the main line. This might be extended past the gaol, along the open space, clear of the sand dunes, and almost entirely on Crown land, then along the east side of Tom Thumb's Lagoon, as in the case of the line described in the preceding paragraphs, crossing the entrance to the lagoon by a bridge.

This bridge will be the only costly work on the line—all the rest, excepting at the turn round the gaol where some sand must be cut into, will be of the easiest character.

Another proposition that has been made by the Wollongong Railway League is to adopt the works of the Mount Pleasant Coal Company's line of railway as far as the junction of that line with the Mount Keira railway at the port of Wollongong. From this point to Port Kembla the new line just described would have to be constructed, but as far as the port of Wollongong the Mount Pleasant line must stand comparison with the one from Mount Keira.

This route has a great deal in its favour, as the line affords the easiest gradients and the shortest route to Port Kembla from all the collieries situated to the north of Wollongong. The expense of working the traffic along this route, owing to the road being quite level or in favour of the load throughout, would be the lowest possible; but the prime cost of resumption and construction would be much heavier than by any other route, and, as compared with that via the Mount Keira line, the whole of it would be additional to the cost were that route adopted.

As the gauge of the existing Mount Pleasant road is 3 feet 6 inches, and as the rolling-stock of that colliery would have to continue to use the road, a third rail would have to be laid down. This would entail renewal of all the sleepers throughout this length of line. Considerable alterations would be required to embankments and cuttings, and some work would be needed on the bridges. A new overbridge would be necessary.

This line was formed through some deep spurs from Smith's Hill, and it shows considerable work in cutting and embankment. The work still to be done, therefore, to widen the road and make it otherwise suitable for the heavy rolling-stock and the traffic that would pass over it at all hours of day and night, added to the cost of the extra rail and sleepers, would raise the prime cost by this route to a very high figure.

In conclusion, I submit that the route via the Mount Keira railway and across the entrance to Tom Thumb's Lagoon will, I believe, be found to be the most suitable for adoption. I believe it will prove to be the most costly in prime cost—not so expensive to maintain—and that the percentage of return on capital expended will be higher than by any of the other routes.

I forwarded that report to the Minister, and afterwards Mr. Alexander made out an estimate of the probable cost of the work, which I think is a fair one. He put down £14,613 1s. 2d. for a single line of railway.

1855. *Mr. Wright.*] You concur in Mr. Alexander's report? Yes.

1856. Would much land have to be resumed in connection with the proposed railway? No. The line would pass almost entirely over Crown land.

1857. How do you propose to deal with the sand drift if the railway is laid along the beach? The line will not be laid along the beach itself. If the route is properly chosen the only bad part will be in the neighbourhood of Wollongong itself, after passing round near the gaol. There would be no difficulty in raising the line on a low timber viaduct to permit the sand to pass underneath.

1858. Would not the supports of such a viaduct offer a resistance to the sand and cause its accumulation? No, I do not think so.

1859. How high would your line be above high-water mark? That I cannot say. There has been no survey.

1860. What land would you have to resume if you continued the Mount Pleasant line to Port Kembla? I should imagine only at the junction; but the continuation of that line I look upon as out of the question, because of the gauge.

1861. What would be the cost of providing a double line of rails for a continuation of the Mount Keira line? About half as much again as the cost of a single line of rail.

1862. That would make the cost about £21,000 or £22,000? Yes.

1863. Do you think that any large amount of traffic could be carried over a single line? Well, the whole of the Illawarra line, beyond Hurstville, is a single line.

1864. We have been told that if the proposed harbour is a success, the shipment of coal at Port Kembla will exceed the present output of Illawarra;—if that were so, probably 10,000 or 15,000 tons would have to be carried over the railway in a day;—would a single line be sufficient for a traffic like that? It could be worked on a single line; but I would certainly recommend a double line. I consider that a double line should be made if the traffic is likely to become very large.

1865. You have not personally inspected the route of the proposed line? No.

1866. You have perfect confidence in Mr. Alexander? Yes. I know the district generally. I have been there several times.

1867. Does the estimate to which you have referred include the cost of all necessary yards and shunting arrangements necessary at the port? No; it is merely an estimate of the bare cost of connection. Of course, if you included all the arrangements necessary to accommodate a large export trade at the port the estimate would have to be largely increased.

1868. Before Port Kembla could be used as a place of shipment, sidings would have to be made, and other provisions arranged in order to meet the trade;—do you not think that the Commissioners, who would receive freight for drawing the coal, should make these arrangements. I understand that they find all the siding accommodation necessary at Newcastle? Yes.

1869. And they would have to do the same at Port Kembla? I think so.

1870. You cannot give us any approximate idea as to the cost of this necessary work? No. Before making such an estimate I should require some reliable data as to the amount of traffic and the area of standing room required.

1871. If the proposed line were made, what would be done with the Mount Kembla line and the Southern Coal Company's line;—would you have them torn up? Why not leave them.

1872. Are they the standard gauge? Yes.

1873. And good enough for ordinary traffic? Yes.

1874. I suppose your idea is to utilise them occasionally? I should think that the Mount Kembla Company would prefer to send their coal direct, instead of around by Wollongong. I am not at all sure that some strengthening would not have to be done to these lines to enable them to carry heavy engines.

1875. You do not apprehend any difficulty in constructing the proposed line? No.

1876. I think you said that the rise on the Mount Keira line was about 36 feet against the load;—that is not a very great height to rise? No. There is a grade of 1 in 75 on the main line, coming up to Wollongong, for about 36 chains.

1877. Are there any steep grades on the Mount Pleasant line? No.

1878. Would your proposed deviation cut out this grade on the main line? Yes.

1879.

1879. Are there any other grades on the proposed line? Nothing of importance.
 1880. So that the line could be easily worked? Yes. On the main line, near Bellambi, there is a grade of 1 in 80 against the load. There is also a grade of 1 in 50 on the main line; but that is nothing.
 1881. If you used the Mount Pleasant route, you would get a level road all the way? Yes.
 1882. What would be the cost of widening the Mount Pleasant line? The bridges would have to be strengthened, and probably the embankments would scarcely be wide enough, though it is difficult to say what the cost of widening them would be. The rails for a single line would cost £600 or £700 a mile.
 1883. In the event of no new line being constructed, there is already a connection with Port Kembla by means of the Southern Coal Company's line? Yes; but with a new line along the beach you would get rid of the grade of 1 in 75.

H. Deane,
Esq.
2 Dec., 1896.

Captain James McGeorge, s.s. "Kurrara," sworn, and examined:—

1884. *Chairman.*] Where does your vessel trade? To the various places along the South Coast.
 1885. You are familiar with the various jetties along there? Yes.
 1886. *Mr. Fegan.*] How long have you been trading to the South Coast? About ten years.
 1887. Can you give us your opinion about Bellambi? It is not a bad place. It is better than Wollongong.
 1888. Can you go in there in almost any kind of weather? You can go in; but you do not get a safe anchorage.
 1889. What is the tonnage of your vessel? 239 tons net register. She draws 14 feet when loaded.
 1890. Has any mishap ever occurred to you at Bellambi? No.
 1891. What is the anchorage there? There is an anchorage of about 6 fathoms; but you are very close into the rocks when you get that.
 1892. What is the bottom like? It is very bad. You may let go your anchor and drag a few yards, or 50 or 100 yards, and then bring up in something which prevents you from ever getting it back.
 1893. Would you call it a safe anchorage? No.
 1894. *Mr. Wright.*] Is it not a good holding-ground? No. It is loose sand and rocks.
 1895. *Mr. Fegan.*] You load coal there? Yes.
 1896. Can you unload anything there? I never tried to unload anything, except a few casks of tallow, or some stores for the mines.
 1897. What is the depth of the water at the jetties? At the South Bulli jetty at low water you will not have more than 20 feet at the berth. At the other jetty, there would be about 15 feet 6 inches at low water.
 1898. Have you any other objection to Bellambi, besides its bad anchorage? A swift sea comes in there from the south-east. We can always work with a roll; but at Bellambi the sea comes in and breaks, and where the sea breaks you cannot do anything.
 1899. Can you get out in any weather? Yes.
 1900. You are thoroughly acquainted with Port Kembla? Yes.
 1901. Have you any objections to that place? None whatever. It is a much better place than Bellambi.
 1902. Why? You get a good anchorage there.
 1903. What is the anchorage? You can anchor at almost any depth, from 9 fathoms.
 1904. What is the holding-ground? A kind of sand and mud.
 1905. Any clay? I never got clay on the anchor.
 1906. *Mr. Darley* says that at Port Kembla there is both sand and clay, and that a great deal of the bottom there is clay, the place being well known as a good holding-ground? That agrees with my opinion of the place. There must be something there besides sand, or else the anchor would not hold; but I have never seen clay come up on the anchor. It might be washed off.
 1907. You do not say that there is no clay there? No.
 1908. But you have no knowledge that there is clay there? No; but I know that the holding-ground is good.
 1909. Can you go into Port Kembla in rough weather? Yes.
 1910. Are you fairly secure there? Yes, at all times almost.
 1911. Is it easier to get there than to get to Bellambi? No.
 1912. There is a roll at Port Kembla? Yes, instead of a fast-running sea.
 1913. You prefer that? Yes, because there is no weight on your chain, and you lie steady. At Bellambi the sea causes a jerk on the chain.
 1914. What is the depth of the water at the Port Kembla jetties? At the Southern Coal Co.'s jetty there is about 26 feet, and about 23 feet alongside the other jetty.
 1915. And a fair-sized vessel could go there without very much trouble? Yes.
 1916. What about getting out? It is easy enough to get out—easier than to get alongside.
 1917. Have you unloaded anything there? Just a few stores for the use of the collieries.
 1918. What company does your steamer belong to? The "Kurrara" is owned by Captain Osborne, of Mount Keira.
 1919. Is Mount Keira nearer to Port Kembla than to Bellambi? There is not much difference; but I could not tell you the mileage.
 1920. Where is the Mount Keira coal shipped? At Wollongong, and at the Kembla jetty.
 1921. Not at Bellambi? No.
 1922. You have never spoken about the necessity for a better harbour? Well, I have said at Wollongong that it is a shame to take people in there, and to keep them there during rough weather.
 1923. You have always found that Port Kembla was sufficiently good for your purposes? Yes; for the business I do there.
 1924. Have you had any mishap at Port Kembla? No.
 1925. Taking it all round it is a fine port? Yes; so long as the wind does not go to the east or south-east.
 1926. Would you express an opinion as to the advisability of constructing the breakwater at either Bellambi or Port Kembla? A harbour is wanted there somewhere.
 1927. Why? Well, look at the ships in distress that are sometimes along the coast. They have nowhere to go now.

Captain
J. McGeorge.
2 Dec., 1896.

- Captain
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2 Dec., 1896.
1928. And I suppose a port is wanted at which cargoes can be unloaded? Yes, undoubtedly.
1929. I suppose you have found it inconvenient not to be able to take a cargo of merchandise down there? Well, not financially, because we do not engage in that business.
1930. If there were a secure harbour at Port Kembla you would have a fair trade down there? Yes now we always go back empty.
1931. Do you know Wollongong well? Yes.
1932. You do not care much about it as a port? No; it lies just in the swell of the south-east sea. I have been lying in Wollongong loaded and tied up with hawsers, while a steamer has gone to Port Kembla, loaded, and returned to Sydney. I could not get out of Wollongong, because of the rough weather.
1933. And in rough weather you cannot get into Wollongong? No.
1934. What do you think of Jervis Bay as a harbour of refuge? It is a fine harbour—a natural harbour.
1935. But it is too far south for the coal trade? Yes; it would be as easy to send the coal to Sydney direct by rail.
1936. Of the three places, Bellambi, Wollongong, and Port Kembla, Port Kembla is the best? It is my favourite port. You can lie at anchor at Port Kembla when you cannot look at Wollongong.
1937. *Mr. Hassall.*] Which is the better port in its natural state—Bellambi or Port Kembla? Port Kembla.
1938. Would Bellambi be a pretty safe port if a breakwater were constructed? You can make a port anywhere by spending money.
1939. But suppose the same amount were spent at the two places? Then Port Kembla would be far better than Bellambi. Bellambi is a small place. If I am lying there in the fairway, sheltered from the sea, if I tail one way I am close to the reef, and if I tail the other way, I am close to the beach. You cannot anchor off the South Bulli jetty, because if you did, you would be amongst the moorings, and if you anchor off the Bellambi jetty and have a 40-fathom chain out, if you swing round towards the reef, you are very close to it, and, with an easterly wind, you are very close to the moorings. You could not get any shelter at all there with a long chain, because you would get out beyond the shelter of the reef.
1940. You would be practically out to sea? Yes.
1941. And in easterly weather how do the two places compare? There is very little difference between them.
1942. Have you ever lost an anchor at Bellambi? I lost one at the South Bulli jetty.
1943. Did you ever lose any chain there? Yes, 15 fathoms of chain.
1944. Did you ever lose an anchor at Port Kembla? No.
1945. Did you ever drag there? No.
1946. Did you ever drag at Bellambi? No.
1947. You think that a better harbour could be made at Port Kembla than at Bellambi? Yes, twice as good.
1948. A larger harbour? Yes, a harbour four or five times as large.
1949. Is Jervis Bay a good place to get into and come out of? It depends upon the wind. A ship coming from the south can always get into Jervis Bay.
1950. Could a ship get in there with an easterly wind? Yes. That would be a fair wind.
1951. Could it get out again? Well, it would have to wait for a favourable slant.
1952. You look upon Jervis Bay as a pretty safe harbour of refuge? As a splendid harbour of refuge.
1953. Is Port Jackson a harbour of refuge? Yes.
1954. *Mr. Roberts.*] Do you recognise the necessity for a deepwater harbour on the south coast? I think such a harbour is necessary.
1955. What are your principal reasons for saying that? I am of that opinion, because of the increase of trade that has taken place there during the last ten years.
1956. Are not the present facilities for shipment adequate for the trade? No, nothing like it. The other day a vessel of 7,000 tons—the “Indrani”—went along side the Southern Coal Company’s jetty to take in bunker coal.
1957. How much water did she draw? I suppose 23 or 24 feet.
1958. What reason is there for making a breakwater at Port Kembla? Sailingships cannot go there now. If a large sailing vessel went there she would require half a dozen tugs to stand by her.
1959. The steamers are quite safe; but for sailing ships a breakwater is necessary? Well, even for the steamers the place is not as well protected as it ought to be. On one occasion the “Echuca” had to leave Port Kembla before she had finished loading, and come up to Sydney for shelter, returning afterwards to finish her loading. On a great many occasions steamers have been hanging about awaiting an opportunity to load, but generally when they get alongside they finish their loading before they leave, though under difficulties very often.
1960. Do you bring coal to Sydney? Principally to Sydney.
1961. That coal is transhipped to larger vessels? Yes. It is generally used for bunker purposes.
1962. Where do the steamers which you supply trade to? All over the world. I supply the P. and O. Company, the Orient Company, the French boats, the Gulf line, and, in fact, all the mail boats, except the Black Germans—the German-Australian line.
1963. Would those steamers go to Bellambi or to Port Kembla for coal if there were a breakwater? Yes; because they would then get better coal at less cost per cent. The handling breaks up the coal.
1964. What would they save per ton? I reckon that by the time they have paid for the bringing of the coal up to Sydney, and the handling of it in Sydney, it costs them not less than 3s. 6d. a ton.
1965. How many tons would a P. and O. boat take? From 1,600 to 2,000 tons—say 1,800 tons.
1966. Would there be a net saving of 3s. 6d. a ton? I should think so.
1967. Are you supplying any large ocean-going steamer at the present time? I was supplying the “Ghazee” last night.
1968. How many tons of coal are you putting on board? I do not think that she wants more than 1,000 tons. I put a cargo into her before she went to Port Pirie.
1969. How many tons would the R.M.S. “Australia” want? I think she took about 1,700 tons this time.
1970. Then is not 1,800 tons rather above the average demand? I do not think so. Some ships carry coal on their decks to take them as far as Malta.

1971. What is the largest quantity of bunker coal that you have supplied to a steamer? I can hardly say; but the P. and O. steamers generally take 1,800 tons, and the French steamers more. I have seen them take 1,900, 2,000, and even 2,500 tons.

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1972. Have you ever put 3,000 tons of bunker coal into a steamer? No, though steamers may have taken that quantity. We generally know to within 50 or 100 tons how much coal a vessel is taking.

1973. Which, in your opinion, is the best place for a port? Years before they started the Wollongong breakwater, I came to the conclusion that Port Kembla was the best place for a harbour.

1974. In what way would it be better than Bellambi? It has a better anchorage, and is better sheltered. When the sea is breaking outside the islands, you only get a roll in Port Kembla.

1975. Would not the two places be equally safe if breakwaters were constructed? Yes; but at the present time the sea never strikes round into Port Kembla as it does into Bellambi.

1976. Is Port Kembla known amongst mariners to have the best holding-ground on the South Coast? Well, when we have wanted to anchor for the night we have gone from the South Bulli jetty at Bellambi down to Port Kembla, and returned at daylight.

1977. From what quarter does our bad weather come—from the south south-east? The gales generally start from the south, or south-west, and work round to south and south-east.

1978. Does the wind ever blow due east? Yes; it blows right round from south to north.

1979. During easterly weather, which of the breakwaters would afford the better shelter to Bellambi—that proposed by the Government, or that suggested by Mr. Nicholson? The inside breakwater. The outer breakwater would be very little better than the present reef. Of course if the outer breakwater were carried further to the north or to the north-west it would do better than even the Government breakwater. In building a breakwater you should build it so that the sea will run along it instead of rebounding against it. The outer breakwater is comparatively useless as proposed.

1980. At Port Kembla would you prefer the breakwater to be constructed as proposed, or would you turn it slightly to the north-west when you got out 2,200 feet? I think it would be better if turned a little to the north-west. Instead of bringing the sea into the basin, as it would do if constructed as proposed, if it were turned to the north-west the sea would break away towards Wollongong.

1981. How far do you think the breakwater should be brought in a north-westerly direction? About 600 feet.

1982. *Chairman.*] The end of the proposed breakwater is three-quarters of a mile from the shore,—is there any objection to bringing it within half a mile of the shore? No; I do not think so. The sea then, instead of breaking round the point of the breakwater into Port Kembla bay, would be thrown on to the beach near Wollongong.

1983. *Mr. Hassall.*] What do you think of running the breakwater altogether in a north-westerly direction, following the line of the coast from Red Point? That would throw the sea away from Port Kembla.

1984. Would you then have a safe entrance? Yes.

1985. Would there be sufficient room for getting in and out of the harbour at any time? Yes; you could beat out of it.

1986. *Mr. Roberts.*] If the end of the breakwater were within half a mile of the shore, would the entrance be large enough? Yes; quite large enough.

1987. Would the sea be worse half a mile from the shore than three-quarters of a mile from the shore? No; it would be about the same. Of course, when you get close into the beach you get a bad sea, because the roll going one way meets the rebound from the beach.

1988. To be on the safe side, do you think the end of the breakwater should be kept three-quarters of a mile from the shore? I do not think that that is necessary.

1989. If it came within half a mile of the shore, could vessels enter the harbour in safety? Yes. Of course, a big four-masted ship might not care to go in; but vessels have been known to sail into Newcastle harbour, the entrance to which is very much less than that proposed here. A vessel could always get into shelter and drop her anchor if the entrance were half a mile wide.

1990. The proposal to carry the breakwater in a north-westerly direction, following the line of the coast from Red Point, would, if carried out, reduce the harbour area? Yes.

1991. But would not the harbour, even then, be large enough? Well, one hardly knows. Trade has increased very much within the last twenty years. I think that all that is needed is to turn the breakwater in a north-westerly direction after you have taken it out about 2,200 feet as proposed.

1992. Would there be plenty of water all over the proposed harbour? Yes, so far as I know, with the exception of a shallow patch near one of the jetties.

1993. Would there be enough water to enable a 7,000-ton steamer to go alongside the jetties? Yes.

1994. Would it be necessary to construct any more jetties? After a time, other jetties might be required.

1995. Do you ever load at Bellambi? Not very often, though I have loaded there scores of times.

1996. You know the nature of the proposed harbour works at Lake Illawarra? Yes.

1997. *Mr. Wright.*] Could you take your vessel into Lake Illawarra at the present time? No, she would require to have rollers on the bottom to enable her to get in now.

1998. *Mr. Roberts.*] Would you be likely to go there for coal if a channel 15 feet deep were cut through the lake? What is the use of a channel 15 feet deep.

1999. What depth do you think is necessary? Not less than 25 feet. I do not think my people would alter their present arrangements.

2000. If the proposed works were carried out at Lake Illawarra, would you still think it necessary to have a harbour on the south coast for the development of the sailing-ship trade? Yes. To develop that trade you must give it suitable accommodation.

2001. *Mr. Wright.*] If the proposed breakwater were constructed, would you take a sailing-ship of 2,000 tons into Port Kembla? Yes.

2002. Could you work her out with a south-easter blowing? I daresay.

2003. You think that the proposed breakwater would make a good harbour for all classes of vessels? I think so.

THURSDAY, 3 DECEMBER, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).	
The Hon. FREDERICK THOMAS HUMPHREY.	HENRY CLARKE, Esq.
The Hon. JAMES HOSKINS.	CHARLES ALFRED LEE, Esq.
The Hon. CHARLES JAMES ROBERTS, C.M.G.	JOHN LIONEL FEGAN, Esq.
The Hon. WILLIAM JOSEPH TRICKETT.	THOMAS HENRY HASSALL, Esq.
The Hon. DANIEL O'CONNOR.	GEORGE BLACK, Esq.
FRANCIS AUGUSTUS WRIGHT, Esq.	

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

Henry Osborne MacCabe, Esq., Manager, Mount Keira Colliery, sworn, and examined:—

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2004. *Mr. Hassall.*] Have you any statement to make with regard to the proposal before the Committee? The idea I have about it is that Port Kembla is the most suitable place at which to make a deepwater harbour for the southern district. At Port Kembla you could protect a large area of deep-water, and you have already there good jetties from which probably 1,000,000 tons of coal could be shipped annually. Those who are interested in the coal trade of the district have realised for many years past the need of a good shipping port on the south coast. I was chairman at a meeting at which the various interests in the district were represented. Of course, while everybody agreed that the port was necessary, each wanted to have it against his own door. At this meeting, at which there were representatives from Bellambi, Wollongong, and Kembla, it was decided that we should go to the Minister and ask him to send an officer to report upon the question of providing a harbour, we agreeing to abide by the decision of the Government. Personally, a harbour at Wollongong or at Bellambi would serve my interests better than a harbour at Port Kembla; but my conviction is that Port Kembla is the best place for a harbour.
2005. How long have you been connected with the Mount Keira Colliery? I have held a power of attorney for Mr. Frank Osborne, who owns the colliery, for the last eight or nine years, and for seven years previous to that I was assistant to my father, who held a similar power of attorney.
2006. How long was your father managing the colliery? He was managing the colliery twenty-four years ago, or more.
2007. How long do you think the coal there will last? At our present output, over seventy years.
2008. That is if you continue to work the same seam? Yes. I am only taking into consideration the top seam—the Bulli seam—at the present time.
2009. I understand that that coal has a very good reputation as a steam coal? Yes; it is the best steam coal in the Colony.
2010. Is the demand for it increasing or decreasing? It is gradually increasing. While the output of individual collieries may have fallen off slightly, the aggregate output of the district has increased.
2011. Is there any probability of the underlying seams being worked? Not for steam coal, while the Bulli seam continues. Later on the lower seams will be used, not perhaps for export purposes to a great extent, but for manufacturing purposes.
2012. What seams are there under the Bulli seam? There are nominally five. There is, first of all, a 4-foot seam. Then there is the big seam, in which there are 5 feet or 5 feet 6 inches of fairly good coal. Then there are three other seams which I have not proved very much; but I know they are there. They show on the outcrop; but I have not driven into them.
2013. What is the quality of the coal in these seams? Fair to medium.
2014. Is it equal to the coal in the Bulli seam? No; not as a steaming coal. None of our coal is equal to the Bulli seam.
2015. Neither in the southern nor in the northern districts? Not for steaming purposes.
2016. Then, if a breakwater were constructed at any place on the coast, easily accessible from the collieries, the output of the district would greatly increase? There is no doubt about that. It is only two years ago since I, with some others, endeavoured to get the coal-owners around there to combine for the allotment of proportionate shares, so that we might borrow upon the security of the whole of the properties to make a breakwater at Port Kembla.
2017. What was the result? Everybody considered his goose such a big swan that we could not apportion the interests.
2018. Are the collieries associated? No. We call ourselves the Southern Coal Owners' Agency.
2019. You desire the Government to come to your rescue by making a harbour at which the various collieries may ship their coal in any weather? Yes; that is what we want.
2020. Would the various collieries, in the event of that being done, be prepared to pay shipping charges equal to those paid at the port of Newcastle? Certainly.
2021. Have you any idea of the present output of the collieries that might ship at Port Kembla? In the three months ending 28th November last, the Agency has shipped and sold 171,000 tons of coal. That is at the rate of about 700,000 tons a year.
2022. What collieries are comprised in the agency? The Metropolitan.
2023. Where is that coal shipped? At present, in Sydney.
2024. Would any of it be likely to come to Port Kembla? I think they would be likely to ship some of their coal there, because, I take it, the Commissioners would be prepared to haul it more cheaply to Port Kembla than to Sydney, inasmuch as to Port Kembla there is a down grade. Besides the Metropolitan, there are the Clifton Colliery, and the Coalcliff, South Bulli, Mount Keira, and the Mount Kembla collieries. The Bellambi Colliery would also send coal to Port Kembla, and the Corrimal company at the present time sends about 120,000 tons a year there.
2025. What would be the yearly shipment from Port Kembla? Last quarter the Mount Kembla Company shipped about 44,000 tons there. That is at the rate of 176,000 tons a year. The two collieries ship about 300,000 tons per annum at Port Kembla.
2026. And in the event of a breakwater being constructed there the output of coal would probably increase? Yes; I think we could get sailing vessels there, and steamers would come there which do not care to come at the present time. I should think it would be a low estimate to say that the increase of trade would amount to 200,000 tons.
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2027. That would make the total quantity shipped about 500,000 tons? Yes.
2028. How much coal would have to be shipped at a charge of 4d. a ton to pay interest upon the cost of constructing the proposed works? I do not think that so far as the appliances for shipping are concerned there need be any expense beyond the cost of resuming the present jetties. Fourpence a ton seems to me too high a charge. Threepence a ton, in my opinion, would be a fairer charge, though that would not pay interest upon the cost of constructing two new jetties. I do not think that a northern breakwater is wanted at Port Kembla. An eastern breakwater would provide sufficient shelter for the trade. When we asked the Government to send an officer to report upon this matter we did not expect to get an elaborate plan, such as that submitted to the Committee. Of course it is a very good thing to have a plan of this kind, but I do not think that it would be fair to saddle the trade or the Government with an unnecessary expenditure. In my opinion, if you constructed the eastern breakwater and resumed the existing jetties at their present value, you would do all that is necessary for the trade there. You could, at very little expense, by adding to one of the jetties, give facilities for the landing of any cargo required by the smelting works, or by anyone else. At the Southern Coal Company's jetty we have loaded a vessel carrying over 7,000 tons of cargo.
2029. What is the largest vessel that has been loaded there? A steamer came there from New Caledonia carrying 6,500 tons of nickel ore, and she took away 2,000 tons of bunker coal.
2030. In your opinion, it is not likely that a vessel of larger tonnage would come to the place? Vessels of larger tonnage might come there; but I do not think that vessels of deeper draught are likely to come, because, in my opinion, the limit of draught has almost been reached. Vessels may be made as big as you like, and with as much beam as you like; but I do not think the draught is likely to be much increased. At that jetty any vessel that is likely to come to Port Kembla could be loaded. It would be time enough to spend money in improving the jetty when the necessity for improvement arose. I do not think that any vessels come to this port which could not lie alongside that jetty.
2031. Mr. Darley estimates the value of the jetties as £8,100 and £5,430;—do you think that a fair valuation? I have never had any jetties built; but I was told that the Southern Coal Company's jetty cost £18,000, and the Mount Kembla jetty about £15,000.
2032. How long have they been constructed? The Mount Kembla jetty about eight years, and the other jetty about six years.
2033. What is the life of these jetties? With a breakwater, and if they were properly maintained, I believe they would stand over twenty years; but at the present time they are subject to the risk of being washed away. Only three years ago the end of the Mount Kembla jetty was carried away by the sea, and it cost £2,000 to replace it.
2034. Supposing the Government paid £20,000 for the jetties, would that be a fair thing? I should think that fair, though not a liberal offer.
2035. Would it be necessary to erect cranes or appliances for unloading at Port Kembla? No; I do not think so. The P. & O. steamers, and most modern vessels, carry their own cranes. You do not see any cranes at Circular Quay for the discharging of vessels.
2036. The cargo to be unloaded at Port Kembla would probably be ore chiefly? I do not think that expensive cranes would be necessary to deal with it, because the ore would not come out in very heavy quantities. All we want is protection from the sea. Of course, as the trade increased, you could have elaborate cranes and fixings.
2037. Do you think it would be necessary to carry the proposed breakwater out 2,800 feet? I should build the breakwater from the start with a sufficient cross-section to enable me to carry it out 2,800 feet if necessary; but if I found that 1,600 feet would give sufficient shelter, I would stop there. We do not want the Government to incur an unnecessarily heavy expenditure.
2038. You want to reduce the shipping charges as much as possible? Yes. Of course, we do not expect the work to be done for nothing.
2039. Do you think that a breakwater carried out in a north-westerly direction, in line with the coast from Red Point, would be more suitable than the proposed breakwater? I am not in a position to give an opinion upon that point.
2040. You think that in the event of the breakwater being made, an export of 500,000 tons of coal could be relied upon? I think so. At the present time we have to refuse many orders, because we cannot deliver the coal at Port Kembla. With a breakwater, we would have a fair chance of doing a trade at Singapore and at Colombo. The present cost of lightering the coal round to Sydney by steamer is about 2s. 6d. a ton.
2041. Do you think that if the breakwater were made, large steamers would come to Port Kembla and load there? A large number of steamers would not come to Port Kembla. The mail steamers would not do so, nor would some of the big wool-tramps. They would find it cheaper to pick up their coal at Sydney. But at the same time, vessels would come to Port Kembla to take coal to Singapore, Colombo, and San Francisco.
2042. Putting the cost of the breakwater at £160,000, do you think all necessary work might be done for £200,000? Well, there would be the beach railway from Wollongong to construct. I think that £200,000 would provide all the facilities we would want for a long time to come.
2043. And the rates to be charged would go to recoup interest on that sum? Yes.
2044. Do you know Bellambi? I have lived within a mile and a half of Bellambi nearly all my life; but I have not taken as much interest in Bellambi as in Port Kembla.
2045. Do you think it would be a better port to improve at the expense of the State? The Government engineers have dealt with the whole subject, and I have pledged myself to abide by their decision; but I must say that I think Port Kembla is the best place. If I owned all the coal in the district that is where I would make the port. I saw by the newspapers that there is some idea of making the beach line with a double track; but in my opinion a double track would not be necessary. I should be glad if we could get all the trade that we could send along a single line.
2046. *Mr. Roberts.* In speaking of £200,000 as the total cost of the proposed works, did you include land resumption? No, because I do not think that the cost of land resumption should form part of the cost of making the harbour. The Government will make a very bad bargain if they are not able to sell the land they resume for more than they give for it, and the profits of the sale might go as a credit against the cost of the work.

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2047. How many acres of land do you think the Government should resume there? That is a matter of policy for the Government to determine; but a certain area—perhaps 40 acres—would be required for siding accommodation.

2048. What value would you put upon the land which it would be necessary to resume? The land is at present used for grazing, and I should think £10 an acre would be a very good price for it.

2049. *Chairman.*] Does that take into account the way-leave that is paid for running over it? No.

2050. *Mr. Roberts.*] What would it cost the Government to obtain absolute possession of the land? Why not let the Government take a long lease of it, and pay way-leave, making a charge to cover the cost? I would sooner see the Government own the land, however.

2051. Do you think that £20 an acre would be its maximum value? I do not know what its value is, taking into account the way-leave.

2052. If the proposed works were carried out, would there be a large population settled at Port Kembla? I think that Wollongong would still be the business and residential centre.

2053. Will the southern coal compare, for steam and smelting purposes, with any coal in the world? For steaming purposes it is nearly equal to the best Welsh coal, which is the best coal in the world. For smelting purposes it is very good.

2054. Has the investment of capital along the coast proved remunerative in all cases? Not in all cases.

2055. Do you think that any great loss of capital has taken place owing to the absence of a safe harbour? I think so. If we had had a good harbour we should have obtained better prices, and some of the companies which went down might be in existence now.

2056. Why have these companies come to grief? Some of them over-capitalised their properties.

2057. Has a large amount of private capital been invested in the jetties along the coast? Yes. A jetty was built at Coalcliff and washed away, and another had to be built. A jetty was built at North Illawarra, a second jetty at Bulli, and at Bellambi two jetties were washed away and had to be renewed. At Port Kembla the Mount Kembla jetty proved to be too low, and five or six years ago the company had to rebuild it. The Southern Coal Company have also put up a jetty there, at which vessels of nearly 8,000 tons can load.

2058. Is more coal shipped at Port Kembla than at any other place along the coast? Yes; than at any other individual place.

2059. Are the steamers attracted there because of the protected state of the place? Yes; and because the Southern Coal Company's jetty is the only jetty at which very deep steamers can be loaded. With regard to the Bellambi jetty, I am informed that the "Glaucus" generally loads partly at Kembla and partly at Bellambi. The master says that at Bellambi the harbour is silting up, and he proposes to load now first at Bellambi, and then go on to Port Kembla.

2060. Do they want two classes of coal? I do not quite know; but they think Port Kembla the safer place, because they prefer to go there loaded instead of going to Bellambi loaded.

2061. Would it be absolutely necessary to construct the beach railway if the proposed breakwater were made? It would be a great help; otherwise traffic from the north would have to come a long way round. Only about 3 miles to 3½ miles of railway would have to be made.

2062. How long will the top seam in Illawarra last at the present rate of output? I should say 200 years.

2063. What would be the increased output following upon the construction of the proposed breakwater? I should think that within ten years the trade would more than double.

2064. Would that be owing to a development in the sailing-ship traffic? Partly, and partly because we would get more big steamers.

2065. Your coal would then go to Bombay, Madras, Singapore, and Shanghai? Yes; When Mr. M'Lean was agent for the P. & O. Company, he thought of taking coal from Port Kembla to Colombo and to Bombay, but the labour difficulty arose, and the prices went down so much that they were not able to do it. I believe that if we could have delivered the coal to them at Port Kembla they would have taken it.

2066. How much coal do the P. & O. boats take? About 45,000 tons every year.

2067. How far does their coal carry them? I think to Suez; but I really do not know.

2068. If the proposed breakwater were constructed, would the P. & O. steamers go to Port Kembla for coal? No. At that time they thought of using some of their small steamers to carry coal from Australia. The mail steamers do not go there to load coal. Their bunker holes are not suitable for one thing. The coal has to be put on board in baskets and then run along the decks. Steamers that were in a great hurry would not run down there; but we should get a large number of tramps and sailing vessels.

2069. *Mr. Black.*] Are we to understand that if the Government surveyors had not declared in favour of Port Kembla you would have preferred some other place as a harbour? No.

2070. You have no other preference? No, though my private interests would be better suited by the making of a harbour at Bellambi or at Wollongong.

2071. It is about 3 miles from Wollongong to Port Kembla? Yes.

2072. If a harbour is made at Port Kembla will the people employed there go daily backwards and forwards to Wollongong? They would have the train.

2073. You think that Wollongong is likely to remain the business centre? I think so.

2074. You spoke of a jetty being constructed at Port Kembla, which is considered too low;—is that jetty still in existence? No, the other jetty was built diagonally over it.

2075. If you were loading a vessel with large and small coal, which would you put in first? That would depend upon the skipper of the vessel. We should load according to his orders.

2076. In regard to what you said about the "Glaucus," the captain does not go to Bellambi first, because he wishes to load small or large coal there? No; but he is afraid to draw too much water at Bellambi, and, therefore, loads there before going on to Port Kembla.

2077. *Mr. O'Connor.*] You know every place south of Botany Bay which has any pretensions to be called a harbour;—which do you think is the best? Port Kembla.

2078. Why? I think that any expenditure there would give better facilities for shipping than a similar expenditure at any other place. Anyone looking at the three ports—Bellambi, Wollongong, and Port Kembla—would be impressed with the superior natural advantages of Port Kembla.

2079. What is your opinion with regard to the Lake Illawarra scheme? £200,000 spent at Lake Illawarra would not give anything like the same result as a similar expenditure at Port Kembla.

2080. Would that expenditure at Port Kembla provide a harbour of refuge there? Yes. Steamers have anchored there, and have ridden out very heavy gales at the present time.

2081.

H. O.
MacCabe,
Esq.

3 Dec., 1896.

2081. What is the largest vessel that could be loaded at Wollongong under the most favourable circumstances? We cannot take anything drawing more than 15 feet of water, and then we have to wait for a high tide. About 780 tons is the largest sized vessel that can load there.
2082. What could be done at Lake Illawarra? I do not think that scheme will ever be carried out, and it seems very unfair that, because a corporation has been granted certain powers, which it has not exercised, the Government should be prevented from making a harbour elsewhere. All they have done in the last seven years is to buy some land.
2083. Do you think it would be next door to throwing money away to try to provide a harbour there? I cannot help thinking that the proposal to cut a ditch across the lake would, if carried out, make a trap for any big vessel going in there. I have never seriously looked at Lake Illawarra as a possible harbour.
2084. *Mr. Lee.*] You referred to a concensus of opinion amongst colliery proprietors as to the advisability of leaving the Government to settle this matter? Yes.
2085. Were meetings held at which that decision was arrived at? The agreement was made, not so much by the colliery proprietors as by the people of the district.
2086. Did the managing directors of the various collieries ever meet together to consider this question? They were present at a meeting in which the Bellambi Progress Committee, the Kembla people, and the members of the Wollongong Harbour Trust took part.
2087. How long ago? About two years ago.
2088. Was the Lake Illawarra scheme in existence then? Yes.
2089. They were aware that the Lake Illawarra Corporation contemplated making a harbour? We had known that for five years, but we had never seen anything done. We knew that they had an Act of Parliament.
2090. If the Illawarra scheme were carried out, do you think that there would be any chance of a harbour at Port Kembla paying interest? At Lake Illawarra they are only pledged to provide a channel 15 feet deep. That would not give as much water as we have at Wollongong.
2091. If there were no Port Kembla, and the Lake Illawarra scheme were carried out, would you send your coal to Lake Illawarra? It would be no use sending coal to a place where there is only 15 feet of water. It seems to me useless to argue about conditions that can never exist.
2092. *Mr. Wright.*] To whom do you send your coal now? Most of my coal supplies the P. & O. Co.
2093. Would any of the large ocean steamers go to Port Kembla from Sydney for bunker coal? Yes; a vessel of 5,000 tons would run down there in about five hours, at a cost of about £25.
2094. Could a vessel of 5,000 tons move herself from Cockatoo Island to Circular Quay for less than £25? Well, at any rate, by going to Port Kembla a vessel would save 2s. 6d. upon every ton of coal she took.
2095. What is to prevent the ordinary steamers from going there now? They have to pay heavy insurance; but if the port were protected the insurance would not be so heavy.
2096. What is the extra insurance? I cannot tell you.
2097. It appears from your evidence that the only new trade at the port would be an occasional steamer? No. We have to refuse a great many orders now which we could fill if we could supply the coal at Port Kembla.
2098. Would a sailing vessel sooner pay 2s. 6d. a ton to load in Sydney or be towed down to Port Kembla? We would tow sailing vessels down with our own colliers.
2099. *Mr. Fegan.*] You have heard Dr. Robertson's evidence—do you agree with what he said in regard to the advantages of Port Kembla over Bellambi? Yes.
2100. *Chairman.*] With regard to the length of the proposed breakwater—I suppose you mentioned 1,600 feet as a sort of "x" quantity—you would not carry it out further than was necessary to give the shelter required? Yes. No doubt it is well to have a completed scheme kept in view, so that any work done may be in accordance with that scheme; but I do not think that half of the work proposed will be required in our time.
2101. The southern end of the Bulli coal seam is somewhere about Mount Kembla, while the eastern face runs pretty well parallel with the crest of the Illawarra range, approaching within half a mile of the sea at Austinmer, and running out at Clifton? Yes. Immediately west of Coalcliff there are about 4 feet of fair coal. North of that—at Stanwell Park—the coal is burnt a bit.
2102. Is there any break between Clifton and Coalcliff? There is a jump-up going towards Clifton; but the coal at Clifton is fairly good. There are about 1,000 acres of fairly good coal there. At Austinmer the coal is very much broken; and at Bulli the best coal has been worked out. There they are close against the cinder dyke.
2103. *Mr. Wright.*] Have they not cut through that dyke, and found good coal behind it? Not to my knowledge. I believe that there is more than three quarters of a mile of cinder coal. Coming down to Bellambi that coal was cut off by the same dyke as occurred at Bulli. South Bulli is to the west of the dyke. The tunnel mouth was in burnt coal; but now they are on the west of the dyke. There is a big cinder trouble starting at Towradgi Point, and going north-west.
2104. From there is there any serious trouble until you get to Mount Kembla? No, not until you get south of Mount Kembla.
2105. The coal to the north of the cinder dyke of which you speak, is some of it very good; but the great belt of good coal lies south of the dyke? Yes.
2106. The valuable coal in Illawarra lies abreast of Wollongong? Yes.
2107. Is Bellambi as much to the north of it as Port Kembla is to the south? I should say a little more to the north.
2108. You believe that the great bulk of the marketable coal of the district lies south of the cinder bed, which is a little north of Corrimal? Yes.
2109. North of the cinder bed the coal is broken? It is not so thick, it is not so regular, and it is more broken.
2110. It is for the coal-field lying west from Wollongong that the harbour is required? Yes. A seam has been opened up west of Lake Illawarra; but I do not think that is the top seam.

Captain
S. Agutter,
Dec., 1896.

Captain Frederick Samuel Agutter, s.s. "Mount Kembla," sworn, and examined:—

2111. *Mr. Roberts.*] How many tons of coal do you generally carry? 750 tons.

2112. Have you been trading down the south coast long? For twelve years, during nine of which I have been master of steam colliers.

2113. You have traded to Bellambi, Wollongong, and Port Kembla? Yes; I have traded constantly to those ports.

2114. You are intimately acquainted with them? Yes; I know them well.

2115. Have you experienced any difficulty in loading at Port Kembla in bad weather? Yes, at times; but not very often. We get a ground swell there sometimes.

2116. What other vessels have you commanded? I had charge of the "Aldinga," a smaller steamer, and one which was much easier to load.

2117. What tonnage is she? She carries 450 or 500 tons.

2118. Do you regard the construction of a breakwater as necessary to the development of the southern coal trade? Yes. If there were a breakwater at Port Kembla, we should get much larger vessels to go there. Many do not like the place, because of the slight swell there. If it comes on much they get frightened and go to Sydney.

2119. What is the largest steamer that you have seen there? Some of the Gulf boats and some of the Tiger line have been there.

2120. 5,000 or 6,000-ton boats? Yes; I suppose the largest steamer that has been there would be about 6,000 tons.

2121. Which is the best site for a harbour? I think that Port Kembla is the only place for a harbour there. It would make a harbour of refuge if the breakwater were constructed.

2122. Is a harbour of refuge necessary, considering the proximity of Jervis Bay? I do not think you can have too many harbours of refuge.

2123. In their present state which is the best place for loading and unloading—Wollongong, Bellambi, or Port Kembla? I have traded to them all, and I think that Port Kembla is undoubtedly the best place.

2124. Is the holding ground better? Yes; the anchorage is good. At Bellambi I have lost four or five anchors.

2125. Is Port Kembla naturally more sheltered than Bellambi? Yes, very much. The Five Islands shelter it from all but easterly and east-south-east weather.

2126. Do you think it would be necessary to carry the breakwater as far out as proposed? To my mind it is would be better to turn the breakwater in towards the beach a little.

2127. You would recommend the end of the breakwater being taken, say, half a mile nearer to the shore? I should think that would give plenty of room to enter.

2128. The breakwater would then afford better protection from north-east gales? It would then afford all the protection that is necessary.

2129. Would the breakwater shown on Mr. Nicholson's plan shelter Bellambi so well as the proposed Government breakwater? No; it would not even keep out a south-east gale.

2130. You think that if the proposed breakwater were constructed at Port Kembla a large foreign trade would be done there, and sailing ships would go there? Yes; I think that sailing vessels would go there for coal, as they go to Newcastle. Anything could go there that wanted to.

2131. *Mr. Lee.*] Have you ever had to slip away from Port Kembla, and put out to sea when only partly loaded? No; though I have been very glad to get finished sometimes, I have never come out half loaded.

2132. Not during a strong easterly gale? If the weather is very bad, we do not go in.

2133. In such weather, I suppose, you stay in Port Jackson? We might go down, and if we did not like the look of it we would come back again. It is only about a dozen times in the year that we have any trouble at Port Kembla.

2134. Have you ever dragged your anchor there? No; it is good holding ground.

2135. At which port would you sooner ride out a gale, at Bellambi or at Port Kembla? At Port Kembla. The holding ground is better, and the place is better sheltered. At Port Kembla you get sand and clay, whereas, at Bellambi the bottom is rocky, and if you drop your anchor you are not certain that you will get it again.

2136. Do you think that with a breakwater Bellambi would be as well protected as Port Kembla? I think it would be easier to make a harbour at Port Kembla.

2137. *Mr. Trickett.*] During what weather can you lie in Port Kembla and load? We can load there two days after a south-east wind has been blowing hard.

2138. What about an easterly wind? You cannot load anywhere along the coast during easterly weather.

2139. How about north-easterly weather? A north-easter does not stop us. It does not raise any sea.

2140. You could load even during a black north-easter? Yes; I have done it often.

2141. A breakwater is only required to protect you from south-easterly and easterly gales? You would require to keep northerly weather out if you had large ships, because they offer so much more resistance to the wind than small vessels.

2142. Can you go right alongside the jetties at Port Kembla, or do you make fast to buoys? You drop anchor, and then take ropes from the jetty, and make fast to buoys.

2143. With what winds can you load at Bellambi? You can load at Bellambi after it has been blowing from the south-east for a day, and sometimes when it has been blowing for two days; but not often.

2144. Is Bellambi as well sheltered from the north-east as Port Kembla? Yes; but Port Kembla is much better sheltered from the south.

2145. During the summer the prevailing wind is the north-easter? Yes.

2146. When do you require most protection? During June, July, and August, and sometimes in February. You get south-east and easterly weather in those months.

2147. How do you go alongside at Bellambi? Just as we do at Port Kembla.

2148. If breakwaters were constructed you would be able to steam right alongside at either place? Yes.

2149. There would be no "send" then? No.

2150. *Mr. Fegan.*] To what company does your steamer belong? To the Mount Kembla Coal Company.

2151. *Mr. Trickett.*] Can you give us any opinion in regard to the Lake Illawarra scheme? No.

2152. *Mr. Fegan.*] Have you had any conversation with your owners at any time in regard to this matter? No. I have never had anything to say about it.

2153. You have never complained to them of the risks you run? No; it becomes second nature to us now to go there.

FRIDAY, 4 DECEMBER, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.

The Hon. JAMES HOSKINS.

The Hon. CHARLES JAMES ROBERTS, C.M.G.

The Hon. WILLIAM JOSEPH TRICKETT.

The Hon. DANIEL O'CONNOR.

HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.

JOHN LIONEL FEGAN, Esq.

THOMAS HENRY HASSALL, Esq.

GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

Captain Hector Allen Boyle, late master ss. "Aldinga," sworn, and examined:—

2154. *Mr. Black.*] To which of the ports under the consideration of the Committee have you been trading? To all of them.

2155. Have you made trips more frequently to one place than to another? I have been more often to Port Kembla and to Wollongong than to Bellambi.

2156. Which, in your opinion, is the most suitable place for a harbour for the shipment of the southern coal? Port Kembla. There is no comparison between it and the other places. I have loaded at Port Kembla when I could not get into Wollongong.

2157. Next to Port Kembla, which is the best place? Bellambi.

2158. Why do you prefer Port Kembla? Because the approach to it is so good. There is no danger of making a mistake in getting to the jetties.

2159. What do you mean by saying that the approach is so good? It is free from all dangers.

2160. Do you mean that there are rocks and shoal-water at Bellambi? Yes. I have frequently refused to go to Bellambi when I have gone to Port Kembla; that is at night.

2161. Why have you refused to go there? Because of the danger; I lost my vessel there in the end. There is just barely room to moor alongside the jetty, and if you make a mistake you are ashore. At Port Kembla you have plenty of room.

2162. Is there a sandbank at Bellambi? Rocks and patches of sand. If you make a mistake you are either on the reef or on the beach. The "Corinna" went ashore there.

2163. If these dangers were removed by dredging, would Bellambi be as good as Port Kembla? I do not think you could dredge it. The only thing to do would be to run the jetty further out into deeper water. Of course, it could be improved; but it would be very expensive.

2164. Is there any objection to Bellambi on the score of the anchorage? Yes; the bottom is very bad. Although I was fortunate enough never to lose an anchor there, I often got them foul of the rocks.

2165. How is the place in a gale? It is no place at all in a gale, in its present condition.

2166. Is it exposed to any particular wind? It is exposed to all weather from south to north-eastwards.

2167. Does a due south wind not affect it? Not much, until it has been blowing for two or three days.

2168. If the proposed breakwater were constructed, would it be any safer from the winds? Certainly.

2169. It would be possible to provide a harbour there to which entrance would be easy in most weathers? Yes; but it would take much less to make a good harbour at Port Kembla.

2170. Was the "Corinna" lost at Bellambi? No; they got her off again.

2171. Did she run ashore? I believe that one of the hawsers carried away, and she swung round on to the reef.

2172. Was the accident caused by the weakness of the hawser? It might have been caused by too much strain. If such a thing had happened at Port Kembla the vessel would have come to no harm; she would not have gone ashore.

2173. Are we to understand that at Port Kembla there is fairly deep water all over the bay? Yes, except for a granite reef about 2 cables' length from the end of the Mount Kembla jetty, on which there are about 16 feet at low water. That reef dips and comes out again on the beach at a point north-westerly from the jetty, about halfway towards the entrance of Tom Thumb's Lagoon.

2174. Would it not be necessary to remove that reef? No; I think the breakwater goes across it. North and west of the reef the bottom is soft mud and sand, with clay underneath.

2175. That is a good holding-ground? Yes. All north and west of the reef there is good holding-ground. In between the reef and the shore the bottom is all sand, and the depth never varies more than about 18 inches.

2176. What is Port Kembla like in rough weather? It is more sheltered than any of the other places. There is no shelter at Bellambi in bad weather.

2177. Have you ever found any difficulty in loading at Port Kembla? Very seldom. I have loaded there with the sea breaking all round me.

2178. Have you ever found it necessary to cut and run? No. The "drawback" does not come against the Port Kembla jetties so heavily as against the Bellambi jetties.

2179. Which is the most dangerous wind at Port Kembla? An easterly wind, and what we call a black north-easter. The ordinary north-easters do not affect us.

2180. Would the proposed eastern breakwater be sufficient protection against an easterly gale? I think so, if it were made strong enough.

2181. Is it long enough? Yes, to protect the jetties.

2182. The head of the breakwater is shown on the plan to be three-quarters of a mile from the beach;—would the place be better sheltered if the breakwater were curved in more towards the shore? I think the breakwater should start from a point on the coast a little more to the east, so as to be outside of the shoal water. If it is carried out as proposed the sea will break on it heavily.

2183. You think that after breaking on the shoal water the sea will break more heavily upon the breakwater? Yes.

2184. If the breakwater were built at the extreme edge of the shoal you think there would be less danger of its being destroyed? Yes; it should either be built there or inside the shoal altogether. Of course, when a sea is once broken its force is pretty well spent.

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- Captain
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2185. You would recommend that the breakwater should be built either at the extreme inner edge of the shoal or at the extreme outer edge? Yes; to build it on the inner edge of the shoal would bring it too far in, I think.
2186. If the head of the breakwater were brought within half a mile of the shore, would that allow a sufficiently wide entrance for sailing vessels? Yes; though it would be better to have the entrance three-quarters of a mile wide. Some sailing vessels are sluggish in working.
2187. Do you think that the increased safety which would be obtained by bringing in the extreme end of the breakwater a quarter of a mile would more than counterbalance the difficulty provided by a narrow entrance? I think so. Of course, to steamers the width of the entrance would not matter.
2188. Do you regard Wollongong as a suitable place for a port? No.
2189. Do you think it might be made suitable? Not without a great deal of expense. The water outside is too shallow.
2190. The entrance to Wollongong is bad? Yes; it is all shoal water round there.
2191. It is much worse than Bellambi? Yes; as it is now it is simply a trap. A vessel getting in there cannot get out again in heavy weather. They had to sink one vessel in Wollongong harbour.
2192. What is the harbour like when you get into it? It is merely a basin, and there is a nasty "draw-back." It is worse now than when I knew it years ago. I was there in 1866. It was a little bit of a place then. That was before they had dug out the basin. The work that has been done lately has undone all that had previously been done, and allows the sea to come in.
2193. The proposed improvements have only made the place worse? That is all.
2194. Do you know of any objections from a navigator's point of view to the proposal to make a harbour at Port Kembla? No.
2195. Do you know any place on the coast more suitable for the purpose? No. I look upon Port Kembla as one of the safest roadsteads on the east coast of Australia. I am comparing it with places like Seal Rocks, Smoky Cape, and other places where vessels sometimes run for shelter.
2196. What about Jervis Bay? Of course you cannot compare these places to Jervis Bay.
2197. What do you think of Jervis Bay as a port? There is plenty of deep water there, though perhaps the approaches are not good.
2198. Is it not too far south? Yes; I should say so.
2199. *Mr. Trickett.*] I suppose a number of steam colliers trade to Bellambi and to Port Kembla? Yes, a good many.
2200. Has the matter before the Committee been discussed amongst the captains of these vessels? No. Shipmasters have told me in conversation that they preferred Port Kembla, and men will go from Bellambi where they are loading to lie at Port Kembla for the night. I have ridden out two or three heavy gales at Port Kembla when I would not have attempted to go in near Bellambi.
2201. We have it in evidence that at Port Kembla even in very calm weather there is a considerable "send"? Not in calm weather. I have made fast alongside the jetty there with a 2-in. line.
2202. I suppose that with a breakwater the place would be as safe as a harbour? It would make a good harbour, though, of course, it would not be safe from all gales. Sydney harbour itself is not always safe. The proposed northern breakwater is not required. It only blocks the bay up. The sea very seldom comes in from the north, except with very heavy north-east gales. The ordinary north-easter is no trouble to us. It only causes a bit of a "lift."
2203. You think that the construction of the northern breakwater is unnecessary? Yes. I have laid in safety at the mouth of the Tom Thumb's Lagoon. Of course we rolled a bit, but we were perfectly safe.
2204. *Mr. Clarke.*] Can vessels lie alongside the Port Kembla jetties except in good weather? Yes, in all ordinary weather. Sometimes there is a heavy swell there—perhaps for three or four days in the year—when we cannot load; but in ordinary weather we can load there as easily as at the wharfs in Sydney. During southerly weather, for the first forty-eight hours, the bay is quite smooth.
2205. Is it not dangerous for sailing ships to go there to load? Yes; they want to be towed away.
2206. If the breakwater were constructed they could go there? Yes; then they would be all right.
2207. Do the steamers that go there load for foreign parts, or chiefly take coal to Sydney? They take coal for intercolonial and foreign ports.
2208. If the proposed breakwater were constructed a large trade would be done by sailing vessels to various parts of the world? Yes.
2209. That cannot be done at present? No.
2210. Would it not be possible to make a breakwater at Bellambi? Yes; but you would not get so good a harbour as you could get at Port Kembla.
2211. Is there more room at Bellambi than at Port Kembla? No, not so much. There is no room at all at Bellambi.
2212. Do steamers now go to Port Kembla for bunker coal? Yes, and for cargo too. Some of the steamers coming to Sydney cannot go there for bunker coal, because their hatches are in the wrong position.
2213. I suppose the transshipping and handling of coal injures it? Yes; it breaks it up, and spoils its market value.
2214. Would Port Kembla make a harbour of refuge if the proposed works were carried out? Yes.
2215. But I suppose a harbour of refuge is not much required between Sydney and Jervis Bay? The more harbours of refuge we have the better we like it; but I do not see that a harbour of refuge is necessary.
2216. *Mr. Fegan.*] What certificates do you hold? A foreign-going master's certificate.
2217. How long have you been a captain? Since 1868. I have a thorough knowledge of the coast of Australia.
2218. Is the entrance to Port Kembla much better than the entrance to Newcastle? Yes. It is simply a wide open bay, with no dangers attached to it, apart from the Five Islands.
2219. If the proposed eastern breakwater were made, would it not in many senses be a superior port to Newcastle? The approach would be better, but not the port itself.
2220. What have you carried principally on the south coast? Coal, and a few stores for the mines.
2221. Have you had any difficulty in landing those stores? Very seldom.
2222. You could not land them in rough weather? Not very well. It might often happen that you could ship coal, but be unable to discharge.
- 2223.

2223. Have you ever made any complaint to your owners in reference to the danger at Bellambi? I have refused to go there times out of number.
2224. Because the place was so dangerous? Yes. You have barely room to moor your ship there.
2225. If a captain does not thoroughly understand Bellambi? He has no business to go there.
2226. I suppose you cannot discharge goods at Bellambi? Yes; in ordinary weather. The loading appliances there are, I think, as good as those at Port Kembla. At night, and in bad weather, the place is dangerous.
2227. I suppose there is no light either at Bellambi or at Port Kembla? No, unless they put one out.
2228. How did you lose your vessel? Because of the thick weather.
2229. Before losing your vessel you had refused to go there? Yes; dozens of times. I was loading at Wollongong, and I got a wire telling me to be at South Bulli at daylight to finish. I was obliged to leave Wollongong at 2 o'clock in the morning to get out on the tide, and while we were waiting about we drifted on to the reef.
2230. Did you tell your owners that you were afraid of losing your ship there? I told Mr. Firth, once or twice, that some of us would be coming to grief there. I made no official complaint.
2231. As a seafaring man, which do you prefer—Bellambi or Port Kembla? Port Kembla. There is no comparison between the two places.
2232. *Mr. Hassall.*] Do you think that a breakwater following the line of the coast from Red Point, and running in a north-westerly direction, would be preferable to the proposed breakwater? Yes. I think that the wider the entrance the better. Some sailing vessels do not work very well, and would like more room. If you narrow the entrance too much you cause a greater drawback inside.
2233. You think it would be better to let the breakwater run out in the direction proposed? Yes; only I would shift it inside the shoal-water.
2234. How far would you let the breakwater run out—1,600 feet? I think that would be far enough.
2235. At any rate until the trade improved? Yes. All that would be wanted would be to take the breakwater out beyond and on the reef. I do not know what the exact distance would be. There would be no great expense in running out the breakwater, because the reef is shoal, and you get a rocky bottom.

Captain
H. A. Boyle.
4 Dec., 1896.

Frederick George Woolcott-Waley, Esq., Manager, Bellambi Coal Company, (Limited), sworn, and examined:—

2236. *Chairman.*] You manage the Bellambi Coal Company? Yes, it is a Melbourne Company, and ships the whole of its coal from Bellambi. We also take the whole of the South Bulli coal. We own the northern jetty at Bellambi.
2237. *Mr. O'Connor.*] Have you any statement to make to the Committee? I heard Captain Boyle's evidence, and, while I do not think that there is as much difference between the two places as he makes out, I am of opinion that Port Kembla is a more suitable place for a harbour than Bellambi, though it would suit my interests better to have a harbour made at Bellambi. I know the coast very well, and I have been up and down it a great many times.
2238. Notwithstanding that you are deeply interested in the Bellambi mine and jetty, it is your opinion that Port Kembla is a better place for a harbour? Yes.
2239. And more suitable than any other place south from Sydney? I think so.
2240. *Mr. Hoskins.*] How much coal did your company ship last year? Somewhere about 200,000 tons.
2241. Where was it mostly sent to? A large amount of it goes into bunkers. We coal the Orient boats, the German mail steamers, and other steamers, and a large quantity of our coal is shipped to San Francisco.
2242. How much do you send to San Francisco? 30,000 or 40,000 tons.
2243. How is it sent there? We bring it to Sydney in small colliers, and then tranship into ocean-going vessels.
2244. All the coal you send to foreign ports has to be brought to Sydney and transhipped? Yes.
2245. Do you consider that it is desirable that a port should be made on the south coast in which vessels of large tonnage could lie with tolerable safety and load, especially sailing ships? Undoubtedly. The construction of such a harbour would give a great impetus to the coal trade.
2246. Has your company been refused large orders for coal through not having a safe harbour in which to load large vessels? Yes. In one or two instances we have had to decline very large orders. A couple of years ago two large steamers belonging to the British-India Company were detained in Sydney eight days waiting for coal, and then one had to go to Newcastle, and the other went away altogether without coal. All that time it was blowing a south-east gale, and we could not load any coal at the jetties.
2247. Is that the only instance of the kind? We cannot tell exactly what orders are lost. Quotations are asked for coal with despatch, and if we are not able to give despatch the order is lost to us.
2248. Would your company benefit by the construction of the proposed harbour? Undoubtedly.
2249. What do you think would be the average charge made for the shipment of coal at such a harbour? I suppose that a fair thing would be to put the port on the same basis as the port of Newcastle.
2250. What price would you charge intending purchasers of coal if the proposed harbour were made? I think we should get a better price than we obtain now, because so much has to be expended in carrying the coal up the coast and transhipping it. We should get about 7s. a ton for it.
2251. Would you then be able to compete with the Japanese coal at Singapore, Hong Kong, Bombay, and places like that? We actually compete with it now, although our charge is 9s. 6d. There seems to be very little doubt that if we could ship direct we should be able to compete on very favourable terms.
2252. How far would you have to send to get to Port Kembla? About 7 miles.
2253. Would the coal travel over any part of the Government railway? Yes, over, I think, about 6 miles of Government railway.
2254. If the Government charged tonnage dues at the proposed port, do you think your output would still increase? Yes. Of course the nearer the mines to the port, the better they would be situated; but with a system under which a moderate charge was made for haulage from all collieries alike, I think we should be much better off than we are now, despite the charges for haulage and the port dues.
2255. Supposing the Government charges were $\frac{1}{4}$ d. per ton per mile for railway haulage, and 3d. or 4d. a ton for shipping? If the charges were reasonable we could afford to pay them.

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2256. Have you ever inspected Lake Illawarra? No, I have never been on the Lake.
2257. How far south of Port Kembla is it? I should think 2 or 3 miles.
2258. In the event of a channel being dredged there 25 feet deep, would the colliery proprietors send their coal to Lake Illawarra for shipment? I do not think so. I think that the Lake Illawarra scheme is utterly impracticable, and out of the question.
2259. *Mr. Humphrey.*] What is your present output? About 200,000 tons a year from the two collieries.
2260. What would be your maximum output? We could put out 1,000 tons of best coal a day.
2261. And you could double that output? Yes.
2262. Do you represent one or more than one company? My company owns one colliery, and has purchased for a term of years the output of another colliery.
2263. You have the use of both jetties? Yes.
2264. We have been told that at South Bulli jetty you can load a vessel of 2,000 or 3,000 tons? Yes.
2265. Then what is the use of sending the coal to Sydney in small colliers? You can only load a large vessel at Bellambi under favourable circumstances as to tide and weather.
2266. The large vessels which take coal from Bellambi load at Sydney instead of at Bellambi? Yes; the only large vessels which we have loaded at Bellambi have been intercolonial vessels. We have loaded vessels partly at Bellambi, and partly at Port Kembla, or entirely at Bellambi, and they have gone to Melbourne.
2267. No coal has been loaded at Bellambi for over-sea export? Not during the last ten years in large vessels.
2268. If a harbour were made at Port Kembla, what use would you make of your present jetties? We would use them for loading bunker coal. The bunkering of the mail boats has to be done in Sydney. Their bunkers are unsuitable for taking coal from the shoots, and the coal is put on board at Sydney while they are discharging cargo.
2269. What proportion of your output is used for bunkering purposes? About three-fourths.
2270. Then you would have about 50,000 tons to ship into foreign-going vessels? Well, I am looking to an increase in the trade.
2271. In what direction? To San Francisco; there we are being cut out now by the British Columbia coal. It is impossible to compete with that coal while we are handicapped by the freight from Bellambi to Sydney, and the cost of transhipment.
2272. What would that amount to? About 3s. a ton.
2273. If all the charges for shipping at Port Kembla amounted to 1s. a ton, that would give you a saving of 2s. a ton? Yes; though 1s. a ton is a good deal to have to pay at Port Kembla, considering that the cost of the coal is not much more than 5s. a ton.
2274. A shilling would amply cover all possible charges? I think that it is a very high estimate. If the charges at Port Kembla were as high as 1s., we would be 1s. 6d. a ton better off in competing in the world's markets than we are under present conditions.
2275. With that advantage, could you compete successfully against foreign coal in the markets of the world? Yes, I think so. Of course, competition is generally met by competition, and no doubt if the price of our coal came down the price of other coal would come down too.
2276. Your coal is much better than the British Columbia coal? Yes, very much better. The rolling-mills and the Pacific railway burn nothing else when they can get it.
2277. Do you know the price of the British Columbia coal? It is controlled by the price of our coal. If the price of our coal rises, they put up their price; but if our coal is sold cheaply there is a fall in their price.
2278. Does their coal stand higher in the market than yours? No, it is not liked so well.
2279. What is the difference in freight in favour of the British Columbia coal? The man who controls the mines owns the steamers which carry the coal. The coal is run down to San Francisco in vessels of 2,000 or 3,000 tons burden. Of course in that way the freight is always the same, whereas we are more or less handicapped by any rise in freight.
2280. What class of sailing vessels would come to Port Kembla if it were made a safe harbour? Vessels of from 2,500 to 4,500 tons.
2281. Would the trade be drawn from Newcastle? No, the Newcastle trade would not be affected. Ours is a different coal from theirs.
2282. You send your coal away to foreign parts now; but instead of exporting direct you have to send from Sydney? Yes. At the present time, however, the coaling of a vessel in Sydney is often delayed or prevented by bad weather, whereas, if there were a port on the south coast we could tow a vessel down there, and load her without interruption. At the present time vessels wishing to take coal have sometimes to go away without it.
2283. What do they do if they if they cannot get coal? Some go to Newcastle, while others go away in ballast.
2284. The vessels that now go away in ballast would come south to load coal? Yes.
2285. Can you supply us with information as to the number of vessels leaving Sydney in ballast for ports other than Newcastle? I will endeavour to get that information. The proposed harbour would also allow a much larger export trade to be done by steamers. Some steamers go to Port Kembla now, but the owners of other steamers have a great objection to open roadsteads. The British-India Company will not allow any of its boats to lie in an open roadstead. We have their contract for coal, and I know that a great deal more coal would be taken by them if there were a port at which they could load direct.
2286. Do you think the proposed breakwater would meet the requirements of the harbour? I think that it should take a bend to the west, so as to break the easterly seas more. Of course, that would narrow the entrance; but that disadvantage would, I think, be more than compensated by the extra shelter.
2287. You think that the collieries making use of Port Kembla could afford to pay a moderate charge for the shipment of their coal from that place? Yes, a moderate charge.
2288. Would you care to express an opinion as to what would be a fair charge? I do not know what the Newcastle charges are; but I think they might be followed. I think that an inclusive charge of 6d. a ton would be cheerfully met. It is very important to my mind that the railway charge should be the same for every colliery, and not so much a mile; otherwise the collieries near the harbour would have an advantage over those further back.

2289. Can you give the Committee any information as to what may be expected in the way of imports? I should not think that they would be worth considering. I do not think any foreign country would send their goods to Port Kembla.

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2290. Is it not probable that a large quantity of ore would come from Port Pirie? Yes, I overlooked that altogether. That, of course, would be a very large item.

2291. *Mr. Wright.*] But apart from the ore you do not think the imports would be much? No.

2292. *Mr. Trickett.*] I suppose the southern coal is pretty well world renowned as a steaming coal? Yes. The home owners look upon it as very little inferior to Welsh coal.

2293. Is it next in quality to the Cardiff coal? It is very near it. It has much the same characteristics as that coal.

2294. With facilities for export the trade would be bound to improve? Yes. I think that we shall have the whole of the East open to us. That will give an enormous market.

2295. How do you view the agitation to make Jervis Bay a port? I do not view it seriously. Jervis Bay is utterly out of reach.

2296. I suppose you would as soon send to Sydney by railway? Far rather.

2297. Even if the distance were a little in favour of Jervis Bay? Yes.

2298. A witness yesterday gave it as his opinion that the great bulk of the coal in the southern district was centred at the back of Illawarra;—do you agree with him? Yes; I heard Dr. Robertson's letter with regard to the cinder dyke read. We know to our cost that the statements contained in that letter are correct.

2299. *Mr. Lee.*] Are you of opinion that in the event of a breakwater being made at Port Kembla, the Government should have absolute control of the jetties? Yes.

2300. You think that it would be detrimental to the interests of the outside collieries if private owners were allowed to keep control of the jetties or railway lines? I think they should all be under Government control.

2301. Do you think that the place should be put upon the same footing as Newcastle? Yes.

2302. And that whatever appliances became necessary in the future should be supplied by the Government? Yes. I would not urge the construction of the Port Kembla scheme when my own interests are centred elsewhere, except on the understanding that Port Kembla is to be a Government port, and open to all without fear or favour.

2303. It would be impossible to work the port under other conditions? I think so.

2304. *Mr. Black.*] On what terms do you hold the Bellambi jetty? I think we have a yearly lease, the jetty being removable at pleasure.

2305. The material composing the jetty is your property, and you have permission from the Government to erect and use it? Yes.

2306. To whom does the land facing the jetty belong? It is private property, and is leased by the company.

2307. Under what conditions is the South Bulli jetty held? Under conditions similar to those under which our jetty is held.

2308. Do you know under what conditions the jetties at Port Kembla are held? No.

TUESDAY, 8 DECEMBER, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHREY.

The Hon. JAMES HOSKINS.

The Hon. CHARLES JAMES ROBERTS, C.M.G.

The Hon. WILLIAM JOSEPH TRICKETT.

The Hon. DANIEL O'CONNOR.

HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.

JOHN LIONEL FEGAN, Esq.

THOMAS HENRY HASSALL, Esq.

GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

Robert Charles Reed, Esq., Manager, Messrs. Gibbs, Bright, & Co., sworn, and examined:—

2309. *Mr. Hoskins.*] Does your firm export large quantities of coal from New South Wales to other countries? They purchase for export.

R. C. Reed,
Esq.

2310. Is the coal shipped away by your own vessels, or by other vessels? Both by our own and by other vessels.

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2311. Where do you send most coal? Principally to China; but now and again to Singapore, and across to America.

2312. Is more coal taken from the southern mines than from the northern mines? About the same from each coal-field, or perhaps a little more from Newcastle.

2313. Does the southern coal meet with favour abroad as a good steaming coal? It has a market quite distinct from the market for northern coal. There is a good market for southern coal at Shanghai, whereas Newcastle coal is unsaleable there.

2314. Is the southern coal sent to Singapore and to San Francisco? Yes, very largely.

2315. Is the southern coal trade increasing, or likely to increase? Its increase or decrease will depend upon its price. If means were adopted whereby its price could be reduced, the trade would increase.

2316. Is its present high price due to the high charges imposed at the ports to which the coal is sent, or because of the expense which has to be incurred here? The price of the coal is governed by the cost of getting it to its destination. One of our shipping companies carries more southern coal to Shanghai than to any other port, and a difference of 1s. a ton in its price would affect the market considerably. We have there to compete against Cardiff coal and coal from other parts of the world, and by a reduction in price we could compete very successfully.

2317. Do you bring the coal from the south coast to Sydney by colliers, and then tranship it into larger vessels, or do you load direct into large vessels? When the weather is suitable we send our steamers to Port

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- Port Kembla—there is no other port on the south coast to which we could send vessels; at other times we load in Sydney.
2318. What is the cost of bringing coal from the south coast and putting it on board a vessel in Sydney Harbour? From 2s. to 2s. 6d. a ton freight, and there is a difference of about 6d. a ton in the stevedoring charge. For coal going direct into the ships' holds the charge is 3d. or 3½d. a ton; but when it has to be hoisted out of colliers the charge is about 9d. a ton.
2319. If the Government expended a large sum of money in providing a safe harbour on the southern coast, could you sell the southern coal more cheaply in Shanghai and in other places than you do at present? Yes, most decidedly, and for more reasons than one. When our steamers go to Port Kembla, the coal is put straight on board without any handling; but when it is loaded from colliers it is broken. The coal put direct into vessels is larger, more saleable, and brings a better price than coal loaded from colliers, and we have fewer or no complaints as to the quality of coal loaded at Port Kembla, whereas when coal is loaded in Sydney Harbour we have claims for shortage and complaints of the bad quality of the coal. The coal in China is used principally for smithy purposes, and a great deal of it goes inland, and the larger the coal the better the price we get for it. Newcastle coal is no good for this purpose, because it is too soft. If there were a safe harbour on the southern coast, a great deal of coal could be sent away in sailing vessels to places like San Francisco, where a difference of a couple of shillings in its price would mean a great increase of trade.
2320. What do you give for southern coal at Port Kembla? From 6s. 6d. to 7s. a ton.
2321. If a good port were made on the southern coast, do you think that coal could be sold at a profit at 7s. a ton? I have no reason to think otherwise.
2322. Would that be likely to turn the scale in favour of southern coal as against Japanese or British Columbia coal? The competition in the San Francisco market is so keen that a reduction of 1s. a ton in price would make a great difference. A great deal of Australian coal goes to San Francisco now, and it has to compete very keenly with the Japanese coal, the British coal, and the British Columbia coal. Not only would there be a saving in price, but we could deliver the coal in better condition.
2323. Are you familiar with the southern ports? Yes. I suppose I was one of the first who opposed the sending of large steamers to Port Kembla.
2324. Where would you recommend the expenditure of public money on the southern coast for the construction of a safe harbour? I think Port Kembla is the best place. In March, 1890, I visited the southern ports, and especially Port Kembla, to advise two of the largest shipping firms in London as to whether they should send their steamers down there to load. I went down the south coast with the Commodore captain of one of the companies' fleets and his chief engineer, and, in my report home, I said that I could not recommend the sending of large steamers down there, because it was not safe to load large cargoes of coal in what I termed an open roadstead. So long as there was fine weather, everything would go well; but immediately there was a swell or heavy weather came on, the difficulties might be most serious. A steamer loading there would have to have steam up all the time, and if she had to leave suddenly it is possible that disaster might happen to her, because of the lee shore. Therefore, I considered that the risk was too great for the small saving that might be made. I went on to say that, in my opinion, the underwriters would eventually be influenced to allow steamers to go to Port Kembla to load, but that sooner or later a mishap would take place, and then the underwriters would prevent other steamers from going there.
2325. Has that happened? There has been no loss there, but vessels have been exceptionally fortunate, and no large steamers have been loading when a gale has sprung up. We have, however, on several occasions sent steamers there to load, which, after lying off the place for twenty-four hours, have had to return without a cargo.
2326. Have you a copy of the report you sent Home? It is so mixed up with private business that it would not be possible to give it to the Committee; but I have here the report which Captain Orr, who accompanied me, drew up. At the present time, except in fine weather, Port Kembla is a dangerous place for steamers to go to; but it appears to me that if a breakwater were run out as proposed, there would be a perfectly safe harbour for steamers to load in.
2327. And for sailing vessels too? Yes. I am quite satisfied that the proposed eastern breakwater would make the place perfectly safe for either steamers or sailing vessels to load.
2328. You have not heard the master of any vessel say that he would have an objection to going there, even if a breakwater were erected? No. Every master is on pins and needles now when he is ordered to go to Port Kembla; but Captain Orr in his report says that he would not have the slightest hesitation in going there if there were a breakwater.
2329. To whom does the captain report? The report was sent home to his owners. Captain Orr was at the time in charge of the s.s. "Port Denison." The report is dated 20th March, 1890.
2330. Will you read it? Yes. It is as follows:—

Report upon Harbour of Port Kembla as a Loading Port for large Steamers.

PORT KEMBLA is an open roadstead, affording no protection whatever with the wind from north to north-east, and with only partial protection from winds as far round as east. The off-lying islands named Five Islands afford very little protection. The three southernmost islands lie about one mile to the southward of the promontory on east side of the port, whilst the two smallest lie about a half-mile apart, and nearly a mile off the end of the promontory, therefore being of no use as shelter. The port is formed on the east side by a promontory (on which is a signal-station used for signalling the approach of, and warning off the coal vessels using the port) about 500 yards long, and with a reef extending about 300 to 400 yards to seaward from the end of the promontory. The promontory and reef run in a north-north-east direction, and some distance off in the same direction lies the northern of the Five Islands. The beach from the promontory runs with a sweep, forming the harbour, until about 500 yards from the promontory, when it runs in a direction about north until up to Wollongong. In the bend of the port lie the two jetties for coaling; the Mount Kembla Coal Co.'s being on the east side, and Southern Coal Co.'s on the west side. The Kembla Jetty runs out into about 24 to 25 feet of water—low water—and the Southern Co.'s jetty into about 30 feet at low water. The beach is a gradually shelving one, and along the water's edge are a number of rocks, and no doubt the same under water. The tide rises about 4 feet to 4 feet 6 inches. Each of the jetties has moorings and buoys laid down for the use of vessels loading there. Upon entering, a steamer would have to drop her own anchor about 80 or 100 fathoms off the end of the jetty to allow her to swing round and clear the jetty end, then slack away and haul astern into loading berth alongside the jetty. When in position she would have to make fast on starboard side by two 12-in. hawsers, one on bow and one on quarter—these would be provided by the company; on the port side in the same manner as starboard side, but with two hawsers provided by the ship, and from the stern to a buoy aft by a ship's line also. I do not know of any steamers of say 3,000 to 4,000 burthen that would have three hawsers sufficiently strong to hold her

her with any sea on whilst loading. Steel hawsers are out of the question. In event of bad weather all these moorings would have to be slipped from the vessel's deck, thus making it very difficult to move the engines without fouling them. Large vessels would have to go alongside and load only in fine weather, and lie under steam ready to proceed to sea in half an hour's notice. The winds most to be feared at this port are north to north-east. The north-east are almost the most dreaded by coasters, and are commonly called "black north-easters." When they do set in they last for from two to four days, accompanied by murky hazy weather, with very heavy squalls. The atmosphere during a north-easter is so thick and hazy, that it is difficult to make out things a mile off. In the event of a large vessel being caught in one of the north-east to north winds, and her alongside the jetty, and supposing she were in any trim for sea, it would certainly be a very dangerous undertaking to proceed to sea. Supposing she cleared the jetty, she would have a very narrow passage to steam through, and could not see much on either side, having a dead lee shore on her port side, and a dangerous reef with a low outlying island to seaward of the reef on her starboard side. But before getting away there is the difficulty of letting go ropes from three buoys, otherwise they would have to be slipped, with the disadvantage as before mentioned; she would have to be hove up to, and the anchor picked up, and engines would have to be depended upon to move immediately they were called upon. Again, it must be borne in mind that in the case of a vessel (large one) loading alongside the jetty, the beach, with possibly large rocks around, is within say 150 feet from her keel were she drawing 20 to 24 feet of water. One thump would break her rudder-post. This or propeller-fouling the moorings would certainly be the cause of the loss of the vessel. The damage to the pier would always be a source of dread to those on board, it being impossible to tie up a vessel like the "Port Denison" alongside the pier, and to keep her in position for loading, and were the ropes to break she would certainly damage the pier severely and herself very badly.

Small vessels could always load, whilst large ones, say 3,000 to 4,000 tons, would have to wait for favourable opportunities, the smaller ones being more easily handled and loaded more quickly. No doubt large vessels could, and will, load there, but not for long before there would be a vessel lost or stranded, and this would be when least expected. When an accident does happen in the port, it will certainly be a very serious one, and well up in the thousands of pounds. Given a certainty of smooth water, or a breakwater to load under the lee of, Port Kembla would be safe, compared with what it is at present. As it now is, I am positive it is a dangerous harbour for large vessels to load at.

S. M. ORR,
Master.

Sydney, 20th March, 1890.

The captain has been coming to this coast off and on for twenty years. The "Gulf of Guinea" was one of the first steamers to load at Port Kembla. She had steam up the whole time she was there, and succeeded in taking in half a cargo. The P. & O. steamer "Coromandel" was also fixed to go to Port Kembla, but I understand the company sent the captain, chief engineer, and their local representative down to the place to report. They then thought that they would not risk their steamer, and consequently the charter was cancelled. The position to-day is exactly the same as it was then. No doubt a number of large steamers has successfully loaded at Port Kembla. We have sent steamers there. We held out against it for three or four years, but we found that we were forced to go there in order to enable us to compete in other markets. Our China boats have either to take back coal or to go back in ballast, and the saving of 2s. 6d. a ton which is made in going to Port Kembla for coal makes almost the difference between profit and loss.

2331. Do you know anything about Bellambi? I have passed the place, but I cannot give you any opinion about it.

2332. In conversation with seafaring men, commanders of steamships, owners, and so on, have you heard the opinion expressed that if a breakwater were made at Port Kembla it would be a good place at which to load coal? Yes; I suppose since 1890 I have had as many conversations with captains on this topic as any one has had, and they, without exception, are satisfied that Port Kembla would make a good loading place for almost any sized steamer if a breakwater were run out. There is very little difference of opinion as to the direction such a breakwater should take.

2333. If the proposed breakwater were made at Port Kembla, I suppose the entrance would be safer than the entrance to Newcastle Harbour? Yes, very much safer. It is not the entering into Port Kembla that is feared, but being there on a lee shore should bad weather come up.

2334. Do you know anything about Lake Illawarra? I have seen Wollongong, but I have not been at Lake Illawarra.

2335. You have seen the entrance to Lake Illawarra? Yes.

2336. How far would the lake be from the centre of the southern coal-field? I should say that it is not so centrally situated as Port Kembla. It is a little too far south.

2337. *Mr. Humphery.*] Captain Orr in his report speaks of the black north-easters as being more to be dreaded than southerly weather? The breakwater that I have in view would keep out north-easters. It would run out in a north-westerly direction, more in the line of the coast from Red Point.

2338. The distance from the end of the proposed breakwater to the shore is three-quarters of a mile;—how much further west would you suggest that it should be taken? About 500 feet. I have been down there several times, and it appears to me that such a breakwater would sufficiently shelter the place.

2339. Would that give sufficient room to allow sailing vessels as well as steamers to enter and to leave the port? I think so. Of course, if the trade of the place increased enormously, you might have to provide more shelter; but, under the circumstances, I think that one breakwater would be sufficient.

2340. During the prevalence of a black north-easter, how would the breakwater you speak of protect the place? Well, I do not think we ever have black north-easters lasting as long as three days.

2341. On that point you do not agree with Captain Orr? No; though you only want an easterly to come up suddenly to do a great deal of damage unless the jetties are protected as proposed.

2342. Would that damage be done if the breakwater described by you were carried out? I do not think so.

2343. I take it that the breakwater to which Captain Orr refers would be an eastern breakwater? I am satisfied that what was in his mind was a breakwater such as I have described, because we discussed the matter together on the spot.

2344. And you think that, in Captain Orr's opinion, an eastern breakwater would be sufficient? Yes.

2345. *Mr. Trickett.*] For what companies are your firm agents? The Eastern & Australian Company, the Anglo-Australian Steam Navigation Company, Gellatly, Hankey & Sewell (Mogul Line), Houlder Brothers, and other steamship companies. We represent a dozen or twenty owners, besides those I have mentioned.

2346. Do the steamers of all those companies use southern coal for steaming purposes? No.

2347. Do most of them? Most of them use southern coal. The old class of steamers use Newcastle coal, but the new class of steamers use southern coal.

2348. Why is that? The newer steamers have a greater draught, and if they used a soft, gassy coal like the Newcastle coal a great deal of it would go up the funnel. Instead of burning 30 tons a day, they would be burning many more tons a day. Every mail steamer, without exception, takes southern coal.

It

R. C. Reed,
Esq.
8 Dec., 1896.

- R. C. Reed,
Esq.
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- It is a denser coal; it is slower in burning; and you only want the draught to get as good results from it as can be obtained from the Newcastle coal. There may be a little more labour involved in dealing with the ash, but that is a secondary matter.
2349. There has been a general improvement in regard to draught? Yes. Nowadays they have narrower bars, and a greater draught than they used to be able to get.
2350. One of your new boats—the “Australia”—went up to Newcastle the other day for coal. Why was that? Because the China agents could not recommend the shipment of southern coal to Shanghai, and advised us to send a limited quantity of coal to Hongkong. That coal is taken sometimes for the gas works at Hongkong I believe.
2351. Did the “Australia” take Newcastle coal for steaming purposes as well as for cargo? She may have taken a little to mix with the rest of her bunker coal; but most of her bunker coal was southern coal.
2352. How much coal does a vessel like the “Austrian” consume? About 28 tons a day. At the present time we are just able to hold our own in the China market, and if we could cheapen our coal to the extent of a 2s. 3d. a ton, the competition would be much easier.
2353. How is the coal trade of New South Wales affected by the Japanese coal? It is very much affected by it at the present time. Our steamers have been going to China and Japan for, I suppose, twenty-two years; but it was not until the strike of 1891 that we used Japanese coal at all. The first cargo of Japanese coal that we bought, we bought in Sydney Harbour, when we took about 1,000 tons for the “Guthrie,” and we found it so much better than our prejudices had led us to expect that we have used it ever since, off and on, on the downward voyage.
2354. Is it as good as the Bulli coal? No, it burns more quickly; but it is good coal.
2355. Is it cheaper than the colonial coal? Well, it is going up in price now.
2356. Is that because of a decrease in the output? No. I think labour in Japan is becoming a little more expensive.
2357. You only take sufficient coal from here to last you for the voyage to Japan? Invariably.
2358. Was that always your practice? No. Sometimes we took sufficient coal for the round voyage. We make our arrangements so as to get the coal as cheaply as we can. Of course it is more expensive to get Japanese coal in Hongkong or Shanghai than in Japan.
2359. When did you last send one of your eastern boats to Port Kembla? A couple of months ago, I think. The “Airlie” went down there a few months ago, and after lying off the port for about twenty-four hours, had to come back again.
2360. And load at Sydney? Yes.
2361. The captains of large vessels object very much to have to lie alongside the Port Kembla jetties? Yes. They do not mind going in there, but they are glad to get out again.
2362. Do vessels always keep steam up when they are coaling there? Yes, always.
2363. Sometimes you send steamers there, and sometimes you do not? Whenever the weather will permit we send our steamers there. We have obtained permission from the underwriters at home to go there; but I am quite certain that the loss of a steamer would put all the underwriters up in arms against Port Kembla, and they would then prevent ocean-going steamers from going there. It took us three years to get permission to go there.
2364. Was there any extra premium to pay? That I cannot say definitely.
2365. Of course, if the proposed works were carried out, charges would have to be made by the Government for the protection afforded? Yes.
2366. I suppose the shippers would be willing to pay charges equal to those paid at Newcastle for similar facilities? Yes, certainly. If we got a safe port at Port Kembla it would pay us to pay port dues or an export duty on coal rather than have the coal brought up here in small colliers at a cost of 2s. 6d. a ton.
2367. Does the irregularity of supply interfere with the export trade? I believe that the export trade would increase very largely if we always had the advantage of a reduced price. We do not export nearly as much southern coal to San Francisco as we used to do, but if we could send coal away in sailing vessels at 2s. 6d. a ton less for export we could easily compete.
2368. That is your experience as a man who is in constant correspondence with these oversea places? Yes.
2369. If the Government constructed the proposed breakwater, would it be desirable that they should resume the two private jetties at Port Kembla? Yes, I think they should be resumed and worked by the Government. I do not think there should be a monopoly established there.
2370. I suppose greater regularity of loading would be ensured if the two jetties were under one control? Yes, I think they should be entirely in the hands of the Government.
2371. *Mr. Clarke.*] Do you know if any wrecks have taken place at Port Kembla? No, much to my surprise. But there have never been any large vessels at the jetties in rough weather.
2372. To what extent do you think the coal trade would increase if the proposed breakwater were made? I would not like to estimate.
2373. It would all depend upon the demand, and upon the competition? Yes. Of course if other coal came down in price, the trade might not increase; but it is not likely that that would happen.
2374. It is necessary that the breakwater should be constructed if sailing vessels are to go to Port Kembla? Yes. They cannot go there now, and steamers will not continue to go there if there is an accident.
2375. Coal sent from there direct would bring a better price than coal shipped from Sydney? A few years ago there used to be a difference of 1s. a ton in the price of Newcastle coal in the San Francisco market, according as the coal had been shipped direct from Newcastle or from Sydney, and I daresay the same thing might happen in connection with southern coal.
2376. Do you think that if the proposed breakwater were constructed, Port Kembla would be the best port south of Sydney? I think it is the best place to make a harbour, so far as I know the coast.
2377. Have you seen the proposal to make a northern breakwater? Yes; but I think a northern breakwater would be unnecessary at the present time.
2378. *Mr. Hassall.*] Can you tell us what steamship owners would be willing to pay if the proposed improvements were made at Port Kembla? I would not like to commit myself to figures, but they would be only too pleased to pay any reasonable charge.
2379. Supposing the charge was 3d. or 6d. a ton? Inasmuch as they now pay 2s. 6d. a ton to bring the coal to Sydney to load it there, I do not think they would refuse to pay any reasonable charge which the Government might impose.
- 2380.

2380. *Mr. Fegan.*] Is the density of the southern coal an advantage to the buyer? It is an advantage to the steamers, because it enables them to carry more in their bunkers.
2381. Is not the density of the southern coal so great that it not only goes against its heating power but its steaming power? Well, that is a question for an engineer. The engineers have told me that southern coal takes up less room in the bunkers than Newcastle coal. I believe that the difference is about 4 feet to the ton.
2382. Coal deteriorates very much by handling? Yes; especially Australian coal.
2383. What is the price per ton for Japanese coal at Shanghai? We never take it at Shanghai. We take it at the mines.
2384. A witness has stated that the Japanese coal controls the eastern market because of the heavy freights from Australia? Well, we do not charge any freight at all. We take the coal up on ship's account.
2385. Why does the Japanese coal continue to keep the eastern market? It does not keep the market, but it holds its place, because of its cheapness. The fact that we can land 10,000, 20,000, and 30,000 tons of coal in the Shanghai market and get one and two dollars a ton more for it than can be obtained for the Japanese coal, shows that the Japanese coal does not hold the market.
2386. Knowing the quality of our own coal, and the facilities we have for shipping it, you are not afraid of the Japanese coal? We are not afraid of it, but we would like to see it out of the way.
2387. There is no reason to be afraid that a harbour at Port Kembla might become useless because of the large increase of the Japanese coal trade? No. The spread of the Japanese coal trade is more likely to affect the Newcastle coal than the southern coal.
2388. Why is the Newcastle coal unsaleable at Shanghai? Because it is not used there. Similarly the southern coal does not sell in the Hongkong market. The coal that goes to Shanghai is chiefly sent into the interior of China for smithy purposes.
2389. Is not the Newcastle coal good smithy coal? They say not.
2390. It is stated in the *Wealth and Progress of New South Wales* for 1894, that—

The result of analyses made of coals from various localities in the Colony showed that the mean specific gravity of the northern district coals was 1.300; of the western coals, 1.346; and of the southern coals, 1.394; while the mean of a number of samples of British coal was 1.279. . . . The steam producing power of the coal from the northern districts of the Colony is almost equal to, and that from the south and west a little below, the generating power of the coal raised in Great Britain.

- ? Well, you can get steaming power out of the Newcastle coal, but you burn so much more of it. Some steamers would burn 2 tons of Newcastle coal to 1 of southern coal.
2391. Do you think that the southern district should have the same facilities for the shipment of coal as have been given to the northern district? Yes.
2392. I understood you to say that it would not be fair to leave the jetties of Port Kembla in the hands of private individuals;—did it ever strike you that the shipping of the coal away should be done by the Government? I have not gone so far as that.
2393. Can you give us any further reasons why the Government should go to the expense of resuming the jetties? Well, I presume that after resuming them, the Government would make such charges for their use as would repay the cost of resumption.
2394. You are not able to compare Port Kembla with Bellambi? I do not know Bellambi.
2395. If Port Kembla were a dangerous port, do you not think that some accident would have happened there before this? Well, an accident might occur to-morrow.
2396. Do you know that one of the largest vessels coming here has loaded at Port Kembla? Yes, the "Indrani" loaded there; but if she had been there in rough weather no ropes would have held her, and the probabilities are that the wharf and all would have gone.
2397. During the Newcastle strike this year, did not a large number of vessels which had gone to Port Kembla for coal have to leave there on account of the rough weather? I do not know; but I know that vessels which went there to load had to return without a cargo.
2398. I suppose that meant a considerable loss to the trade of the district? Yes; a loss to everybody concerned.
2399. *Mr. Roberts.*] Could you tell us how much the trade of Port Kembla would increase if the proposed breakwater were made, and you were enabled to compete against the Japanese coal more easily? It would be very difficult to say how much the trade would increase; but there would be a great increase.
- 2399½. Of course if a population is ever settled at Port Kembla there may be an inward trade, as there is at Newcastle. Most assuredly.
2400. Is it not probable that large quantities of ore will be brought from Port Pirie to the smelting-works? No doubt a large quantity of ore will be landed at Port Kembla if a harbour is made there.
2401. Would the construction of one breakwater render the harbour sufficiently quiet for the unloading of cargo? I think so.
2402. Is not much quieter water required for the unloading of ships than is necessary for the shipment of coal? Certainly; but in Newcastle we discharge alongside the Government wharf, and as much swell comes in there as probably would be at Port Kembla if the breakwater were made.
2403. Would not the place be rather exposed if a black north-easter were blowing? Perhaps parts of the bay would be exposed, but not that part where the jetties are. The object, I take it, is to expend sufficient money to meet present requirements, but if the trade of the port increases very largely it might afterwards be found necessary to do something more.
2404. You send your vessels to Port Kembla now if the weather permits, but otherwise you load coal in Sydney? Yes. It sometimes happens that we lose as much as half a dollar—1s. 1½d.—a ton upon coal shipped from Sydney—that is apart from the cost of transhipment—because of the depreciation in value in consequence of the extra handling.
2405. *Mr. O'Connor.*] Port Kembla at the present time is not thoroughly secure, but if the proposed improvements were made it would be secure? Yes; that is my opinion. At the present time, except in fine weather, it is a dangerous port to load at.
2406. If the proposed improvements were carried out, a steamer like the "Gulf of Guinea" could stay there sufficiently long to load a full cargo? Yes; she could stay there a month.

Captain Green, Superintendent, Eastern and Australian Steamship Company (Limited), sworn, and examined :—

- Captain Green.
8 Dec., 1896.
2407. *Mr. Humphrey.*] Have you ever been to Bellambi? I have passed close in to the place, but I have never been in there. As a sailor, I should say that Port Kembla is more convenient and could be made a more secure harbour than Bellambi. Port Kembla seems to be much more protected.
2408. Have you taken steamers to Port Kembla? Yes; I have taken vessels of 2,300 tons there.
2409. Have you loaded coal at the jetties there? Yes, at the southern jetty.
2410. Have you run any risks through the prevalence of north-easterly weather? No; I have never been interfered with by north-easterly weather, but we have once or twice left the place with less coal than we intended to take, because of south-easterly weather.
2411. Have you any opinion as to the kind of breakwater that is necessary at Port Kembla? Yes; I have had conversations with the people there on the subject. I think that a breakwater would make the place comparatively safe.
2412. You have heard Captain Orr's report about the risk in a north-easterly gale? Yes, a heavy north-easterly gale would be very awkward; but I consider that if the breakwater were taken a little more to the west than it is shown on the plan the north-easter would do no damage. I would run the breakwater out in the direction of the pencil mark. That would give much smoother water in a north-easterly gale than the proposed breakwater would give.
2413. Would that leave sufficient room between the shore and the end of the breakwater for the entrance of sailing vessels as well as of steamers? It would do well enough for the steamers, but I would not answer for sailing vessels.
2414. Would it be better to leave a wider entrance for sailing vessels? No; it would be better rather to contract the entrance. By making the eastern breakwater a little more to the westward at the northern end it would make a more secure entrance.
2415. Do you know anything about Lake Illawarra? I have seen the lake.
2416. You are not able to express an opinion as to its suitability for the shipment of coal in vessels of large tonnage? I do not know what the soundings are.
2417. You believe that Port Kembla could be made a suitable harbour for the shipment of coal? Yes; we should load our steamers there every voyage when southern coal was required if the wharfs were properly protected.
2418. Would you load bunker coal or cargo coal? If there were facilities for loading the bunkers there, we should load them at Port Kembla instead of at Sydney.
2419. Do you send your passenger ships to Newcastle for coal? Yes, sometimes.
2420. For bunker coal? Well, steamers going on to Melbourne are bunkered in Sydney.
2421. Could you not continue to take your bunker coal from Sydney even if Port Kembla were improved? We only take sufficient bunker coal in Sydney to take our steamers from here to Melbourne and back.
2422. You would not interrupt the passage from Sydney to Melbourne by a stay at Port Kembla for coal? No. We take in about 300 tons of bunker coal for the voyage from Sydney to Melbourne and back, and if we go to Newcastle we put about 600 tons into the bunkers for the voyage north. Our steamers use from 700 to 1,000 tons of bunker coal on the voyage to China. If we could load at Port Kembla we would take 700 tons there, and 300 in Sydney.
2423. Where do you get your bunker coal now? In Sydney, unless the steamer goes to Newcastle as the "Australian" did, to load cargo coal. Then we take in bunker coal there at the same time.
2424. Would it frequently happen that circumstances would permit you to put into Port Kembla for your bunker coal? No; we would not go there for bunker coal alone. Whenever we have to take a cargo of Newcastle coal, we go there to load. We would not think of loading Newcastle coal in Sydney, and it would be the same with southern coal if the harbour were protected.
2425. I suppose, then, the probability is that you would continue to get your bunker coal in Sydney? Yes.
2426. Is it likely that, if the breakwater were made, a large number of sailing ships would go to Port Kembla for coal? Yes. In that way they would save the cost of bringing the coal from Port Kembla to Sydney. If a sailing vessel has to take Newcastle coal, she goes there to load it.
2427. Do many sailing vessels at present load southern coal? Yes; I have seen several loading in Sydney harbour, but I do not know how much coal is taken by them.
2428. What is your practice in regard to obtaining bunker coal? When a steamer is on a voyage from China to Melbourne, we call in at Sydney to discharge cargo, and at the same time we put in sufficient bunker coal to take her to Melbourne and back. When she comes back here from Melbourne, if we are taking a cargo of Newcastle coal to China we go to Newcastle for it, and at the same time fill our bunkers with Newcastle coal.
2429. Would it be worth your while to send a steamer to Port Kembla simply for bunker coal? Well, as a rule we would not send a steamer to Port Kembla simply to fill her bunkers.
2430. Do you consider Port Kembla at the present time a safe place for steamers? In fine weather, perhaps. But no port where you have to keep up steam the whole time can be considered safe.
2431. It would be quite unsafe to lie alongside the jetties at Port Kembla unless you kept steam up? Yes. It would be running a risk to blow steam down.
2432. You are favourable to the proposal before the Committee? Yes.
2433. *Mr. Trickett.*] What wind was blowing when the "Airlie" had to come back from Port Kembla without a cargo? A south-east gale. She remained there at anchor for several hours, but the sea was too rough to go alongside the jetties. Had there been a breakwater, she would have loaded.
2434. The anchorage at Port Kembla is excellent? Yes. We have frequently had to anchor a steamer there while another steamer was completing its loading.
2435. The place has all the advantages of deep water and a good holding ground? Yes. When the breakwater is made, we shall load all our vessels there when southern coal has to be taken; but we cannot do it now, because of the uncertainty and the chance of delay.
2436. Is the "send" very marked at Port Kembla? Yes; but we have not been much inconvenienced by it. I have never been there in very heavy weather. They have splendid moorings there, and splendid fenders.
2437. And good appliances for loading? Yes; we have loaded coal there at the rate of 700 tons an hour.
2438. I suppose the "send" comes in direct from the ocean? Yes, on the starboard bow. The steamers drop their anchors, and swing round to the north-east.

2439. It would not be likely to come in with much force from the north or north-east if the proposed breakwater were erected? No. I have never experienced any heavy weather there with a north-east wind, and, at any rate, the water within a line drawn from the Southern Company's jetty at the head of the breakwater, would always be comparatively still.

Captain
Green.
8 Dec., 1896.

2440. *Mr. Lee.*] You admit the necessity for a safe port on the south coast? Yes.

2441. The present conveniences given there are not sufficiently secure for a large coal trade? No.

2442. But I suppose there is no justification for two ports? No; one good port would be quite sufficient.

2443. Do you think Jervis Bay enters into the question? No.

2444. Does Lake Illawarra? I think the position of the entrance is very much against it, also the depth of water inside.

2445. What depth of water would be required at Lake Illawarra to admit of the entrance of large vessels? The biggest ship I have taken to Port Kembla is about 330 feet long, and came away drawing about 21 ft. 6 in.; but large steamers would load down to 23 and 24 feet.

2446. Do you think it would be feasible to put in short jetties near the heel of the eastern breakwater, and carry on the discharging of cargo there? I would not build the jetties out from the breakwater. I would take them out from the main land. At Colombo you see the seas breaking over the breakwater at times. Of course, that could be prevented; but it would make the work more expensive. I think that, before any decision on that point is come to, you should see what the result of building the breakwater is.

2447. Supposing a breakwater were made, do you think the requirements of the port would demand the construction of another jetty? Yes.

2448. *Mr. Wright.*] I understood you to say that you would like the breakwater brought round more to the west for the convenience of sailing vessels? It would give vessels more shelter if brought further round to the west.

2449. But what about getting in and out? There would still be a good entrance.

2450. I suppose sailing vessels would be towed in there? Yes, I think so. It would be awkward to moor at the jetties without the assistance of a tug.

2451. A vessel of 2,000 or 3,000 tons would not attempt to sail in? No, they would not risk it unless stress of weather demanded it, when they would get a snug anchorage, especially for small craft.

2452. And in bad weather they would have difficulty in making an offing in going out? Yes, they would prefer to be towed out.

2453. Only twelve sailing vessels left Sydney in ballast last year; where would they go to? I suppose they would all go to Newcastle.

2454. *Mr. Roberts.*] If the northern end of the proposed breakwater were brought within half a mile of the shore, would that be dangerous to the place? No, the entrance would then be perfectly safe for a steamer.

2455. And there would be ample harbour accommodation? Yes, I think so. You are not much more than a ship's length off the Cawarra Bank when taking a large steamer into Newcastle.

2456. The entrance at Newcastle is less than a quarter of a mile wide? Yes. An entrance half a mile wide would be quite safe.

WEDNESDAY, 9 DECEMBER, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.

The Hon. JAMES HOSKINS.

The Hon. CHARLES JAMES ROBERTS, C.M.G.

The Hon. WILLIAM JOSEPH TRICKETT.

The Hon. DANIEL O'CONNOR.

HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.

JOHN LIONEL FEGAN, Esq.

THOMAS HENRY HASSALL, Esq.

GEORGE BLACK Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

Captain Jose Horatio Amora, Consul for Chili, sworn, and examined:—

2457. *Chairman.*] What are you? At the present time I am engaged in commercial pursuits, but by profession I am a master mariner.

Captain
J. H. Amora.
9 Dec., 1896.

2458. *Mr. Trickett.*] Are you fully acquainted with the south coast between Sydney and Jervis Bay? Yes, I am very well acquainted with it.

2459. For what length of time have you known it? For over twenty years.

2460. Is that as a mariner? Yes, I have been down there with steamers, and I have also been engaged in managing businesses down there.

2461. Do you know Port Kembla? Yes, I have particular reasons for remembering Port Kembla. A vessel of which I at one time had charge, the "Llewellyn," broke her tail end shaft off Stansfield Bay, near Coalcliff, and I worked her from there down to the inside of Tom Thumb Island, where I anchored with 50 fathoms of chain on one anchor, and 40 on the other for three nights and two days during a south-east gale. During that time I refused assistance because I felt sure, from the way the vessel was riding that I was perfectly safe there.

2462. So that you had good holding-ground? Yes, splendid holding-ground.

2463. But you were not inside Port Kembla? No. Afterwards, when the weather moderated, I sent my boat to Port Kembla, to report to Sydney. Port Kembla is a place I know well, having laid the first moorings there, and having taken there the first large steamer that went down to try the Mount Kembla Jetty.

2464. Have you had any experience of Port Kembla in rough weather? On the occasion I speak of if I had had daylight, I should have gone further in; but the wind was so shifty, and my vessel was so light, that I thought it prudent to take the first good anchorage that I could get.

2465. Is Port Kembla sheltered in southerly weather? Yes.

2466. Is it sheltered in northerly and north-easterly weather? It is open to northerly and north-easterly weather, but no sea comes up with a north-easter blowing. The weather which must be provided against is the easterly, south-easterly, and south south-easterly weather.

2467.

- Captain
J. H. Amora.
9 Dec., 1896.
2467. Do you think that the proposed eastern breakwater would afford protection to the port in a weathers? I do; and I believe that any easterly sea that might strike the breakwater would run away the north-west instead of entering the harbour.
2468. If the head of the proposed breakwater, which is three-quarters of a mile from shore, were turned to within half a mile of the beach, would that give a sufficiently wide entrance? It might give a sufficiently wide entrance; but I am sure that the entrance would not be as good as if it were three-quarters of a mile wide. The proposed breakwater would give a larger area of protected water, and would lessen the chance of there being any surge in the harbour. In South America they have found that when they have built the breakwaters too close in to the shore the surge has been very great.
2469. The wider the entrance, the less the "send" in the enclosed water? Yes. That is the principle in moderation.
2470. You think that if the entrance to the harbour were only half a mile wide, that would increase the "send"? I think so; and by taking the breakwater in a little, you would afford more protection from northerly winds.
2471. There is a pretty good blow sometimes during a black north-easter—would the breakwater give shelter from that weather? To a certain extent. Of course, you could not keep out the north-easterly weather unless you made a northern breakwater; but the bringing of the end of the eastern breakwater a quarter of a mile nearer the shore would, I think, make things worse, because the seas would come right in and sweep round the port.
2472. What area of sheltered water would there be during north-easterly weather;—would all the water be sheltered within a line between the head of the breakwater and the northern jetty? The northern jetty would barely be sheltered. We have found, however, that when the wind is north-east the sea runs a little more to the east.
2473. So that the breakwater would be more affected in north-easterly weather than one might suppose by looking at the plan? Yes.
2474. Not nearly so much sea gets up with a north-easter as with a southerly or a south-easter? No.
2475. Do you think it is desirable that a harbour should be made on the south coast for the convenience of shipping? I think it very desirable.
2476. Besides giving facilities for loading and unloading, would it have other advantages? Besides giving facilities for the shipment of coal, it would be a port of refuge, and it would afford a splendid outlet for a great deal of the Illawarra produce.
2477. Do you know anything about Bellambi? Yes.
2478. How does that place compare with Port Kembla as a place for the construction of a breakwater? I prefer Port Kembla a thousand times.
2479. Why? The area of water at Bellambi is too confined.
2480. What is the holding ground at Bellambi? It is not so firm as at Port Kembla. The sand seems to be looser.
2481. Are there not reefs about there? Yes, outside, and the ground inside is rocky here and there.
2482. Do you think it is as well sheltered as Port Kembla? No. Red Point shelters Port Kembla to a great extent, and the Five Islands are a great natural shelter. They are a kind of breakwater in themselves.
2483. How long is it since you have had practical experience of these places? I suppose six or seven years.
2484. Do you know the proposal to construct a harbour at Lake Illawarra? I understand that it is proposed to open an entrance into the lake close to Windang Island, and to make docks for the reception of vessels in the lake.
2485. What is the least draught of water that it would be desirable to have at a port from which coal is shipped by oversea vessels? For a loading berth not less than 24 or 25 feet.
2486. Would 15 feet be of any service, except for coasting vessels? Absolutely none, and I question very much whether it would be of much use to coasting vessels; they are becoming so large.
2487. Would the breakwater be a considerable advantage in developing the sailing ship trade? Yes; a breakwater would make the port available for that trade. Sailing ships do not go there now to my knowledge.
2488. The breakwater would be of more advantage to sailing ships than to steamers? Yes; steamers can get away whenever they please; but sailing vessels would have to haul out to an anchorage. While the anchorage there is very good, and I should have no hesitation in lying there if I had good ground tackle, still it would be a great advantage to have a breakwater. I question whether some people would care for their vessels to go there at the present time.
2489. Would you like to take a sailing vessel there to load coal at the present time? Not a large sailing vessel; only a small vessel that could be easily handled.
2490. Do you know anything about the coal trade on the southern coast? I was connected with it for some years.
2491. What is your opinion of Wollongong Harbour;—is it of any use at all? It has served its purpose, and to my mind it is a great pity that the money was not spent on works like the proposed breakwater.
2492. Wollongong Harbour is only suitable for vessels up to 700 or 800 tons? Yes.
2493. As a port it could never be the means of developing the southern coal-fields? No. That is impossible.
2494. You think the Port Kembla scheme is the best that you know of? Certainly. No one with any local knowledge, and especially nautical knowledge, could arrive at any other opinion but that that is the only desirable port.
2495. Do you know anything about Jervis Bay? Yes, it is a splendid port; but it is too far south.
2496. The coal might as well be sent to Sydney as to Jervis Bay to be loaded? Yes.
2497. Therefore Jervis Bay is out of the question? Yes.
2498. *Mr. Clarke.*] Would it be possible to make Bellambi a shipping port? Everything is possible; but even with the expenditure of a great amount of money I question if you could ever make Bellambi anything like so good a harbour as Port Kembla might be made.
2499. Do you know what quantity of coal is shipped now from the two jetties at Port Kembla? I know that a large quantity is shipped, but I cannot say how much.
2500. Do you think that in the event of the proposed improvements being carried out, the shipment of coal will be increased? I do; because I have known vessels not to have been able to get coal there, and to have gone to Newcastle.

2501. What would be the extent of the increase? I should imagine it would be 50 per cent.
2502. Do you think that other collieries on the coast would continue to use their jetties if the proposed works were carried out, or would they ship entirely from Port Kembla? No doubt they would use their own jetties for a time, but after a while the safety of their property and the saving of wear and tear would probably cause them to ship wholly at Port Kembla.
2503. Independently of the intercolonial trade, they would load into large vessels at Port Kembla? Yes. A great many vessels would go to Port Kembla which now go to Newcastle. I know of three or four vessels that would have gone to Port Kembla but they were prevented by the weather.
2504. If the proposed improvements were carried out, it would be possible for sailing vessels of any size to load at Port Kembla? I think so.
2505. Can you give the Committee any information as to the quantity of coal carried in sailing ships—say, from Newcastle to various over-sea ports? Not from memory.
2506. I believe that inasmuch as freights by sailing vessels are cheaper than freights by steamers, a great increase in the coal trade would result from the employment of sailing vessels at Port Kembla? Yes; but I think that the day is not far distant when we shall be able to carry coal by steamers almost as cheaply as in sailing vessels.
2507. Steamers on long voyages consume large quantities of coal? Yes; but they are making such vast improvements in machinery that the consumption of coal is becoming smaller and smaller, and I think that steamers will pay better than sailing vessels because of the time they save. The matter is exercising the minds of shipowners at the present time. They are inquiring whether the export of nitrate of soda from the western coast of South America could not be better done by steamers.
2508. Have there been any wrecks at Port Kembla since they commenced to ship coal from there? Not that I am aware of.
2509. What kind of produce, other than coal, do you think would be shipped from Port Kembla? Much of the produce that is now carried by the steamers.
2510. I suppose chiefly dairy produce? Yes; all that was not brought by rail.
2511. Would not that be a very small item? I am not speaking only of what the coal vessels would take away, I am speaking of vessels trading up and down the coast. They could take in their coal, and whatever dairy produce they required at the same time.
2512. What other places are there to ship dairy produce from at the present time? Well, they ship a certain quantity from Wollongong now; because the railway cannot compete with the water carriage. I do not see why they should not ship from Port Kembla.
2513. Do you think it likely that large quantities of ore will come from Port Pirie to Port Kembla to be treated at the Dapto smelting works? If the smelting company has its own port, no doubt its stuff will go there; but, apart from that, I think that a good deal of stuff will be brought to Port Kembla. The fact that vessels will be able to use Port Kembla in any weather will be a point in its favour. The Illawarra steamers now cannot at times get into Wollongong or Kiama, because of the rough weather, whereas they could always make Port Kembla.
2514. In the event of the Lake Illawarra scheme not being carried out, do you think the smelting company would land their stuff at Port Kembla? I should think so. If I were the master of a vessel, and it were a question of freight from South Australia to Port Kembla, or to Lake Illawarra, I would prefer to go to Port Kembla even for a little less money.
2515. *Mr. Lee.*] Have you had experience of coastal ports in other parts of the world? Yes.
2516. Do you know any similar to Port Kembla? Yes; we have one or two similar places in South America. Tome, in Chili, and Talcahuano are splendid open places in fine weather, but in winter time vessels ride badly there owing to the prevalence of northerly gales. They constructed a breakwater at the latter port, but I heard, two mails ago, that it had been broken in the middle through the force of the sea. They spent 2,500,000 dollars there.
2517. Was that breakwater built for the express purpose of protecting the bay? Yes, and to protect the new docks of the Chili arsenal. There, however, they have a straight line of coast with nothing to break the roll of the sea; but Port Kembla is protected by Red Point, and the islands to the south, so that the sea would be broken before they reached the breakwater.
2518. Do you think that there will be any danger of the proposed breakwater being carried away? No. There is a lot of reefs between the inner Tom Thumb Island and the three islands lying off Red Point. These reefs will, I think, protect the breakwater in some measure.
2519. The conformation of the coast will largely assist to diminish the force of the sea when it reaches the breakwater? Yes.
2520. And you have no doubt as to the protection that the breakwater would give to shipping? None whatever.
2521. If there were, say, thirty sailing vessels inside the proposed breakwater waiting to be loaded, and a heavy easterly gale sprang up, could they ride it out? I think so. I think that with the proposed breakwater they would be fairly well protected. The broken ground I have spoken of would lessen the force of the sea as it approached the breakwater, and after the sea struck the breakwater it would run north-west, so that the water inside the harbour would be comparatively smooth.
2522. Would there not be a surge round the breakwater into the bay? There would be a small "sand," unless you closed in the bay altogether with two breakwaters, as shown on the plan.
2523. Is it not desirable that as large an area of water as possible should be protected? Yes, and the greater the area of protected water you have, the lesser the wash.
2524. If Port Kembla becomes a place for the export of a great quantity of coal, a large number of ships will be anchored there? Yes.
2525. The port must, therefore, be made as ample as possible? Certainly.
2526. If the end of the breakwater were drawn in towards the shore that would decrease the anchorage considerably? Yes.
2527. It might afford more protection to the port, but it would not give so much accommodation to vessels waiting to load? No; and it would bring in more ground swell, because the waves would not have sufficient room in which to spread out.
2528. In your opinion, is there any danger of the bay silting up, supposing the breakwater is constructed? I do not think there is any danger. I think that the long open stretch of coast to the north will prevent any wash into the bay. Further than that, I find that underneath the sand there is a hard clay. That I account for by the siltage coming out of Tom Thumb Lagoon.

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2529. You are of opinion that it would be wise to construct the port as suggested by the Government officials, and that, if constructed, the breakwater would give all necessary protection for the present, and would allow shipping to be carried on there with safety? Yes.

2530. I find that there is a very large coal trade between Newcastle and Chili? Yes; it amounts to nearly 300,000 tons annually.

2531. Is any coal taken from the south coast to Chili? Some southern coal and some western coal have gone there; but it has been chiefly Newcastle coal.

2532. Would the construction of the proposed port have any effect upon that trade? I think so. I think that a great deal more southern coal would be sent away if the port were made.

2533. Would that be at the expense of the Newcastle trade? I do not think so. We get a great deal of coal for gas-making from Newcastle, and I know that a great deal of Newcastle coal is used for purposes for which they would prefer southern coal. If facilities were offered for shipment numerous cargoes of coal would be taken from the south coast to Chili.

2534. That trade would not be at the expense of the trade of Newcastle, but would increase the trade of the Colony generally? Yes.

2535. *Chairman.*] Can New South Wales hold the market in Chili at the present prices? No. They get a good deal of coal from Swansea.

2536. Do they get any from Vancouver? I think only one or two cargoes, when vessels fail to bring timber.

2537. If New South Wales coal could be delivered for 1s. 6d. or 2s. a ton less, would it hold its own in the Chilean market? I am sure of it. Our own mines could not be developed at the price. We have large coal-fields, and we supply our southern railways; but we cannot get sufficient coal for the purpose, and we shall not be able to do so for years.

2538. What is the coal consumption of Chili? I think somewhere about 1,000,000 tons.

2539. What is the coal production of Chili? According to the last statistics, about 63,000 tons.

2540. Is there a market there for 1,000,000 tons of New South Wales coal, if it could be sent there for 2s. a ton less? Yes; if it could compete with the British coal.

2541. If our coal were sent there for 2s. a ton less than its present price, it seems probable that it would beat the British coal? Yes; I think that it would throw it out of the market altogether.

2542. *Mr. Wright.*] What is the freight for coal from New South Wales to Chili? It has varied from 9s. a ton to as much as 17s. a ton.

2543. What is a fair average? From 12s. to 13s. a ton.

2544. What would be the average freight for Welsh coal? From 18s. to 21s. a ton.

2545. That difference in freight should more than compensate for any difference in the cost of getting the coal? Yes. They have not been able to get Welsh coal there very often, and they have had to use Newcastle coal.

2546. Is the southern coal required chiefly for steaming purposes? Yes; besides what is required on the nitrate-fields.

2547. The great bulk of the coal used on the west coast of South America is consumed for steaming purposes? Yes.

2548. If the southern coal is nearly as good as the Welsh coal, and could be delivered for 7s. a ton less, it ought to beat the Welsh coal out of the market? Yes; and years ago I wrote to my government to that effect. From my experience, the Welsh coal is similar to our southern coal. If the southern coal could be exported direct to Chili, it would compete very favourably with the British coal.

2549. This trade is done by sailing vessels principally? Exclusively.

2550. If a port were made on the southern coast at which sailing vessels could load, you think that the good quality and the cheapness of the southern coal would increase the demand for it in South America? Yes. At the present time there is a great innovation taking place in connection with the shipment of nitrate of soda from Chili to England. This work is now being done by steamers, and if ocean tramps coming out here could load coal at Port Kembla they would be glad to take it to Chili, and there load nitrates for England.

2551. The freight would then be lower? Yes; and the consumption of coal would be increased.

2552. Such an arrangement would mean cheap freights all round? Yes; it would give employment for shipping, and mean an increased output of coal.

2553. You have no doubt that the proposed breakwater would make Port Kembla a good harbour? None whatever. On the coast of Chili we load at places infinitely worse than Port Kembla.

2554. Valparaiso would not be so good a harbour? Not with a westerly wind.

2555. *Mr. Hassall.*] You have had practical knowledge of this coast by navigating vessels along it? Yes. I have taken a good number of vessels there, and I have been engaged in managing collieries. I have given this matter some consideration, and have weighed in my mind the evidence that has been given here.

2556. You said that you have not had much experience of Bellambi? No; but I have seen it often under varied conditions.

2557. Port Kembla is a more suitable place for a harbour? Yes.

2558. Do you think that if the proposed breakwater were run out in a line with the coast from Red Point, it would afford more shelter for shipping? I do not think it would give as good shelter as if carried out as proposed.

2559. Do you think that if the breakwater were run out in the direction I suggest, it would answer the present requirements of the port? It would give shelter to the port, but you have also to consider how vessels will lie in the harbour. If you take soundings from the outer Tom Thumb Island to the outermost point of the islands off Red Point, and then go across towards the point midway between Red Point and Port Kembla Point, you will find a number of outcroppings of reef. This broken ground will prevent the sea from injuring the proposed breakwater. I do not see that you gain very much by carrying out the breakwater in the direction you suggest, inasmuch as you will be bringing it into the deep-water of the basin.

2560. By taking the breakwater in the direction I suggest, you run out to comparatively shallow water, at 38½ feet, while inside you have from 40 feet to 50 feet. The question is whether a breakwater running out in line with the coast would not resist the seas better than the proposed breakwater? I do not think that the difference would be very great. The Five Islands are a natural protection to any breakwater, and by carrying out the breakwater in the direction you propose you lessen the area of the harbour. In that way you give less room for shipping, and you are likely to have rougher water. I should like to have seen the breakwater carried a little further to the east.

2561.

2561. You think it would be advisable to run the breakwater in a more easterly direction than that provided for on the plan? Well, I would not bring the breakwater in at all. I would not reduce the harbour area under any consideration. Captain
J. H. Amora.
2562. Do you think it would be advisable to take the breakwater in a more easterly direction for some distance and then give it a curve round towards the west, so as to throw the seas away to the north? Yes, that would strengthen the breakwater a great deal, and would give a larger area of protected water inside. 9 Dec., 1896.
2563. Would it get rid of the ground swell that might arise if the proposed breakwater were constructed? I think it would be an advantage to carry the breakwater out in that way. If you confine the entrance you will get a continual "fetch."
2564. You think the head of the breakwater might remain where it is, but that it should have a curve to the east to give a larger area of protected water, and to lessen the chance of a swell in the harbour? I think so.
2565. Do you think that it is necessary to carry the breakwater out more than 2,800 feet? It would be better to go further out if possible; but that would mean an increased expenditure.
2566. Do you think that the output of coal would increase to such an extent that a charge of 3d. or 6d. a ton would pay interest upon the sum expended in making the harbour? I think so. I am sure that the southern coal would then be used a great deal more than it is now.
2567. Have you any interest in the southern coal trade? Not to the extent of one cent.
2568. Do you think the collieries interested would be willing to pay the charges necessary to cover interest? I think that it would be to their own advantage to do so, because the construction of the proposed harbour would give them a larger output.
2569. Do you think the natural advantages of Port Kembla are superior to those of other places along the coast? Yes; from Jervis Bay to Port Stephens. It requires no amount of nautical knowledge to see that. Jervis Bay is too far south for the coal trade. What is required is a place handy to Sydney, where vessels can easily run down and load. I am surprised that Port Kembla was never thought of before.
2570. Do you think the Lake Illawarra scheme, if carried out, would meet the requirements of the district? No; not for the purposes of an international traffic.
2571. You think the natural difficulties in the way of making a good port are too great to be overcome? Yes; unless an enormous sum of money is spent. Money will overcome all difficulties, but the question to be asked is, would the expenditure pay.
2572. How much would have to be expended to make a fairly safe harbour at Lake Illawarra? I could not go into figures; but a great deal of work would have to be done. Then, too, the entrance to Lake Illawarra is not so protected as Port Kembla. The whole of the sea bed outside Lake Illawarra is as flat as a fluke. There are no reefs to break the sea there, as there are at Port Kembla.
2573. In your opinion the expenditure of a certain sum of money at Port Kembla would give more satisfactory results than the same expenditure elsewhere? Certainly. I have always held that it is a pity that the money expended at Wollongong and Kiama was not expended at Port Kembla. I nearly lost my ship at one of those ports.
2574. Have you had any trouble at these other places? I have lost one or two anchors.
2575. Where? I lost an anchor off Broughton Island at one time.
2576. As a practical man, you are of opinion that Port Kembla is the most suitable place for the construction of a harbour? Yes.
2577. *Mr. Roberts.*] You stated that there was a market for 1,000,000 tons of coal a year in Chili? Yes, approximately; though I could give you the exact figures from my returns.
2578. From what parts of the world does Chili purchase her coal? From New South Wales and from Great Britain. She has got one or two cargoes from Vancouver, and she also gets coal from her own mines. They have three coal shipping ports now on the south coast of Chili.
2579. Do they purchase Japanese coal there? No; I do not know of any Japanese coal having been used there yet.
2580. If the proposed harbour were constructed and coal was sent from New South Wales at a lower price than the present, the demand for it would be considerable? Yes, I think so. I think the southern coal would cut very much into the Swansea and Cardiff coal trade.
2581. How much lower would New South Wales coal have to be sold in Chili to make sure of the Chilean market? So far as Newcastle coal is concerned they do not want to go any lower. For many purposes, however, the Welsh coal, which is dearer, is preferred, and I have no doubt that if the proposed port were made the southern coal would be exported direct to Chili, and would successfully compete against the Welsh coal all the way up the west coast of South America as far as Panama. Newcastle coal is at present being used over there for purposes for which they would prefer southern coal. They cannot get sufficient Welsh coal, even at a higher price, and therefore they are compelled to use Newcastle coal.
2582. Does any southern coal go to Chili at the present time? I do not think any has been sent there lately.
2583. Would that be because of the difference in price between southern coal and English coal? I think not. I think it is because there are no facilities for loading southern coal here. It has to be brought up to Sydney by colliers, and the charge for that work, say 4s. a ton, has to be added to the price of the coal, which brings it up from 7s. to 11s. per ton.
2584. How low would the southern coal have to go to secure the market against all comers? Not very low. There is a difference of 5s. or 6s. a ton between the freight from England and the freight from New South Wales.
2585. There is a large sailing-ship trade between Australia and Chili? Yes, and I do not think it will be long before it is supplemented by a steamship trade.
2586. If the sailing vessels could load at Port Kembla, you think there would be a great market for southern coal abroad? Yes. Merchants in Valparaiso will not order southern coal at the present time, because they have to pay 12s. a ton for it, as against 6s. a ton for Newcastle coal. If, however, the southern collieries were put in the same position as the northern collieries, it would be different.
2587. For how many tons of southern coal would there be a demand in Chili? I think 40 or 50 per cent. of the coal required would be southern coal. Industries there are making great strides at the present time, both in Chili and in Peru.

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2588. What is the nature of those industries? Various manufactures, and they intend to go further into the nitrate business. There is a large area of country there which will be developed very shortly.
2589. The demand for coal from the southern district will, you think, continue to increase? Yes.
2590. Do you think that if the proposed breakwater is constructed a large population will settle round Port Kembla, or will Wollongong continue to be the commercial centre? Naturally if vessels did not call at Wollongong population would increase at Port Kembla. I think that the population of all these colonies is going to increase largely, and no doubt the construction of the proposed harbour would mean the settlement of a considerable population at Port Kembla.
2591. Have you formed any opinion as to the area of land likely to be required to be resumed if the proposed harbour were constructed? No, I have not gone into that matter; but I do not think that very much would be required.
2592. On what grounds do you prefer Port Kembla to Bellambi? At Bellambi there is a very small area of protected water, and only a short beach, whereas at Port Kembla you have a large area of protected water, and a long beach to the north, while the configuration of the coast to the south creates a natural breakwater. If I did not know the coast at all, and were approaching it as a total stranger, I should go to Port Kembla.
2593. Is not Bellambi similarly protected from the south-east to Port Kembla? No; Port Kembla is much better protected.
2594. Is not Bellambi more sheltered from black north-easters? No; though there is no sea from the north-east. You can thresh through a north-east sea as you cannot do against a southerly sea.
2595. With a black north-easter blowing would there not be a great break on the shore? No. It is astonishing how little sea there is at Port Kembla when a north-easter is blowing. I have lain there during the continuance of a heavy north-easter.
2596. Without inconvenience? Yes.
2597. What lights would be necessary at Port Kembla if the expected traffic were to be created? I suppose they would require to have a light on one of the Tom Thumb Islands, and another at the end of the breakwater. You would want a small harbour light there. The light would have to be so screened as to protect approaching vessels from all dangers.
2598. Could the Wollongong lighthouse-keeper look after the Port Kembla lights? No; you would require to have a special man.
2599. He could not have come down by train to attend to it? No. You would require to have a man stationed there at night to see that nothing happened to the light.
2600. *Mr. O'Connor.*] How long have you resided in this Colony? About thirty-two years.
2601. You are the representative of several Governments? Yes, of seven.
2602. And you have been a seafaring man? Yes.
2603. The objects of the scheme before the Committee are, not only to secure the best possible harbour for commercial purposes, but also to provide a harbour of refuge for shipping;—what in your opinion is the best place for such a harbour? Most certainly, Port Kembla. A harbour on the south coast is a long-felt want.
2604. Have you any interest in this place? Absolutely none; but I have lived in the colonies for a long while. I have a love for them, and desire their advancement, and if anything I could do would help them, I would do it.
2605. You are of opinion that the best harbour for the development of the resources of the south coast is Port Kembla? Certainly.
2606. Do you know what the output of coal from Port Kembla is? I cannot remember the figures at the present moment; but every year I send reports to the Governments which I represent, on the commerce of the colonies, and therefore I take notice of these things.
2607. It is one of the duties of your position to report to the various Governments which you represent, the industrial conditions of this Colony, its commercial possibilities, and so on? That is so.
2608. You have done that from time to time? Yes. My last report to the Chilean Government covered 275 sheets of closely-written foolscap, and I make similar reports to the other Governments which I represent.
2609. Do you think that New South Wales, as a coal-producing country, will be able to hold her own in the east if proper facilities are given for the shipment of coal? Certainly.
2610. You think that with proper facilities for shipment we may hope to meet all competitors in the east? I think so. I am looking forward to a great improvement in that direction. I take it that we shall shortly have a better output in the Netherlands than we have now.
2611. You are aware that during the great coal strike here a large development took place in connection with the Japanese coal industry, and they have many advantages there in the way of cheap labour and so on which we have not. Notwithstanding this fact, do you think that we shall be able to successfully compete with the Japanese coal in the near future? I think so. What we have to fear is not so much the cheapness of the Japanese coal, but the dearth of profitable cargo. Vessels now going out to the Netherlands from Europe take coal almost for nothing, rather than go empty. I could show the Committee figures which I have received from the department in Batavia which show that. The English coal is delivered there much more cheaply than Newcastle coal; but people will soon stop taking it so cheaply, because they are getting sick of it.
2612. The quality of Australian coal is so good that it will be able to successfully compete with foreign coal? I am told that the Australian coal is preferred, and would be sought for, but for the introduction of other coal at so low a rate.
2613. It only remains for us to afford every facility for the shipment of coal to give our colliery proprietors a fair chance of successfully competing in other parts of the world? Certainly. If New South Wales could introduce her southern coal on the west coast of America, as I have shown she could, why should she not be equally successful in other places. The west coast of South America is open to Newcastle coal, and it would also be open to southern coal.
2614. You have seen the marvellous coal-fields at Newcastle, and also on the southern coast? Yes. I have been to Mount Kembla, Mount Pleasant, and Mount Keira.
2615. There are thousands of tons of coal for which there is a market in the east? Yes; the only thing is to get vessels to load it.

Captain William Henry Mills, Master Mariner, sworn, and examined:—

2616. *Mr. Clarke.*] How long have you been trading to the South Coast? Twenty-four years.
 2617. Have you traded to all the ports between Sydney and Jervis Bay? Yes, to the whole of them.
 2618. Which do you consider the best port in its natural state? Port Kembla; it is superior to any place between Sydney and Jervis Bay. I traded for the Bulli Company for sixteen years. When I have dragged my anchor at Bellambi I have gone to Port Kembla, and have held on there during very heavy south-east gales, not only with small boats, but with vessels of 6,000 and 7,000 tons. I have lain there quite comfortably with a single anchor out, and 60 fathoms of chain.
 2619. *Mr. O'Connor.*] Was that during a gale? Yes. The following is a list of the vessels which I have taken to Port Kembla, and which have successfully loaded there:—

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1892-1893.		1895.	
December.....	S.S. Eaton, 4,500 tons.	February	S.S. Keraweera, 2,500 tons.
February	„ Marie, 4,000 tons.	April	„ Catterthun, 3,000 tons.
April.....	„ Crown of England, 5,000 tons.	June	„ Keraweera, 2,500 tons.
October	„ Oberon, 4,000 tons.	July	„ Port Philip, 4,000 tons.
		August.....	„ Tirica, 3,000 tons.
		„	„ Catterthun, 3,000 tons.
		September.....	„ Airlie, 3,000 tons.
		October	„ Indrani, 7,000 tons.
		November.....	„ Indra, 5,000 tons.
1893.		1896.	
January	S.S. Barmen, 4,500 tons.	January	S.S. Guthrie, 3,000 tons.
August	„ „ „ „	May	„ Angonia, 4,000 tons.
September.....	„ Guthrie, 3,000 tons.	„	„ Echuca, 4,500 tons.
„	„ Catterthun, 3,000 tons.	„	„ Sonneberg, 7,000 tons.
November.....	„ Tirica, 3,000 tons.	June	„ Stassfurt, 5,000 tons.
December.....	„ Catterthun, 3,000 tons.	July	„ Port Philip, 4,000 tons.
		„	„ Gulf of Ancud, 4,500 tons.
		August.....	„ Gulf of Lions, 4,000 tons.
		„	„ Gulf of Bothnia, 5,000 tons.
		September.....	„ Rakanoa, 4,000 tons.
		October	„ Port Adelaide, 5,000 tons.
1894.			
January	S.S. Airlie, 3,000 tons.		
July	„ Franklin, 1,500 tons.		
December.....	„ Guthrie, 3,000 tons.		
„	„ Ormidale, 6,000 tons.		

2620. *Mr. Clarke.*] Have you occasionally been compelled to put to sea before you had finished loading? I have occasionally had to slack my breast ropes and lie about 20 feet off the jetty. Sometimes a range sets in with the flood, and drops again on the ebb. Then we brace in and commence loading again. On several occasions I have had to let go at a minute's notice, and lie out at anchor. I have lain at anchor quite safely until the weather moderated. I have never had to lie out at anchor more than two days.
 2621. The holding-ground was good? Yes. It is splendid blue clay, with sand over it.
 2622. The danger to be feared is not so much from heavy weather? No; it is the range that is dangerous. You cannot get anything to hold you when it sets in.
 2623. A breakwater would obviate that? Yes.
 2624. And would make it safe for both sailing vessels and steamers to load there? Yes, that is the eastern breakwater. I do not think the northern breakwater will be required for thirty or forty years yet. No danger is to be apprehended from northerly weather. I have lain alongside the jetty quite comfortably dozens of times while it has been blowing feather white.
 2625. Do you think it would be advisable to bring the end of the breakwater more in towards the west? I should say that the breakwater would do as it is; but you want as much enclosed water as you can get. With vessels 400 feet long you cannot have too much room.
 2626. Do you think that the present jetties will be sufficient for a long time? I think so.
 2627. Do you think that in the public interest the Government should resume them? I am not in a position to speak about that.
 2628. Would it not be advisable for the Government to have control of the jetties in order to secure their use to the best public advantage? Well, that would prevent a monopoly; but it is a question whether the Government would ship coal as fast as it is shipped there now. The present rate of coaling is tremendous. The only thing you have to wait for is more coal. Sometimes all the mines cannot keep the works going.
 2629. Will not the Government require revenue to pay interest upon the proposed expenditure? Well, I think harbour and pilotage dues might be charged.
 2630. Do you think the coal-owners and others should pay the same rates as are charged at Newcastle? I do not see why they should not, considering the benefits which they would derive. It is evident that the trade of the port would be increased enormously if sailing vessels could go there. I have been asked to take two large sailing vessels there; but I distinctly refused, because there might be an accident, and I have never had an accident yet.
 2631. A great deal of the oversea coal-trade is carried on by sailing vessels? It used to be. The Bulli company used to have eight or nine vessels loading at once.
 2632. They can carry coal at a cheaper rate than steamers can carry it? Well, since the strike, the San Francisco trade has fallen off tremendously. At one time we could not supply the demand.
 2633. Inasmuch as sailing vessels do a great deal of the trade from Newcastle, it is probable that they will do a great deal of the trade from Port Kembla? Decidedly. I brought two steamers from Newcastle—the “Indrani”* and the “Ormidale”—which could not load a full cargo at Newcastle; and I also recently took the “Sonneberg,” a large German-Australian steamer of 7,000 tons there. When she left the jetty at Port Kembla she was drawing 25 feet 6 inches; but at Newcastle you cannot get out if you are drawing more than 24 feet at spring-tide, and then it must be a very smooth day. The ships are increasing in size every year; but at Port Kembla you can get deep enough water without dredging or any extra expense.
 2634. Would there be any danger of the proposed harbour silting up, supposing the breakwater were made? I do not think so.
 2635. And there would be a large increase in the trade if the breakwater were made? Yes, both in the steamer trade and the additional sailing-ship trade. The masters of the big steamships see dangers in the place that I do not see. Lying alongside the jetty with an anchor and 90 fathoms of chain out,

you

* NOTE (on revision):—The “Indrani” came from New Caledonia direct to the jetty; not from Newcastle.

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you could swing clear, suppose anything happened, without the engines at all, and there is plenty of water in which to float. Of course they see the vessel close to the beach—a thing to which they are unaccustomed—and they say that they will write to their owners and tell them what sort of a place it is. 2636. You consider that in the public interest this work should be carried out? Yes; eventually it must be done. The trade is increasing every year, and there is a great demand for the coal. I heard a gentleman say yesterday that the "Gulf of Guinea" had gone down to Port Kembla to try the place, and went away in disgust; but since then I have taken four of the "Gulf" boats there. The last vessel I took there was the "Port Adelaide," a steamer of 5,000 tons.

THURSDAY, 10 DECEMBER, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).	
The Hon. FREDERICK THOMAS HUMPHERY.	HENRY CLARKE, Esq.
The Hon. JAMES HOSKINS.	CHARLES ALFRED LEE, Esq.
The Hon. CHARLES JAMES ROBERTS, C.M.G.	JOHN LIONEL FEGAN, Esq.
The Hon. WILLIAM JOSEPH TRICKETT.	THOMAS HENRY HASSALL, Esq.
The Hon. DANIEL O'CONNOR.	GEORGE BLACK, Esq.
FRANCIS AUGUSTUS WRIGHT, Esq.	

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

Captain William Henry Mills, Master Mariner, sworn, and further examined:—

Captain
W. H. Mills.
10 Dec., 1896.

2637. *Mr. Lee.* In what capacity have you visited Port Kembla so often with the vessels you named yesterday? In the capacity of pilot, having full charge of the ship until she is loaded and taken out to sea, or to a safe anchorage, ready to proceed on her voyage.

2638. You have only taken steamers there? Yes.

2639. I suppose in taking a vessel there you choose your weather? To a certain extent, but, coming from Melbourne at times, bound to Port Kembla direct, I have had to make the best I could of it, and I have put into Port Kembla and anchored there.

2640. How long have you been acting in this capacity? Ever since the Southern Coal Company's jetty was erected. I took down the first steamer that went there—the "Gulf of Mexico." That was eight years ago, and I have taken down every large steamer which has been there since.

2641. You have never taken a sailing vessel there? No.

2642. I understand that you were asked to take two sailing vessels there, but that you declined;—why was that? They had not the needful appliances. They had hand winches but no steam winches, and it is an utter impossibility to work a ship in there by hand. With a sailing ship you have a great deal to heave against. The action of the wind and of the sea is very strong, and you cannot do much without steam power.

2643. It was for this reason, and not because you were afraid of loading in the port, that you refused to take those vessels down? Yes.

2644. Have you ever had to cease loading and to proceed to sea in consequence of bad weather at Port Kembla? Yes, several times.

2645. What are the conditions prevailing there at present should adverse weather arise suddenly? The only obstacle is the range coming in with a south-east wind. That prevents vessels from lying at the jetty.

2646. If they are not lying securely at the jetty it is impossible to load? Not only that, but they cannot hold on to the moorings.

2647. I presume you have a knowledge of the coast beyond Port Kembla? Yes; my knowledge extends all along the Australian coast.

2648. You believe that Port Kembla is the proper place for a harbour? It is the only place that I know of for a thoroughly safe harbour.

2649. Supposing the Government entrusted you with the work of making a harbour on the south coast for the purpose of developing the Illawarra coal trade, how would you proceed? I would run out a breakwater from the point as proposed.

2650. A breakwater similar to that shown on the plan? Yes, but if anything a longer one. I have heard it suggested that the breakwater should run out more in a north-westerly direction; but such a breakwater would include less water, and we must make our preparations to meet the class of vessels that we may expect to come there. I have taken vessels there 400 feet in length, and four or five such vessels lying at anchor with 60 fathoms of chain out take up a considerable amount of room. Of course the length of chain they have out depends upon the weather. In bad weather they would want a lot of chain.

2651. Do you think that the proposed breakwater goes out far enough? Yes, I think so. The only inconvenience I have seen has been from the heavy range between the point and the first island. There is no mischief anywhere else.

2652. Could a ship safely anchor outside the head of the proposed breakwater? Yes, quite safely.

2653. If the proposed harbour contained 260 acres of water, how many ships could be safely accommodated within it? I think that seven large ships would be all that could safely swing there at single anchor. Of course if they were moored it would be different. When a vessel is moored she only swings her own length; but riding at single anchor she takes three times as much room.

2654. I understand that the proposed harbour, if not dredged, will only include 153 acres, in which there would be a depth of 24 feet? Well, I do not see that it would be necessary for every vessel waiting to be loaded to cram into the harbour. Some of them could anchor outside. Of course, if the Government laid down moorings the ships would not require so much room.

2655. At Newcastle it is the common practice for over-sea vessels to lie at anchor, or at moorings, waiting their turn to load? Yes.

2656. If a large shipping trade is developed at Port Kembla the same sort of thing will take place there? Yes.

2657. The first proceeding of an over-sea vessel arriving at Port Kembla would be to go to moorings, or

to drop her anchor until her turn came to load. She would then go alongside the jetty, take out her ballast, and load with coal. Meanwhile she would have to wait in the basin. At times there might be more than seven vessels waiting in the basin? Well, of course it is impossible to say what the trade will be. Captain
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2658. The ordinary steamer trade will still go on. There must therefore be sufficient trade left to allow the steamers to pass in and out. Supposing ten or a dozen vessels were lying in the basin, and a heavy cyclonic blow suddenly arose, what would be their position? I think they would be no worse off than if they were lying in the stream at Newcastle.

2659. Newcastle harbour is more protected than this coast would be? Sometimes it is; but at times it is a difficult job to load at a dyke, with the range that comes in from an easterly gale.

2660. But the range at Newcastle is at its minimum? Yes.

2661. The range at Port Kembla must necessarily be very much greater? Yes.

2662. If the breakwater does not prove entirely effective under the circumstances such as I describe, it will, in bad weather, act as a trap, because it will be impossible for sailing vessels to get out. They must either hang on or go ashore? Yes.

2663. You have no fear on that score? I would have no fear whatever of loading a sailing vessel there if the proposed breakwater be constructed; but at present I would not take such a vessel there, unless she were well manned and had proper steam appliances and good gear on board.

2664. If good loading appliances, in the way of cranes, were provided there, would that meet the objection? I am referring not to loading appliances; but to appliances for mooring the ships.

2665. You apprehend that there would be difficulties in moving sailing vessels from their moorings to the jetty, and away from the jetty again? Yes.

2666. Would not the creation of a harbour at Port Kembla necessitate the establishment of a tug service there? Yes, tugs would be necessary.

2667. Not only to bring vessels in and out, but to move them from their moorings? Yes.

2668. Would not that overcome your objection? It would to a great extent.

2669. In bad weather, would the sea break over the breakwater? Of course it would all depend upon the height of the breakwater, but I think that unless the breakwater was very high indeed the wash of a heavy easterly sea would come over the top of it.

2670. If the breakwater is to be used as a side track for railway trucks it will be necessary to raise it some height above the water? Yes, a tremendous height.

2671. Otherwise it would not be safe to use it for the purpose? No.

2672. Are you of opinion that jetties could be run out from the eastern side of the breakwater to be used for unloading? No. I would suggest that every jetty run out in Port Kembla, or anywhere along the coast, should take a north-easterly or south-westerly direction, because then a vessel lying alongside would lie bow on to whatever sea there was, and would not be so much affected by the range as if she were lying broadside on.

2673. Is that the direction of the present jetties? Yes; and that is why we lie there so snugly in north-easterly weather.

2674. If there should be an import trade in the shape of mineral ores, how would you discharge cargo at Port Kembla? I think that you could discharge at the jetties just as well as you could load.

2675. I presume that it would not be more difficult to discharge ore than to discharge ballast? No.

2676. If a sailing vessel came in in ballast she would have to discharge the ballast when alongside the jetty? Yes.

2677. If she could discharge ballast when alongside the jetties she could also discharge ore? Yes.

2678. Do you think that the existing jetties will be more than sufficient for the trade if the proposed breakwater is made? I think so, for some time to come. You can load an enormous quantity of coal from those jetties. I consider that until the trade increases very much it will not be necessary to run out another jetty.

2679. Has any portion of either of the jetties ever been washed away? Yes; a good deal of damage was done to the first Mount Kembla jetty; but no accident has happened to the Southern Coal Company's jetty since it has been erected, and neither has the new Mount Kembla jetty met with any accident.

2680. You do not endorse the opinion that the breakwater should be drawn in towards the shore more than is proposed? No.

2681. Your opinion is that we should give as much space in the harbour as possible? The more water you can enclose now-a-days the better. Large ocean-going steamers flying light in ballast must go in with way on. Otherwise, if it is blowing at all, you will have no rudder power. The same thing happens going out. I go out sometimes with a strong southerly wind blowing, and as soon as I let go from the jetty the vessel's stern tails round to the wind and she heads south-east, and I have to make a circle to get her out of the port. These large vessels take up a good deal of room to swing in; generally I let go from the jetty, and let the vessel swing round to the wind until the anchor is up. Then I go ahead with the helm hard-a-starboard, and she has to make nearly a circle in order to clear the islands. This takes up a good deal of room.

2682. Are there any shallow patches in the bay? There is a patch with about 16 feet of water on it at low tide; but it does not interfere with us. There is plenty of room to avoid it.

2683. Is it sand or rock? Rock.

2684. Is there much of it? Yes, it is a good-sized patch.

2685. Is there any other patch like it in the bay? No; it is the only patch.

2686. Have you noticed any tendency for silt to accumulate in Port Kembla? None whatever.

2687. What is the set of the current? It sets out from all the jetties along the coast about south-east.

2688. Therefore the breakwater would not influence the current in any way? No.

2689. The conditions that prevail now would prevail if the breakwater were constructed? I think so. There is no river or anything like that to cause the place to silt up.

2690. *Mr. Wright.*] You are acquainted with the shipping appliances at Newcastle? Yes.

2691. What is the difference between loading from the cranes at Newcastle and loading from the jetties at Port Kembla? At Port Kembla they can load 20 tons while they are loading 10 tons at Newcastle.

2692. Do you think that the proposed harbour is large enough for all practical purposes? Yes, for a long time to come.

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W. H. Mills.
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2693. If the proposed breakwater were constructed, could a large sailing ship run in there without a tug? Yes.
2694. What sized vessel would you take in? I would take in a vessel of 4,000 tons without a tug.
2695. Could such a vessel, wishing to leave, make an offing in a fairly stiff south-east breeze? She could not.
2696. With a north-easter she could not get out at all? No.
2697. So that if sailing vessels frequent this port, a tug would have to be stationed there? Yes.
2698. With the ordinary capstan and windlasses you would not handle a sailing vessel there now? No.
2699. They must have steam appliances to their warps and anchors? Yes.
2700. Do you think it would be an improvement if the proposed breakwater were carried out more to the east? No; I think the breakwater is just about in the right position. The northern breakwater I look upon as utterly unnecessary. The port will be quite safe without it.
2701. Do you think there is room there in ordinary weather for twelve vessels—seven or eight lying at anchor, and the rest loading at the jetties? Yes.
2702. Do you think it is likely that a larger number of vessels than that will go to the port for some time to come? I do not think that the harbour will be overcrowded for many years to come.
2703. Supposing the output of southern coal were doubled, would there be sufficient room in the harbour for the shipping required to export that coal? Yes.
2704. Do you think 2,000,000 tons could be shipped annually from the Port Kembla jetties? Yes.
2705. If the proposed breakwater were constructed, practically all that would be wanted to make a harbour there would be done? Yes. I think all that is wanted to make a practically safe harbour for any vessel that has ever come to this country is the proposed breakwater.
2706. Would you make a quay of the breakwater? No.
2707. You would not use it as a jetty? No.
2708. What would be the height from a vessel's hold to the top of an ordinary jetty, supposing she was loading cargo into railway trucks? I think that at the Southern Coal Company's jetty, which I believe to be the highest jetty in the colonies, the lift is nearly 100 feet.
2709. That is a very long hoist? Yes, but with steam appliances it would not be very much.
2710. Nearly all ships are now fitted with steam winches? Yes.
2711. Are not most sailing vessels supplied with steam winches for discharging? A great many of them—all the modern ships are.
2712. Could a ship lie safely alongside the breakwater if the breakwater were only 20 feet high? I think the water that would come tumbling over, even in moderate weather, would make it very uncomfortable for her, and it would be impossible to do any work. If a vessel were loading cargo at the time, I would not vouch for its condition.
2713. Do you think that while the breakwater will give protection to the port, it will not answer any other purpose? Yes.
2714. All the cargo to be handled should be handled away from the breakwater? Yes.
2715. *Mr. Pegan.*] By whom are you employed? I am employed by any one requiring my services. Both the Southern Coal Trust and the Southern Coal Company recommend me as the only man who has taken ships down there.
2716. What is the draught of the vessels which you have taken down there? Yesterday I said that I had taken vessels there with a draught of 25 feet; but last night when I went to the German-Australian Company's office I found that the draught of the "Stassfurt" was 26 feet 6 inches when she left the jetty at Port Kembla, and the draught of the "Sonneberg" 26 feet.
2717. Have you ever lost a vessel off any of the southern ports? Never.
2718. Have you ever met with any mishap there? No, I have never had an accident.
2719. But I suppose you have noticed that the southern coal trade is at times crippled for the want of a good port? Yes; and because of the prejudice of shipmasters against this place.
2720. Really there is nothing to be afraid of? Nothing whatever; of course, it is only an open roadstead, and you require a practical man to handle a ship there. Men who have never been in the trade see their vessels close to the beach, and the break along the beach, and nothing will convince them but that something will give way, and that their ship will go ashore.
2721. Do not captains of foreign vessels sometimes obtain certificates of exemption? Yes.
2722. I suppose that a great many of them do not know our coast, except the harbours of Sydney and Newcastle? Yes.
2723. If they were better acquainted with the coast a great many vessels might be taken down south to coal instead of coaling at Port Jackson? Yes.
2724. Therefore, a great deal of the want of trade at Port Kembla is due to the reluctance of foreign masters to go there? Yes.
2725. Before a master obtains a certificate of exemption, should he not show a thorough knowledge of the ports along the coast, so that he will not damage our trade in this way? He should possess a local knowledge of the place for which he is exempt.
2726. If a man receives exemption for Port Jackson or Newcastle, that exemption should only apply to those ports? Foreign-going masters are generally exempt only for Sydney and Newcastle. They are not, of course, exempt for Wollongong, for instance. Port Kembla, perhaps, would not be called a port.
2727. What constitutes the examination for exemption? A man has to show a thorough knowledge of any particular port before the fact that he is exempt from that port is endorsed upon his certificate.
2728. Do you think it would be better for the trade if captains had to obtain a certificate of exemption, not for one port, but for all the ports along the coast? I think it would be impossible to require any but local men trading on the coast to be acquainted with all the coastal ports.
2729. Sometimes mistakes are made and vessels and lives lost because of the want of knowledge of those who receive these exemptions? Yes.
2730. You have a thorough knowledge of Bellambi? Yes.
2731. You have been there in all kinds of weather? Yes.
2732. What is your opinion of the port? My opinion of the port is a very poor one.
2733. It does not compare with Port Kembla? No. I was running to Bulli jetty for sixteen years. It was the first open jetty along the coast. At Bellambi there is a little shelter from the reef. I have left
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the Bulli jetty and steamed to Bellambi, and, dragging there, I have had to run to Sydney. On one occasion I went from there to Port Kembla—that was before any jetty was thought of—and I lay there quite comfortably with a single anchor during a heavy east south-east gale.

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2734. I suppose you have experienced great difficulty in discharging at Wollongong, Bellambi, and at Port Kembla? Sometimes. At one time when the Bulli Company was in full swing a great deal of cargo used to be sent down there nearly every trip.

2735. But, speaking generally, no provision is made for the discharging of cargo? None whatever.

2736. That goes against the port considerably? To a certain extent, but, so long as there are jetties you can discharge as well as load.

2737. *Mr. Roberts.*] Would you prefer the proposed breakwater to be constructed as shown on the plan or more in a bow shape? The more water you enclose the better; but I do not think the shape of the breakwater matters very much. Perhaps if you made the breakwater bow-shaped, it would strengthen it a little, because the sea would then strike it more at an angle. All that we want is to keep the south-east seas off. If the breakwater were run out in a north-westerly direction, following the line of the coast as has been suggested, it would shut out a lot of deep water that is absolutely required. At the present time a large amount of room is required to swing in, and, if the breakwater were taken out in a north-westerly direction, you would have to go astern and ahead half-a-dozen times before you got round.

2738. If the breakwater were bow-shaped, would not the seas be less likely to enter the harbour? I do not think so. You want to run the breakwater sufficiently far out to prevent the sea coming in.

2739. If the head of the breakwater is three quarters of a mile from the shore, that will give plenty of room to enter? Yes.

2740. If the head of the breakwater were brought within half-a-mile of the shore, would there be too little room? I think that would be rather close for big steamers. Running down with a beam sea, these large ocean tramps are like balloons on the water, and if you ease the engines much they simply lose all rudder power, so that you want as much room for them as possible.

2741. I suppose that if a large import trade sprang up at Port Kembla, it would be necessary to construct a northern breakwater in order to give a perfect harbour? That is looking a long way ahead. The north-easterly weather makes very little difference to Port Kembla. We never have anything like the sea there during a north-easter that there is in Hobson's Bay during a north-wester.

2742. Would you like to express an opinion as to the probability of a large import trade springing up at Port Kembla? I think that a very large coal export trade will be done there. As I have already stated, I have taken vessels there drawing 25 and 26 feet; but the greatest draught at which a vessel can get out of Newcastle is 23 ft. 6 in.; and I do not see any possibility of permanently deepening the Newcastle entrance. Therefore these large vessels cannot load full cargoes at Newcastle. One vessel coming out of Newcastle with 800 tons short of her full cargo lay in the quarantine ground here and finished loading.

2743. I asked you about the probability of an import trade? I do not think that will ever be much. Of course a large quantity of ore may come there.

2744. Would that necessitate the construction of another breakwater? No.

2745. Is it not necessary to have much quieter water for discharging than for loading? Well you have to take things as they come. At some ports vessels have to discharge when they are rolling gunwales under. You cannot always get a place like the Circular Quay. All that is necessary at Port Kembla is the proposed breakwater. When it is made, sailing vessels and vessels of any draught will be able to load there in perfect safety.

2746. Do you think a large number of sailing vessels will go there? Yes; especially if the trade increases as it did during the early days of the Bulli Company, when we had eight ships loading for San Francisco, at one time. The present system of loading in Sydney knocks the coal to pieces, and damages its value.

2747. Have you loaded vessels of as much as 7,000 tons in Port Kembla? Yes, the "Sonneberg," which I loaded there about five months ago, was that tonnage.

2748. Did she take the full cargo of coal? Yes.

2749. Nothing but coal? Yes.

2750. Where did she go to? To Bombay. The "Stassfurt" did the same.

2751. You have taken the "Gulf of Bothnia" there? Yes; the "Gulf of Ancud," the "Gulf of Mexico," the "Gulf of Lions," and the "Gulf of Bothnia."

2752. What is the tonnage of these vessels? From 4,000 to 5,000 tons. The "Gulf of Bothnia" is about 5,000 tons.

2753. Was she there recently? Yes, she took her full cargo of coal to Adelaide, while waiting for wool.

2754. How much would that be? I think about 4,000 tons odd, and about 600 tons of bunker-coal in addition.

2755. Have you ever known these vessels to be unable to load because of the weather? Yes, several times, because of the range.

2756. Would they then drop anchor in the port, or would they return to Sydney? Generally, they lie at anchor until the weather moderates; but sometimes a captain says, "I am not going to lie here," and we have to return to Sydney. I have never been forced back to Sydney by stress of weather. Sometimes the range sets in for half an hour, and drops again suddenly.

2757. Do you refer to the south-east swell? It is the under-tow that I refer to—the water at the bottom seems to boil.

2758. What would be the loss if a vessel like the "Gulf of Bothnia" had to come back to Port Jackson? She would lose about eight hours steaming time—that would be 10 or 12 tons of coal.

2759. At how much a ton? Between 6s. and 7s. a ton.

2760. Would a vessel that had returned to Sydney wait there two or three days for the weather to moderate? The Eastern and Australian Company's boats will not wait three hours—their time is so short. They will not lie off the place over night to wait for the morning. Generally, however, steamers that go down there do not go away until they have loaded. The longest stay I ever had there was with one of the German boats, when we were there three days. We lay there at anchor all the time.

2761. The masters of steamships do not like going to the place now? No; they will not go there if they can get out of it.

2762. If the proposed breakwater were constructed the prejudice against the place would be removed? Yes.

- Captain
W. H. Mills.
10 Dec., 1896.
2763. *Mr. O'Connor.*] What would be the width of entrance if the proposed breakwater were erected? Well, the breakwater would not much reduce the width of entrance.
2764. Would it not be a great advantage to construct a second breakwater? I do not think that a second breakwater is required. Of course if you wanted to fence the place right in you could construct it; but the expense would be enormous.
2765. Do you think that the proposed breakwater should be taken out 2,800 feet, or would a lesser distance do? I think it should be taken out the full length.
2766. You have been on the coast for a great many years? I have been sailing out of Sydney for thirty-four years.
2767. How many ships could safely lie at anchor in the proposed harbour? It is difficult to say. I should think a dozen ships could lie there if they were moored; but if they were riding with a single anchor out five or six would be enough.
2768. What is the largest vessel that would be safe there? Any ship that I have ever seen would be safe there.
2769. *Mr. Black.*] The proposed opening to the harbour is about three-quarters of a mile, and it was thought that by narrowing it to half a mile that would give greater security to the port; but a nautical witness has told us that it would increase the surge inside? So it would.
2770. And you are also of opinion that a wider entrance would be advantageous to a vessel swinging out? Yes. Larger and larger vessels are coming here every year, and you do not know where the limit will be.
2771. You think that if any alteration is made in the plan before the Committee it should be in the direction of lengthening the breakwater, rather than of altering its contour? Yes, that is what I think.
2772. *Mr. Humphery.*] What you call the 16-foot patch appears on the plan to have 26 or 30 feet of water over it? Well, I never sounded the place, but we call it the 16-foot patch.
2773. The plan may be correct? Yes; but in any sort of moderate weather it will break there, although it is smooth everywhere else. I generally anchor to leeward of it, because in heavy weather the sea breaks there tremendously.
2774. What distance is it from the end of the jetty? About half a cable's length—360 feet—east-south-east from the Mount Kembla jetty.
2775. *Mr. Roberts.*] You were present yesterday when Captain Amora was examined;—do you disagree with any of the evidence given by him from a nautical point of view? No, I do not.

James Rowan, Esq., Government Inspector of Collieries, Wollongong, sworn, and examined:—

- J. Rowan,
Esq.
10 Dec., 1896.
2776. *Mr. Lee.*] Where do you reside? At Wollongong.
2777. How long have you been there? About thirteen years.
2778. Have you occupied the same position all that time? Yes.
2779. Has the southern coal trade been hindered in the past from the want of a proper port of shipment? I could not say, because I have not given the matter sufficient attention. My duties are to see that the regulations under the Coal Mines Act are faithfully adhered to.
2780. You know nothing about the shipping of the coal? Nothing more than an outsider would know.
2781. How many collieries are there at work in the Illawarra district at the present time? There are the Metropolitan, Coalcliff, South Clifton, Bulli, Bellambi, South Bellambi, Corrimal, Mount Pleasant, Osborne-Wallsend, and Mount Kembla.
2782. Are any new mines being opened? No. There are two mines working between Bulli and Bellambi.
2783. Have any mines been worked out or closed up? Mitchell's North Illawarra has been given up. At least no work has been done there for about two years.
2784. Has the seam been worked out? No; I think the associated collieries have taken it over.
2785. Have any of the mines closed for want of coal? No.
2786. Have any closed because of the inferior quality of their coal? Part of the Bulli mine has stopped working because of the burnt or cinder coal met with.
2787. Do you think these coal-beds are likely to last for any period of time? Yes, between Woonona and Mount Kembla, so far as I know, the coal is pretty fair. There is a basalt irruption about Woonona which throws off nearly three-quarters of a mile.
2788. Do you think that the coal will last for twenty-five years? Yes, so far as I know, though of course these basaltic dykes and upheavals are very erratic, running first in one direction and then veering round to another.
2789. Had you any experience of coal-mining before you obtained your present position? Yes, from the time I was 9 years old.
2790. How long have you been in the Colony? Nearly eighteen years.
2791. Do you think that the Illawarra coal-beds are likely to prove lasting? For a distance of about 8 miles there is every appearance of a good future for the coal trade; but the question is, how far does the coal go back.
2792. I suppose there is a good deal of country not yet explored? Yes. At the back of the range I suppose the dip is about 600 feet.
2793. With the exception of where the cinder-beds occur the coal is generally of good character? Yes.
2794. It is good coal for steaming purposes? Yes, so far as I know.
2795. Has it come under your notice officially that the work of the mine has been delayed for want of a proper shipping port? No; I cannot say that it has. At Coalcliff especially they are very much interfered with by rough weather, and at other places they cannot load for days together sometimes when the weather is bad.
2796. I suppose you are not concerned with anything besides the enforcement of the regulations you speak of? No; I have to do with the ventilation and safety of the mines, and report upon accidents, and so on.
2797. *Mr. Fegan.*] How much coal is left in the Illawarra mines? About 1,000 tons of coal to the acre. That is, taking no account of the rolls and faults. About 600 tons to the foot.
2798. Then you recover a larger percentage of the coal than they get in the northern collieries working under tidal waters? Yes.
2799. That will extend the life of the southern coal-mines considerably? Yes.

2800. How many of the collieries have cinder coal? At the Bulli "B" pit they drove in a mile and got cinder coal more or less all the way. At Bulli proper part of the coal is cinder coal. A wave of basalt seems to have passed through the coal there.

2801. There is no cinder coal in the Metropolitan Colliery? There are only the ordinary dykes.

2802. There it comes in as a kind of blackstone? No; I would not say that it is the same thing. I do not think there is any real cinder coal in the Metropolitan Colliery.

2803. The collieries south of Bulli have not met with the cinder coal yet? No, except that in part of the Bellambi Colliery the coal is singed a little.

2804. Do you know anything about the other seams besides the Bulli seam? There is the 4-foot seam, which is about 24 feet under the top seam. It is not as good as the top seam.

2805. Is it easily worked? Yes; it can be worked very well on the long-wall system.

2806. Is it fairly free? Yes.

2807. It is coal that will ultimately be of value? It may be, after the top seam is finished.

2808. What is the next seam? It is known locally as the dirty seam, or the 21-foot seam. There is a series of bands in that seam.

2809. With about 7 feet of coal altogether? Altogether there might be about that.

2810. At present it is unworkable? I think so. Three of the collieries have opened up that seam, but it has not been a success. I refer to the Ringwood, the Berrima, and the Moss Vale or Mittagong collieries. There is another seam about 80 feet below these, but I cannot speak of it.

2811. Do you know what has been done at Brownville? They are doing some work there, but they are not under the Coal Mines Act yet.

2812. Is there any coal there? I do not think the top seam is of any value there. At Mr. Biggar's place the top seam is very clear.

2813. If the present output of the Illawarra district were doubled or trebled, what would be the life of the coal-field? It is a very venturesome thing to give an opinion upon the subject; but, taking a length of 8 miles and a width of about 4, we should get something over 118,000,000 tons of top-seam coal. There are collieries down there which have been working for a quarter of a century now.

2814. *Chairman.*] Is it reasonable to suppose that they will haul coal 4 miles back from the present pits' mouths? I think so. Of course, shafts are not allowed to be sunk on the Sydney water catchment area, but shafts could be put down on the table-land with appliances for hauling the coal the last mile and a half or 2 miles. Some of the mines there now are in a good way. Mount Keira is within a mile and three-quarters, and Mount Kembla over a mile.

2815. *Mr. Fegan.*] Do you come from Scotland? Yes.

2816. You bring coal from a long distance there? I was managing the Kirkwood Colliery, where, I think, the haulage is about as much as anywhere in Scotland, and there we were in about 2 miles.

2817. Are you acquainted with any of the Durham mines? No.

2818. I suppose that a great part of the top seam at Bellambi is worked out? Yes. That is the colliery where part of the coal is singed.

2819. There is not as much coal north of Bellambi as there is towards Port Kembla? Most of the coal lies south towards Port Kembla.

2820. *Mr. Trickett.*] Two or three witnesses have given it as their opinion that the bulk of the coal lies due west from Wollongong? Yes. All the disturbance is straight out to the west from Bulli, veering a little round to the north.

2821. *Chairman.*] The great body of the coal lies between Bellambi and Port Kembla? Yes.

2822. A line running west from Wollongong would strike pretty well through the middle of the coal-bed you have referred to? Yes.

2823. Will you describe the coal deposits north from Bellambi? First there is Bulli, where you get cinder coal to a very large extent, running west. At Austimmer the coal is very poor.

2824. Is it a narrow seam? Yes, very heavy, and full of bands. At Bulli "B" pit there is cinder coal. At South Clifton the coal is very good, and from there to Coalcliff, a distance of about a mile, there is good coal, with an average width of 5 feet.

2825. Is there any coal at Stanwell Park? Not that I know of. I heard that they put down a bore and got cinder coal there.

2826. There is a break from there to Helensburgh? Yes; that country is unexplored.

2827. From Bellambi south to Mount Kembla there is a fine coal-bed 6 feet thick? Yes; that is good healthy coal all along.

2828. *Mr. Humphery.*] Is the Metropolitan coal a continuation of the Bulli seam? Yes; there is no mistake about that.

2829. What is the thickness of the seam there? Eleven feet. That is altogether an exception. In the other collieries the seam is occasionally 7 or 8 feet thick.

2830. May it be assumed that between Coalcliff and the Metropolitan mine the Bulli seam continues at a thickness of from 5 to 11 feet? That I could not say. They only work about 5 feet for the Metropolitan seam—the upper portion of it.

2831. Is it the theory that there is coal between the Metropolitan mine and Coalcliff? Well, they put down a bore at Stanwell Park, but I believe they got cinder coal.

J. Rowan,
Esq.

10 Dec., 1896.

FRIDAY, 11 DECEMBER, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.

The Hon. JAMES HOSKINS.

The Hon. CHARLES JAMES ROBERTS, C.M.G.

The Hon. WILLIAM JOSEPH TRICKETT.

The Hon. DANIEL O'CONNOR.

HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.

JOHN LIONEL FEGAN, Esq.

THOMAS HENRY HASSALL, Esq.

GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

Andrew Innes Liddell, Esq., Civil Engineer, sworn, and examined:—

- A. I. Liddell, Esq.
11 Dec., 1896.
2832. *Mr. Wright.*] Are you engaged on any engineering work at the present time? At the present time I am occupied chiefly as a mining engineer, and I am also engaged in surveying and laying out a township at Lake Illawarra for the Illawarra Land Corporation.
2833. Have you had anything to do with the construction of the proposed harbour works there? No.
2834. Do you know anything about the constitution of the Corporation? Yes; but I am not very intimately acquainted with its workings.
2835. Can you give the Committee any general idea as to the Corporation's intentions with reference to Lake Illawarra? The proposal is to construct a breakwater from the mainland to Windang Island, and to throw out two training-walls to the north of it, giving an entrance with a width of 450 feet and a depth of 25½ feet at mean tide. The tide rises and falls there about 5½ feet, so that will give a depth of about 27 feet at high tide. At present there is practically no rise and fall inside the lake, but when the channel is made there will probably be 2 feet range of tide.
2836. What is the rise and fall of the tide inside the lake? About 2 feet or 2 ft. 6 in.
2837. What is the average depth of water inside the lake? At present, 14 or 15 feet. The company propose to dredge a channel 100 feet wide across the lake from the entrance to Talawera Point. That channel will have a depth of 25½ feet at mean tide, and can be widened as requirements demand. There are about 2,000 acres in the lake which have a depth of 15 feet, and which could be deepened by dredging.
2838. In the event of the scheme being carried out, what further accommodation could be given to shipping? All around the wharfs the channel will open out into docks for the accommodation of vessels.
2839. Do you know what area it is proposed to deepen near the wharfs? No. The engineers will be able to tell you that.
2840. Are you an hydraulic engineer? Yes.
2841. But you have not been entrusted with this work? No.
2842. Have you ever sounded the lake? No; but I have fished there often.
2843. Do you fish with a marked line? No; but I have fished there often enough to be able to judge the depth pretty well.
2844. If it has been told us that the depth is not more than 10 feet, will you still adhere to your statement? I am certain that there are 15 feet—that is, all about the proposed channel.
2845. For an area of over 1,000 acres? Yes.
2846. Can you give us the total superficial area of the lake? I should say that the lake is about 4 miles long by 2½ miles broad.
2847. Who are the engineers for the the scheme? Messrs. Harper, Harper, and Henderson.
2848. Do you know when it is contemplated to commence the work? I believe that they will commence very shortly. Some arrangements are being made in London.
2849. Have the necessary surveys been made? Yes, all the surveys have been completed, and I understand that a contract has been let for the whole of the works.
2850. Do you know the name of the contractor? Yes, Mr. Amos.
2851. Have you any idea of the amount of the contract? From £130,000 to £150,000.
2852. Does that include the railway already built? I am not sure.
2853. What is the length of the railway that has been built? Close upon 8 miles, including a short piece of about a mile running off to the smelting company's works.
2854. Has the railway been completed? Yes, and they have been running over it.
2855. You know of your own knowledge that a contract has been let for deepening the entrance and for cutting a channel through the lake? Yes.
2856. Have you made any examination of the entrance to the lake? Yes, I have been over it carefully several times.
2857. What is it like at the present time? It is now practically closed by a sandbank.
2858. There is hardly any depth of water there? I suppose there would be only 3 or 4 feet.
2859. Was the entrance ever entirely closed? I have been told that on one occasion it was closed, or almost so, and that the farmers round about opened it in order to let out the water.
2860. What is the depth of water near Windang Island? According to the soundings taken by the engineers, and the soundings on the Government charts, there are 40 feet just north of the island.
2861. Then the Corporation will not have to deepen the bay at all? They will not have to do any dredging beyond the end of the training-walls.
2862. What is the depth further out? According to the Admiralty chart it is all deep water further out. A breakwater is to be run out from the mainland to Windang Island, to prevent the southerly seas from silting up the entrance, and when once the entrance is dredged the scour of the tide will keep it perfectly clear.
2863. As an engineer, can you give the Committee any approximate idea of the cost of cutting a channel across the lake, and giving berthing accommodation for, say, twelve big over-sea ships? The Corporation's scheme is designed to do that. Steamers will be able to lie as closely in the proposed dock as in Sydney Harbour.
2864. How many berths will they provide? I cannot say.
2865. Could they berth more than four ships, each 400 feet long? Yes; but I would not say that four ships of that length could lie alongside the proposed wharfs.
- 2866.

2866. If you had a vessel lying in the channel, it would not be possible to get another large vessel past it? If the traffic became very big the Corporation would very soon widen the channel. A. I. Liddell,
Esq.
2867. At the present time they only intend to provide for the trade that may be expected in the immediate future? Yes. 11 Dec., 1896.
2868. But they will be ready to give further accommodation if the trade improves? I believe that is so.
2869. Where will the silt to be taken from the lake be deposited? The Corporation have the right to reclaim part of the foreshores of the bays north and south of Talawera Point.
2870. They would build training-walls there, and deposit the silt behind them? As accommodation was required, they would dredge out the necessary area, and use the silt for reclamation.
2871. They would have an enormous quantity of silt to get rid of? I understand that the idea is to deposit most of the silt on these foreshores, though some of it will be taken to sea, where that is cheaper.
2872. You know nothing about the Corporation's financial position? No.
2873. Mr. Amos' contract for the railway has been completed? Yes.
2874. And I presume that he has been paid for it? He has been paid for it.
2875. He is now going on with the harbour? Yes.
2876. Do you know anything about the coal-fields in the neighbourhood of Lake Illawarra? Not very much.
2877. What is the name of the coal-mine from which the company's railway starts? It is called the Ocean Colliery.
2878. Has the mine been opened? Yes, and I believe that they are now in about 200 feet.
2879. Have they got coal? I have been told that they have very good coal.
2880. Have you anything to do with the smelting company? No.
2881. Are the works of the smelting company in progress? Very large works were nearly completed when I was down there three weeks ago.
2882. What do they consist of? Three large furnaces—the manager told me that they were three of the largest in the world; and there are other buildings. The works are built on the top of the hill, which has been levelled off, and as the slag accumulates it will be thrown out, and will increase the area of level ground. The position of the works being elevated, everything from the furnaces will naturally run down hill.
2883. The proprietors of the smelting works depend upon getting their ore by sea? Yes.
2884. Are the smelting works connected with the main Illawarra railway? Yes; by the Illawarra Land Corporation's line.
2885. So that, failing to get their ore by sea, they will be able to get it by rail? Yes.
2886. *Mr. Hassall.* Have you given any consideration to the proposal to construct a harbour at Port Kembla? Yes.
2887. Do you think that proposal a desirable one? I do not think that the breakwater is needed there. In southerly and south-easterly weather vessels can be there quite comfortably now, and north-easterly weather does not affect the place. With heavy easterly weather, I do not believe the harbour would be of much use, even if the proposed breakwater were constructed. A sailing vessel could not get into the proposed harbour in easterly weather, or even in heavy north-easterly weather.
2888. To make a secure harbour it would be necessary, you think, to construct the two breakwaters shown on the plan? Yes; and to have a very powerful tug service. I understand that the distance between the end of the proposed eastern breakwater and the shore is only three quarters of a mile. A sailing vessel would not attempt to make an entrance like that in heavy easterly weather.
2889. A vessel going in there in an easterly gale would have a beam wind? Yes, and she would be so close to a lee shore that I do not think any master would care to take the risk.
2890. Have you had much experience of sailing vessels? No, though I have travelled up and down the coast a good deal in both steamers and sailing vessels.
2891. Do you think Port Kembla a fair harbour at the present time? I consider it a very good harbour, except in easterly weather.
2892. It is fairly well protected from the south? It is almost perfectly protected from the south. I have been there during heavy southerlies, and I have never noticed any swell.
2893. In the event of the Government proposal being carried out, do you think it would be necessary to make the eastern breakwater 2,800 feet long? In southerly weather the breakwater would not be wanted, and in easterly weather I do not think it would be any protection. It would not allow a sailing vessel to make the harbour.
2894. That being so, would it be necessary to carry it out 2,800 feet? Yes, to give accommodation for twenty or thirty ships.
2895. Do you think it would be reasonable to run the breakwater out in a line with the coast from Red Point, taking it a distance of 2,200 feet? That would be sufficient to protect vessels lying at the jetties. Of course the length of the breakwater must depend upon the area of water you wish to protect.
2896. Have you any knowledge of Bellambi? No, I have not been much at Bellambi.
2897. You could not make a comparison between it and Port Kembla? No.
2898. Do you think that the construction of a harbour at Lake Illawarra would meet the requirements of the southern coal trade? I think so. In fine weather, or in southerly weather, they could still load steamers safely at Port Kembla, and there would be nothing to prevent a connection being made between the main south coast line and Lake Illawarra to allow them to load vessels in Lake Illawarra in rough weather. The company's Act gives them power to make wharfs, dredge channels, and do other work to facilitate this.
2899. Do you think that the various collieries having their own jetties at the present time, would go to the expense of making lines of railway to Lake Illawarra in order to load there? I think they might do that, or they could use the company's line. They would only have to come to Lake Illawarra in very bad weather.
2900. Have you any knowledge of Port Kembla? Yes; I have been there frequently.
2901. Is the holding ground good? Yes.
2902. Do you look upon Port Kembla as pretty centrally situated, having regard to the position of the southern coal-mines now being worked? It is not so centrally situated as it might be,

- A. I. Liddell, 2903. Do you think that Wollongong would be more central? Yes, for the coal-mines which are now working.
- Esq.
11 Dec., 1896. 2904. Have you any idea of the cost of constructing a breakwater at Port Kembla? I only know the Government estimate.
2905. You have made no calculation on your own account? No. It appears to me, however, that the breakwater will be a very difficult one to construct. For one thing, it will be over 60 feet high—45 feet under water, and 20 feet above water. I doubt whether it is in the power of man to make a sufficiently stable breakwater there, considering the heavy seas that roll in after an easterly gale.
2906. Are the operations in connection with the Lake Illawarra scheme so advanced that you can say that they will be carried out? I am not in a position to speak about that matter.
2907. *Mr. Roberts.*] Have you given consideration to the various schemes for providing a deep-water harbour on the south coast? No, only to the Port Kembla and the Lake Illawarra schemes.
2908. Do you regard Wollongong and Bellambi as unworthy of consideration? I do not know much about Bellambi, but Wollongong seems out of it altogether.
2909. Which do you prefer—Port Kembla or Lake Illawarra? Having in view the comparative costs, I think the Lake Illawarra scheme is the better. The contract for the Lake Illawarra scheme has been actually let for £150,000; while the mere estimate of the cost of the other scheme is, I understand, £168,000. I have seen this coast during easterly gales, when the waves have been coming in with a mean height of 20 feet. Of course I should be very sorry to place my experience against that of Mr. Darley, but I really do not believe that it is possible to make a breakwater there which would stand those seas. Even at Wollongong the breakwater has crumbled away as they have tried to make it.
2910. At Newcastle there is a somewhat similar breakwater? Yes; but that breakwater extends eastwards, and is end on to the heavy easterly sea. The only seas that affect the Newcastle breakwater come from the south, but they do a good deal of damage to it at times, though they are never so big as the easterly seas. An easterly gale, however, would break upon the proposed Port Kembla breakwater at all points, and it is when a sea breaks directly like that that it does damage.
2911. Do you maintain that with an expenditure of £150,000 you could afford better facilities for the loading of sailing ships and of large steamers at Lake Illawarra than a similar expenditure at Port Kembla would give? Yes. Once you get into the lake you are quite landlocked.
2912. Do you think that the coal trade of Illawarra would be more advantageously developed by the expenditure of money at Lake Illawarra than at Port Kembla? I think so. By allowing the company to make a harbour at Lake Illawarra you bring new coal-mines into operation. If the Lake Illawarra scheme is not carried out it is certain that the coal-mines west of the lake will not go on working. Therefore the carrying out of the Port Kembla scheme would restrict the trade of the district.
2913. Are you in a position to say that if it were decided to carry out the Port Kembla scheme the Lake Illawarra scheme would not be proceeded with? No; but I think that the company is hardly prepared to make a port in such close proximity to Port Kembla.
2914. But if the contract has been let, will not the work have to be carried out? I cannot say.
2915. Do you know that the contract has been actually signed? Yes; I know that it has been signed.
2916. When do they intend to commence operations? I could not say.
2917. By what date have the works to be completed as per contract? I believe at the end of two years.
2918. Do you know the date of the signing of the contract? No.
2919. Was it signed last month, or the month before? It was signed before that; but I could not say the exact time.
2920. Was it during the present year? Yes.
2921. Was it signed before the 30th June last? I could not say.
2922. *Mr. Black.*] You have spoken about the difficulties attending any attempt to enter Port Kembla with sailing vessels during easterly or heavy north-easterly gales;—are there any circumstances which would make it easier for such vessels to enter Lake Illawarra during similar weather? No. Such vessels would be under a similar disability. A strong tug service would be required in either case. The company's Act obliges them to keep a tug service, and if they do not keep a good enough one the Government have power to take it over themselves.
2923. If a contract for the carrying out of the Lake Illawarra scheme has already been let, the works must be carried out, that is, unless the contractors are indemnified for the non-completion of the contract? That is a matter I cannot speak about.
2924. If the smelting-works which are situated on the shores of Lake Illawarra are to have the conveniences which their projectors intended, they must be provided with direct communication with the ocean? Yes, I think so; but I believe that the smelting company is in a pretty safe position. They have made arrangements with the railway authorities which, I think, render them almost independent of harbour accommodation.
2925. Do you not think that, inasmuch as there is now no entrance to Lake Illawarra, and that to make a harbour there you will have to dredge, and keep dredged, both an entrance and a channel across the lake, a better harbour could be constructed more easily at Port Kembla, supposing the proposed breakwater were made? I think not. There is more accommodation at Lake Illawarra than at Port Kembla. At Port Kembla there would be only 260 acres of protected water, but at Lake Illawarra you could get 3,000 acres if you wanted the room.
2926. Is not dredging a very expensive process? It is pretty cheap now, and the company would have no difficulty in disposing of the silt.
2927. How much would it take to dredge an acre for the accommodation of big ocean vessels? Taking the average draught at 24 feet, you could put the cost at 2d. or 2½d. per cubic yard.
2928. How much would that be an acre? Between £170 and £200. If extra accommodation is wanted, the company will be willing to give it for their own profit.
2929. How much would it take at £170 an acre to deepen 260 acres. £44,000.
2930. That estimate does not include the cost of dredging the entrance and a channel across the lake? No; that is for increasing the accommodation in the lake.
2931. I suppose the alleged superiority of Lake Illawarra is due to the fact that when a vessel once gets inside she is perfectly safe from any weather? Yes; the lake is perfectly landlocked.
2932. That is why you support the Lake Illawarra scheme in preference to any other? That is one of my

my reasons for supporting it. Another is that it will increase the coal trade of the district by giving an outlet for the coal from mines west of the lake, which have not yet been worked, and it will not in any way reduce the output from the other mines.

A. I. Liddell,
Esq.

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2933. You do not think that the construction of a harbour at Port Kembla would have the effect of opening up as yet unworked mines in the vicinity of Lake Illawarra? I do not think so. I think it only means giving a monopoly to mines already working. If the Lake Illawarra scheme is not carried out no mines will be opened south of Mount Kembla.

2934. You think that the construction of a harbour at Port Kembla will give an undue advantage to the mines in the immediate vicinity? I fancy it would.

2935. Does not that always happen? Yes, I suppose so. I suppose if you made a harbour at Bulli it would be too far north for the Kembla mines.

2936. How does Bellambi compare with Port Kembla as a place for sheltering vessels? I cannot say; I have not seen it in rough weather.

2937. *Mr. Hoskins.* What is the nature of the bottom at Lake Illawarra? Volcanic mud and a soft kind of sandstone forming a stiff clay.

2938. Do many watercourses empty into the lake? There are two good-sized ones—Mullet Creek and Macquarie Rivulet.

2939. If the lake scheme is carried out it will be necessary not only to dredge the channel and docks but to keep them dredged? Only to a slight degree. I have given that question a good deal of consideration. The only silt likely to be brought into the lake will find its way down the two creeks which I have just mentioned; but neither of them enters into the lake near Talawera Point, and consequently silt is not likely to accumulate near the proposed basin. The bottom of the lake is very tenacious in character, and it is considered likely that the sides of the channels would stand up by themselves.

2940. Even though covered by water, and subject to heavy rushes consequent upon rains? There will be no movement to speak of on that account. Of course there will always be a dredge at work somewhere or other.

2941. If much business was done in the lake, would not the movement of the vessels cause the banks of the channels and docks to slip in? Well, the tugs would not draw more than 8 or 10 feet, and the excavation does not begin until you get 15 feet under water, so I do not think that their wash would do any harm.

2942. Are you aware that some of the best authorities who have given evidence before the Committee say that the existence of extensive seams of coal south of Mount Kembla has not been proved? I have heard that said, but I have also heard that these gentlemen have been down to the different places and are altering their minds. I know that the coal outcrops all along the cliffs there, and at present they are 200 or 300 feet into a very good seam of coal at the Ocean Colliery.

2943. No attempt has hitherto been made to work coal south of Mount Kembla? No, because there has never been an outlet for it.

2944. Have they not explored sufficiently to have ascertained that the seams south of Mount Kembla are very broken and faulty, and that the coal is inferior? That I cannot say. I only know one place south of the mine at present working where any tunnel or adit has been put into the hills. Men who are supposed to know about coal have told me that there is plenty of coal down there, and a good many of them have put their money into this colliery that I speak of.

2945. Have they got much coal out? They have a very good seam.

2946. Has the coal been tested? Yes, and found to be good coal. So much so that it is to be used at the smelting-works.

2947. When were you last at Lake Illawarra? About three weeks ago.

2948. What work had then been done by the Corporation? Four or 5 miles of railway had been built, and a start had been made with the breakwater.

2949. Are there many men at work down there now? That I could not say; but I do not think so.

2950. The railway was constructed with a view to supplying coal to the smelting-works? No; it was part of the company's original project.

2951. You cannot say whether any spirit has been shown in the carrying out of the scheme? I do not know enough of the company's doings to speak about that. I only know that the railways have been built.

2952. Do you think that the work will be carried out in two years? The contractor thinks so.

2953. Do you? I do not see why it should not.

2954. Would it not necessitate the employment of hundreds of men? It will require a large number of men.

2955. It has been given in evidence that the best body of coal in the southern district lies at the back of Wollongong? I have always heard it said that that was so, but I do not know much about the collieries there.

2956. How far is Port Kembla from Wollongong? About $4\frac{1}{2}$ miles.

2957. How far is Talawera Point from Wollongong? Eight or 9 miles.

2958. So that if the Illawarra scheme is carried out in preference to the Port Kembla scheme the colliery proprietors to the north will have 4 miles further to send their coal? Yes.

2959. Are not profits in the coal trade so finely cut that additional haulage will very much hamper the coal-mine proprietors? I do not know enough about the coal trade to be able to say whether an additional haulage like that would be a killing handicap or not; but I do not see what there is to prevent a branch line being made from Kembla Grange to the lake. That would not make the lake much further away than Port Kembla.

2960. But it would necessitate a great deal of dredging? Yes. A channel would have to be dredged from the north shore of the lake to the main channel crossing the lake.

2961. I suppose you admit that it would be unwise to take a vessel drawing 25 feet of water up a channel $25\frac{1}{2}$ feet deep? Well, you would require a lot of very soft ooze underneath.

2962. Should not the depth of the channel be nearer 30 feet? If the company wishes to provide for vessels drawing 25 feet it will have to deepen the channel, but few of the over-sea vessels, except the mail steamers, draw 24 feet.

2963. We have it in evidence that vessels drawing 26 feet have loaded at Port Kembla? Yes; I know that there was a 4,000-ton vessel there a few months ago.

2964. You admit that Port Kembla in its natural state is a good port? Yes; in all but easterly weather.

2965.

- A. I. Liddell, Esq.
11 Dec., 1896.
2965. *Mr. Humphery.*] Have you had experience in the carrying out of works similar to those contemplated at Lake Illawarra? I have had experience on the Macleay.
2966. But not outside the Colony? No.
2967. What works were you engaged on at the Macleay? Dredging works, and one thing and another.
2968. But have you had any experience in connection with works like those contemplated at Lake Illawarra? I was engaged in connection with the construction of the breakwater at Newcastle, and I was for a number of years with Mr. Moriarty dodging about from one place to another.
2969. Where is it proposed to get the material for the breakwater at Lake Illawarra? Most of it from the top of Windang Island, but some of it will be taken from Mount Brown.
2970. Do you think it probable that a sand-bar will form outside the entrance? No. The water is so deep that I do not think that there is any danger of that. It is about 40 feet deep there.
2971. Would you dredge to that depth at the entrance? No. It is only intended to dredge the channel to a depth of 25½ feet there; but I understand that the borings show that it would be possible to make the channel still deeper if it were thought necessary.
2972. Can you say definitely from having seen soundings of the lake what its actual depth is? Not at the present moment; but I know that all along, close to the proposed channel, there is an average depth of 15 feet. At the entrance the depth is always varying.
2973. What is the bottom of the lake like when you get beyond the mud? A good sound stiffish clay.
2974. Would it be difficult to dredge? No; those who understand dredging say that it would be easy to dredge, and it is proposed to use a sand-pump dredge, so that it cannot be very hard.
2975. Your estimate of the cost—2½d. per cubic yard—is for stiff clay? Yes. In giving that estimate I ran through my mind the prices which have been paid at different places as given to me by the engineers in charge of various dredging operations.
2976. Do you think you have over-estimated or under-estimated the cost of the work? I have not made any estimate for the whole work.
2977. Does your estimate of the cost of dredging include everything? Yes; but it does not include the first cost of the plant.
2978. Do you know anything about the coal now being worked to the west of Talawera Point? I have seen the coal.
2979. When did you last visit the mine? Four or five months ago.
2980. What distance had they then driven in? 150 or 200 feet.
2981. What is the thickness of the seam? So far as I could judge about 8 feet; but I was told that it was thicker.
2982. Without bands? They were not far enough in to say.
2983. Did you understand that they had a workable seam of 8 ft.? Yes.
2984. Has not a mine recently been opened up not very far from there by a Mr. Brownley? I do not know of it. I have only seen the mine to which I refer.
2985. How long will it be before the completion of the smelting works? I cannot say, but they are proceeding with them very rapidly. They had a couple of hundred men on when I was down there three weeks ago.
2986. Do you know if they have made arrangements to get the coal they require from the mine you speak of? They have taken a lease of that mine.
2987. Is it owned by the Illawarra Harbour and Land Corporation? It is leased by the smelting company, and I believe that it belongs to the Illawarra Harbour and Land Corporation.
2988. *Mr. Trickett.*] Would the channel across the lake be 100 ft. wide at the top or at the bottom? I should think that would be the width at the top, though I am not sure.
2989. If you were constructing it, would you make it 100 ft. wide at the top or at the bottom? At the top.
2990. What width would you have at the bottom? I would give it a batter of 1 to 1; that would make it 80 ft. wide at the bottom.
2991. You think that that batter would be sufficient to hold up the sides? I think quite sufficient.
2992. You think the bed of the lake is suitable for the cutting of a channel? I do.
2993. And you think that the sides of the channel will stand up without piling or sheathing? Yes, except that just near the entrance there is a little bit of sandy stuff which would have to be piled. When you get into the bed of the lake it is all good sound stuff.
2994. What is the flow of the tide out of the lake? I cannot say, but I think that the matter has been fully considered. It is intended to keep the entrance clear by the action of the tide.
2995. Nothing of any extent has been yet done at the entrance? No.
2996. *Mr. Clarke.*] In the event of the scheme being carried out, where would vessels lie in the lake? In the basin near Talawera Point. The channel runs out into a dock at the point.
2997. If the scour of the tide did not remove the sand at the entrance I suppose you would have to be continually dredging there? Yes; but it has been calculated, and I believe that Mr. Darley himself is satisfied that the scour will keep the channel open.
2998. The breakwater from the mainland to Windang Island will prevent sand from silting up the entrance? Yes; that is the reason for making it.
2999. Is the Ocean Colliery a new mine? Yes, entirely.
3000. Is the coal from that mine good coal for steaming or for smelting purposes? So far as I can see it does not differ from other southern coal. The smelting company is quite satisfied with it.
3001. Are you aware that the Southern Coal Company opened up a mine in that locality and found that it would not pay to work it? No.
3002. Are you aware that the company is now working the Corrinal mine on tribute? No.

Captain John Sage, Master Mariner, sworn, and examined:—

- Captain John Sage.
11 Dec., 1896.
3003. *Chairman.*] What are you? A master mariner.
3004. Do you know the ports on the South Coast? Some years ago I was for five years running down the coast continually from China, calling at all the ports from Port Darwin to Adelaide.
3005. Are you prepared to make a statement to the Committee? So far as I know the coast, all the ports are

are bold on the northern side and stand out a little on the southern side. In my opinion, a breakwater at Port Kembla would not stand the south-east gales unless it were at least 100 feet wide at the base. There is nothing much in the north-east weather to hurt; but if the proposed northern breakwater were constructed, no sailing vessel would ever attempt to enter the harbour in bad weather. I have had twenty-five years experience at sea, and for eleven years I have commanded 2,000-ton boats. I think a sailing vessel would also be doubtful about entering the port if the proposed eastern breakwater were constructed.

3006. *Mr. Wright.*] It is proposed to have the breakwater about 130 feet wide at the base? No doubt that would stand; but the cost would be tremendous. Sailing ships could always enter Lake Illawarra, because in bad weather they would be sheltered by the island; but it is doubtful if they would attempt to enter Port Kembla. The breakwater at Newcastle is a good deal protected by rocks to the south-east, so that the seas do not break right on it. Their force is spent before they reach it. All the ports along the coast from Gabo Island to Port Darwin are deep on the northern side, but on the southern side they nearly always silt up with sand. The proposed breakwater at Port Kembla would, however, keep that place clear of sand.

3007. *Chairman.*] I suppose all ports of any importance require a tug service? Undoubtedly; both for steamships and for sailing ships.

3008. I suppose sailing vessels would not attempt to enter Port Kembla without assistance, any more than they would attempt to enter Newcastle? No.

3009. Are you prepared to say anything with regard to Wollongong or Bellambi? No; though I have looked at the plans. I have just come down from Townsville, where there is a breakwater upon which they have spent a great deal of money. About 2 miles off there is a magnetic island; but even with that protection the breakwater, which is 40 feet at the base, and cemented right along, will not stand the sea.

3010. You believe that the approach to Port Kembla would be difficult for a sailing vessel if only one breakwater were constructed;—but it would be still worse if both breakwaters were made? Yes; a sailing vessel would never attempt to enter Port Kembla in bad weather if both breakwaters were made.

3011. In considering the cost of making the harbour at Port Kembla we must take into our calculations the probable cost of a tug service? Yes.

3012. You like the proposed approach to Lake Illawarra better than that to Port Kembla? Yes.

3013. You are doubtful if the breakwater proposed at Port Kembla would stand against the heavy easterly seas? I am sure that it would not stand unless it had a tremendous base.

3014. Does that fairly well cover your case? Yes, that is all I have to say.

3015. *Mr. Trickett.*] You have ventured the opinion that nothing less than a base of 100 feet will do;—I suppose that you think that if the base were more than 100 feet, the breakwater would stand? Yes; it might stand then.

Captain
John Sage.
11 Dec., 1896.

TUESDAY, 15 DECEMBER, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.

The Hon. JAMES HOSKINS.

The Hon. CHARLES JAMES ROBERTS, C.M.G.

The Hon. WILLIAM JOSEPH TRICKETT.

The Hon. DANIEL O'CONNOR.

HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.

JOHN LIONEL FEGAN, Esq.

THOMAS HENRY HASSALL, Esq.

GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

Stephen Henderson, Esq. (Messrs. Harper, Harper, and Henderson, Engineers to the Illawarra Harbour and Land Corporation, Limited), sworn, and examined:—

3016. *Chairman.*] What are you? Civil engineer.

3017. Have you got charge of the works proposed to be carried out by the Illawarra Harbour and Land Corporation at Lake Illawarra? Yes.

3018. Did you do the engineering? My firm did it.

3019. You can give any information that is necessary? Yes.

3020. Have you a plan with you? Yes; I have brought two plans with notes. I have here a short statement which I had better read:—

The Illawarra Harbour and Land Corporation have already constructed a railway from their coal properties in the mountain range to Talawera Point, on the shores of Lake Illawarra, also a siding connecting this railway with the Government line at Dapto, and a branch line to the works of the Smelting Company of Australia.

It is now proposed to form a harbour in Lake Illawarra by cutting an entrance channel through the sand ridge that separates the lake from the ocean; protecting the entrance channel by the construction of parallel training banks and breakwaters slightly curved on plan; by dredging a channel 100 feet wide at bottom from the entrance across the lake to Talawera Point; by dredging a shipping basin at Talawera Point 1,050 feet long by 850 feet wide; by constructing two jetties, each 450 feet long, in the shipping basin; and by reclaiming portions of foreshores at Talawera Point and near the entrance by depositing the dredgings behind reclamation banks.

With regard to the entrance works, it was originally proposed to run the southern breakwater in a northerly direction from Windang Island; but Mr. Darley suggested the present arrangement, pointing out that a breakwater running north from Windang Island would be almost broadside on to our heaviest seas, and would have to be made high and of heavy material to stand the seas. He considered that the most lasting results may be looked for when a breakwater is as nearly end on to the heaviest sea as possible. His design for the plan for the entrance works was adopted.

At the sea extremities of the breakwaters the proposed level of the top of the breakwaters is 17 feet above low water, the top width 15 feet, and both the side slopes $1\frac{1}{2}$ to 1. As the breakwaters approach the shore the height and cross-section are reduced.

When the breakwaters and training banks are completed, and the entrance channel dredged, I expect that no dredging will be required to maintain the entrance. The area of the lake is some 13 square miles, and forms an immense natural scouring basin. The volume of water flowing in and out with each tide will maintain the channel without artificial means.

The depth to which it is proposed to dredge the shipping basin and the channel is 25 feet 6 inches below mean tide level, and this means that in the shipping basin the depth at low water will, in all probability, never be less than 24 feet 6 inches, as the range of tide in the lake is not likely to exceed 2 feet.

S. Henderson,
Esq.
15 Dec., 1896.

The

S. Henderson, Esq.
15 Dec., 1896.

The areas to be excavated to this depth are as follows :—Between the breakwaters, 35 acres; in the channel across the lake, 36 acres; in the shipping basin, 20½ acres; making a total area 25 ft. 6 in. deep at mean tide level of 91½ acres. A contract has been entered into between Mr. Robert Amos and the company to construct all these works already described.

The amount of this contract is £177,060. Only half this amount has to be paid to him in cash, namely, £88,530; the other half he has agreed to take in debentures of the company. If the whole is paid in cash he is willing to reduce the prices by 20 per cent., bringing down the total cost of works to £141,648.

In the proposed tidal basin four large steamers can berth alongside the jetties, and at least half a dozen others can be moored in the basin.

The company proposes to purchase a dredge, and keep enlarging the harbour to keep pace with trade development. This dredge will also be used to deepen the harbour if required, and to widen the channel across the lake.

I have estimated that the size of the shipping basin could be increased to 40 acres; and three more jetties, 450 feet long each, could be constructed with railway connections for the sum of £25,000, giving 4,000 feet of berthing accommodation, and there is no limit to the possible extension.

Lake Illawarra possesses immense natural advantages for the site of a commercial harbour. Its artificial entrance will be protected by Windang Island from the heaviest sea. Its great area will give sufficient tidal scour to maintain the entrance without dredging. Also, the silt brought down by the inflowing streams in flood time will be deposited near their mouth, and not interfere with the navigable channel, as is the case at Newcastle, where the floods of the Hunter require an enormous amount of dredging to be carried on annually for maintenance alone.

The bottom of the lake consists of mud soft for a few feet down, and then firmer, and near the entrance of sand. The material can be dredged at a very cheap rate by sand pumps.

3021. What is the formation at the bottom of Lake Illawarra? It is mud; near the entrance, sand. It is mud all along our channel.

3022. How deep is it from the surface of the water to the mud? It varies in different places.

3023. Have you any borings? No; I have none here. In the channel, which is 3 miles long, the average depth of the first 112 chains, starting with the basin at Tallawera Point, is 11 ft. 6 in. below mean tide level; then for the next 40 chains, 5 ft. 6 in.; and for the last 91 chains, 3 ft. 6 in.

3024. That brings you to where the lake narrows before it comes to the sea? I think that stops at the western extremities of the training banks.

3025. What depth of mud is there? Borings have been put down to a depth of 30 feet and nothing was found but mud or soft stuff.

3026. Were borings taken right across the lake at various distances? Yes, right from Tallawera Point.

3027. And at no place did you find anything but mud going to a depth of 30 feet? I do not think that all the borings were put down 30 feet. The borings were taken before I came to Sydney. The most recent borings were one made by Mr. Amos to satisfy himself.

3028. Can you give the Committee any information with regard to the depth of the mud at the bottom of the lake? As far down as our contract depth there is no rock.

3029. What depth is that? 25 ft. 6 in.

3030. Did you take the boring across to the beginning of the breakwater? Yes. These borings were taken in 1889. I only came to Sydney in 1891.

3031. You believe there is nothing to be found at the bottom of the lake but mud? Mud and soft material. There has been no trace of rock, except, of course, near Tallawera Point.

3032. Is the material very soft? It is soft for the first few feet, then it gets firmer, more consolidated.

3033. Having cut that channel in your docks, is there any chance of its filling up? No, I think not.

3034. Is there any ebb and flow in the lake at all? Very little, but there will be.

3035. In your opinion it will not affect the soft material or bring it into the channel you have cut? Not to any extent; there may be some silting towards the eastern portion of the channel. The tide will be sufficient to keep the entrance to a proper depth.

3036. Will Mullet Creek and Macquarie Rivulet bring down any silt? Yes, but that will not affect the work at all.

3037. They will furnish some current? Very little, the current from the sea will be much more than their current.

3038. You think that those small tributaries will not affect the current in the lake? Not in the main stream; it will add to the current going out at the entrance.

3039. But not in the main body of the lake? Certainly not.

3040. You limit the question therefore to a scour that will carry any silt into that portion of the cut just before entering the narrows as they appear on the plan? Yes, and then it will not be silting—there will be a tendency to scour.

3041. You tell us that soundings having been taken by your firm, you find that you can get a channel across the lake? Yes.

3042. The second point is that except towards the eastern end of it there is no danger of its silting? There is no danger towards the eastern end either.

3043. There is no danger at all? No.

3044. Where the cut ceases, to the end of the breakwater, you propose to erect fascine banks do you not? Not there.

3045. You reclaim behind the bank? Yes.

3046. You propose to erect fascine work from the island near the inner entrance? Yes.

3047. This has no material connection with your scheme? No, it is only to put the dredgings in.

3048. Therefore your cutting runs clean out to the end of the breakwater? Yes.

3049. Have you any doubt with regard to your work standing from the narrows to the end of the breakwater? No.

3050. You have no doubt about it? Not the slightest; there will be plenty of scour there.

3051. I am speaking of the work standing up where the sand is near the entrance before you get to the end of your breakwater? The scour will excavate a wider channel than we make.

3052. You believe that not only the channel will stand but that it will have a tendency to increase? It will.

3053. You put no sides on? Not there.

3054-6. There will be no attempt to hold it up until your breakwater is up? That is so.

3057. What is the length of your southern training-wall? 1,650 feet.

3058. Does that terminate at the small protecting breakwater that goes south-easterly to Windang Island? Yes.

3059. And from there to the end of the southern breakwater, what distance is it? 1,815 feet.
3060. And the northern breakwater? That is the same length. The northern training-bank is much shorter.
3061. The northern training-bank starts from where? It terminates in the sand a little to the south-west of the green point shown on the map, and then the northern training-bank runs a distance of 825 feet, the western termination being approximately north of the western termination of the southern training-bank.
3062. Will you describe the width and depth of your two training-banks? I have not got the width. The depth of the foundations for the training-banks and breakwaters is 27 ft. 6 in. below mean tide level.
3063. What is the width of the crown? I have not that here.
3064. Where does your material come from? From Windang Island.
3065. You have no doubt about Windang Island furnishing that material? None whatever.
3066. What number of cubic yards will it take? The northern training-bank will take about 35,000 tons, the southern 72,000 tons.
3067. That is the amount of material you estimate to require? Yes.
3068. You are to get it from Windang Island? Yes.
3069. How do you propose to take it across the channel? That is a matter for the contractor. If I were doing the contract work I would make the northern breakwater before I dredged the channel through the lake. That is a matter for Mr. Amos. He can take the material across by railway, or punt it across.
3070. I suppose you took steps to see if Mr. Amos' contract seemed a reasonable one? Yes.
3071. Therefore you must have taken into consideration the cost of the transfer of material? Yes.
3072. And you believe the training-walls can be built at a certain price? Certainly.
3073. And you believe you can take them right across the entrance of the lake, make the northern training-wall first, then subsequently make the southern training-wall? Decidedly; before you cut the entrance through.
3074. How much a yard do you estimate the breakwater to cost? The contract price which Mr. Amos has given is in tons. It is 3s. 7½d. a ton for the breakwater.
3075. I am speaking of the training-bank? For that it is 3s. 1½d. per ton. That would have to be reduced by 20 per cent., because he has offered to do it for 20 per cent. less for cash. It is a schedule contract.
3076. The schedule virtually controls the total payments? Yes.
3077. It seems to you that banks of a certain height and width at a certain price, 3s. 1½d., would come to a certain sum of money—what is the amount for the two training banks? The northern is £5,468, and the southern is £11,250.
3078. Always subject to increase or decrease as the work progressed? Certainly.
3079. Will you give us the dimensions of the northern breakwater. It increases towards the end. You seem to have 25 feet at the end? That is the end most exposed to the sea.
3080. What is the width of your southern breakwater at the eastern end? Fifteen feet.
3081. That is on the top? Yes, and side slopes of 1½ to 1. The width at high water would be 51 feet, and at low water 66 feet.
3082. And the width at the bottom? It would be over 140 feet at the bottom.
3083. That is in 25 feet of water? Yes.
3084. What depth have you estimated for your breakwater right into the beginning of the training-wall? At the beginning of the training-wall the dimensions of the breakwater are 10 feet wide at the top, and I may mention that the side slopes of the breakwater for the last 10 chains are 1½ to 1; but from there to the shore end, they are from 1¼ to 1. That makes a difference in the quantities. The width at the top is 10 feet and the slope is 1¼ to 1, and they have to go down 27 ft. 6 in. below mean tide level.
3085. So that it is 27 ft. 6 in. at the eastern end of the northern training-bank, 10 feet on the top, then there is a gradual increase until you have 15 feet on the top, and 25 feet below low-water mark at the extreme eastern end? Yes.
3086. Have you soundings where you propose to put the northern and southern breakwaters? Yes.
3087. Have you any borings? That I cannot tell.
3088. Do you know how far it is down to the rock? No, except that one boring was put in at the middle of the channel between the two breakwaters by a 32-foot rod, and when it went down it was about 3 feet above mean tide level, and there was no rock down there.
3089. You had not got rock then? No.
3090. Is it reasonable to suppose that there would be 8 feet of sand at least under the northern and southern breakwaters? Until you come to the end of it, I think there will.
3091. And you do not think that the scour is likely to shift that? No.
3092. Still you think it will shift sand, and keep your entrance clear? Yes. When you have training banks, you will find that although it keeps the channel deep, there is beside the breakwater and training bank, a slope of sand, a gradual slope from the wall. That is owing to the action of the training bank.
3093. The basis of your calculation then was 2 feet under the sand at the eastern end, and the dimension of the breakwater as shown? Yes. I believe it was 2 feet which I allowed. I know that we did make an allowance.
3094. What amount of stone does that give you? We estimate that in the northern breakwater it will be 139,000 tons.
3095. Subject, of course, to the schedule? Yes.
3096. And what will be the cost of that? £25,193.
3097. How much a yard? 3s. 7½d. a ton.
3098. As regards the southern breakwater were the dimensions taken there in the same way? The quantity is 153,000 tons, which comes to £27,731.
3099. Will there be any trouble at all about getting material of the size you desire? We shall get it of the size we desire at Windang Island.
3100. You are sure of that? Yes.
3101. And you can make the breakwater across the entrance, and complete that before touching the southern? Before touching the entrance I would make the southern breakwater.

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- S. Handerson,
Eq.
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3102. You would keep your breakwater going? I would not cut the entrance.
3103. You believe that it is practicable? It is, certainly.
3104. What is the area of the lake? About 13 square miles.
3105. What is the rise and fall of the Illawarra Lake at present? I have no record, but I believe it is pretty well imperceptible.
3106. Imperceptible? Yes, quite imperceptible.
3107. Lake Illawarra is not much affected by the tide? It is not.
3108. Therefore not much water goes in and out from the ocean? No.
3109. What rise and fall do you expect to have when the entrance is open? It is very hard to say, but I should think about 1 foot or 18 inches at the outside.
3110. Can you tell us the amount of water which a depth of 1 or 2 feet would be over 8,000 acres? I will make a note of it.
3111. Can you tell us whether that 430 feet is sufficient to give a uniformity of level between the sea and the lake at high water? I do not think it is.
3112. At what rate do you anticipate that the water will run between the breakwater and the training-bank, taking the rate uniformly right through? Do you mean uniformly over the whole width of the lake.
3113. I mean approximately between the northern side of the guide wall, and the eastern side of the breakwater? I will work it out.
3114. The water coming out of the lake to the end of the northern and southern breakwaters spills into the sea saucer, it widens out at once, and the force is lost a short distance out? Yes.
3115. Then the tendency would be for it to spill outside and to make a bar beyond the two breakwaters? That would be the tendency as far as that is concerned.
3116. If you have not a scour sufficient to shift it well out into deep water, will you not have a bar outside your two breakwaters? There is a tendency to form a bar there.
3117. Do you depend upon the scour to maintain the channel between the training-walls? Yes.
3118. You do not know the rate at which that is expected to run? No; it is rather difficult to prophesy.
3119. You maintain that it will carry your silt? Very little; it will be mostly sea water coming in and out with the tide.
3120. What is the tendency of the waves on the coast? They tend to back up the sand.
3121. How are you going to keep that sand away or remove it without a scour? We should have to dredge it if there were no scour.
3122. Supposing there were no Lake Illawarra behind it at all and you carried out your works? We should have to keep a dredge there constantly.
3123. The result would be that the beach would run out over the end of your breakwater, and it would be the same as the beach to the north? Yes; after a long time. The sand comes principally from the south. It would come round Windang Island and choke up the entrance there. It is not generally that we have an island in the direction in which the sand comes. That is a great feature of the harbour there. We connect the island with our breakwater.
3124. Unless you have a scour, the tendency will be for the thing to silt up? Yes; but it would take a long time.
3125. That is the tendency? It is the tendency. Therefore, if there were no scour it would require dredging. Of course there will be an amount of sand blown in by the wind, and it would pack up along the entrance. The island makes a very great difference. With the exception of a little distance from Windang Island the water deepens very rapidly in front, and that would make all the difference in the world.
3126. Then it comes to a question of velocity, whether the scour is sufficient to carry the silt to where the water deepens? Yes.
3127. Why have you determined that the width of the entrance should be 430 ft.? That was done before I came to Sydney. It was done, I think, in consequence of a tracing which Mr. Darley sent out. We kept to that plan as far as the width of the entrance was concerned, and the direction of it.
3128. You say that Mr. Darley recommended the width of 430 ft.? Yes.
3129. And you see no reason to alter it? I have not discussed it, but when we carry out the work we will go into the question to see whether that is the best width.
3130. For Lake Macquarie, which is very much larger than Lake Illawarra, Sir John Coode recommended a width of 200 ft.? Yes, I know he did.
3131. How do you explain the reason for proposing 430 ft. in this case when he required only 200 ft. for Lake Macquarie? One could not possibly explain that without knowing all the circumstances of the case. I believe that the channel there is ever so much longer than ours. Mr. Darley believes that 200 ft. is not enough. Unless you go into all the surroundings you cannot compare the one with the other. I do not know whether it was to get a scour that Sir John Coode recommended 200 ft.
3132. Your wall, constructed in a south-easterly direction on to Windang Island, is intended partly as a protection to your breakwater? It tends, for one thing, to prevent the sea from scouring between Windang Island and the shore; and it also forms a way of access near Windang for all time; and it prevents sand from coming round in that direction.
3133. Are you prepared to express an opinion with regard to the accessibility of the port from the sea for shipping? I think it has a first-rate entrance from the sea.
3134. That is your opinion? Yes.
3135. What weight of stones are you putting in at the end of your eastern breakwater? None less than 10 tons above 5 feet below low water.
3136. You have already said that there is an ample supply at Windang Island? Yes.
3137. Has it been tested? Quarries have been opened up, and one or two contractors have looked at it and satisfied themselves about it.
3138. Do you think that the stone will suit in large blocks? Yes.
3139. You have no doubt about that? No doubt whatever.
3140. And the quantity is ample? Yes.
3141. Of what formation is Windang Island? It is described by Mr. Pittman as ferruginous sandstone. It is a good lasting stone; it is not friable.
3142. Sandstone that has been heated by volcanic action? It looks like it.

3143. Do you care to express an opinion with regard to this other work? No; I have not gone into S. Henderson, Esq. that at all.
3144. Can you give us the cost per yard of cutting a canal right across the lake? That is a lump sum for dredging 25½ feet deep below mean tide water-level all along. 15 Dec., 1896.
3145. Does mean tide level mean the surface of the lake as we know it now? No, halfway between low and high water outside.
3146. What is the lump sum? £81,200.
3147. Is that for the cutting alone? That includes the shipping basin.
3148. What area is the shipping basin? Twenty and a half acres.
3149. It includes the cutting right across—what width? 100 feet wide at the bottom.
3150. What batter do you expect? We specify not less than two to one.
3151. Can you let us know the amount of stuff you are going to shift? I believe the quantity specified to be shifted will come to about 3,600,000 yards. That includes all between the breakwaters along the channel and in the shipping basin.
3152. That is your first 21 acres; the other that could be done at £25,000 is not included in it? No.
3153. What will your wharfs cost? Timber jetties about £4,000 each, altogether £8,222.
3154. How many of them will there be? A couple are provided for in this contract.
3155. What loading space is there on them? They are 400 feet long in deep water.
3156. Will you be able to load on both sides? Yes.
3157. Therefore four boats could load at once? Yes. At the two jetties four boats could load or unload. We shall probably make one a loading and the other an unloading jetty. The loading jetty will be about 30 feet above high water, the unloading jetty about 4 feet above high water. My estimate for enlarging the shipping basin to 40 acres and constructing three additional jetties, with railway sidings, is made up as follows:—Dredging, £10,400; three jetties, £11,000; railway connections, £3,600. Total, £25,000. These prices are cash prices.
3158. Have you put anything in for loading plants? We have in the contract.
3159. Have you a list of the items? Yes. £1,750 is put down for shoots and loading gear.
3160. Could you furnish a list of the items? I will do so.
3161. Can you give us any information as to the commercial aspect of the matter? I am not able to give evidence about that.
3162. What is the cost of maintenance? If by that you mean maintaining the channel and the entrance, I think it will come to £1,500 or £2,000 a year at the outside. They do not really want a dredge for that. They will employ the dredge elsewhere in extending their works.
3163. What length of time will it take to complete these works? I estimate that the breakwaters would take to complete them for the proposed depth about two years. It can easily be done in two years. That includes the training-banks. Mr. Amos' time for doing it is eighteen months.
3164. With regard to the dredging? That depends upon the amount of plant that you put on altogether.
3165. You believe it can be done in that time? Certainly, if they put the proper plant on.
3166. What is the depth of the entrance? Twenty-five feet 6 inches below mean tide level, 23 feet at dead low water.
3167. Twenty-seven and a half feet at high water? Yes.

WEDNESDAY, 16 DECEMBER, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.

The Hon. JAMES HOSKINS.

The Hon. CHARLES JAMES ROBERTS, C.M.G.

The Hon. WILLIAM JOSEPH TRICKETT.

The Hon. DANIEL O'CONNOR.

HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.

JOHN LIONEL FEGAN, Esq.

THOMAS HENRY HASSALL, Esq.

GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

Tannatt William Edgeworth David, Esq., B.A., Professor of Geology and Mineralogy, University of Sydney, sworn, and further examined:—

3168. *Mr. Fegan.*] Have you any statement to make? I should like to say that Mr. Pittman, Government Geologist, and I have made a joint examination of such areas of the Illawarra Coal-fields south of Mount Kembla as had not previously been explored by me, and have prepared a short report on the subject. That report is as follows:—

T. W. E.
David, Esq.,
B.A.

16 Dec., 1896.

To the Parliamentary Standing Committee on Public Works,—

REPORT on portion of the Bulli Coal-measures, south of Port Kembla.

Gentlemen,

14 December, 1896.

We have the honor to report that in accordance with your instructions we have inspected recently the chief areas where the Bulli Coal-measures have been tested south of Mount Kembla. The areas inspected by us were the following:—

1. The Smelting Company of Australia's Coal Tunnels near the head of Duplo Creek.
2. The Wongawilli Coal Tunnels (inspected by Mr. Pittman).
3. Mr. Brownlee's Coal Tunnel, Tongarra Albion Park.
4. The Jamberoo Coal Tunnels.
5. The Broger's Creek Coal Tunnels.

The following is a brief summary of the results of our investigations:—

At The Smelting Company of Australia's tunnels five seams have been partially prospected.

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The following are sections of the seams and the associated strata, in descending order :—

Third (?) Seam in the Bulli Coal-measures. Roof not seen.

	ft. in.	
	0 2	Hard fire-clay.
	2 0	Perished coal.
	0 6	Band yellowish clay shale.
	2 3	Inferior coal.
	0 9	Coaly shale.
	1 6½	Hard coal, splint, and bituminous, inferior.
	0 2½	Band, hard black clay shale.
COAL SEAM, 12 feet 4½ inches	0 5	Inferior splint and bituminous coal.
	0 2	Band, hard black clay.
	0 6	Bituminous coal.
	0 4	Inferior coal, bituminous passing into splint
	0 0½	Band, brown clay.
	1 2	Coal, inferior splint and bituminous.
	0 2	Band, brown clay.
	2 2	Coal, inferior splint and bituminous.
		Floor (clay shale).

The number of bands in this seam, and the inferior nature of the coal would, in our opinion, render it valueless for export purposes.

The descending section continued shows the following :—

	ft. in.		ft. in.
24 0	Strata, probably chiefly sandy shale.	0 8	Perished coal.
		0 3	Brownish-grey clay.
		1 8	Perished coal.
		0 10	White clay shale.
		0 3	Band, black stone.
		1 7	Perished coal.
7 8½	Fourth (?) COAL SEAM	0 1½	Clay band.
		0 4	Perished coal.
		0 1	Clay band.
		0 10	Perished coal.
		0 0½	Clay band.
		0 1½	Perished coal.
		0 1	Clay band.
		0 10	Coal and bands.

The above seam is obviously too full of bands to be workable. There follow :—

	ft. in.		ft. in.
60 0	Strata, probably chiefly soft sandstones and shales.	0 9	Perished coal.
6 0	Clay Shale.	0 0½	Clay band.
		0 10	Perished coal.
		0 3½	Band white clay.
3 10	COAL SEAM (Fifth ?)	1 2	Perished coal.
		0 0½	Clay band.
		0 6½	Perished coal.
		0 0½	Clay band.
		0 2	Perished coal.
		3 10	
			Floor black shale passing downwards into whitish clay shale.
47 0	Strata, chiefly clay shales and sandstones.		
		ft. in.	
		0 8	Perished coal.
1 3	(at least) COAL SEAM (Sixth ?)	0 1	Clay band.
		0 6	Perished coal.
24 0	Strata chiefly clay shales (?) passing downwards into sandy shale forming the roof over the seventh seam.		
		ft. in.	
		1 2	Coal splint.
			Parting.
8 0	COAL SEAM (Seventh)	2 10	Coal, splint, with 3 to 5 in. of soft coal about 1 foot above base of this layer.
		0 0-3	Band, dark-grey clay shale (say 1 inch).
		3 11	Coal, hard splint.
		8 0	Floor dark shale.

The following are analyses by Mr. J. C. H. Mingaye, Analyst and Assayer, Department of Mines, of samples of coal selected by us from the above seam :—

	Upper zone of 2 feet.	Second zone of 2 feet.	Third zone of 2 feet.	Lower zone of 2 feet.
Hygroscopic moisture.....	72	69	70	60
Volatile hydrocarbons	17.64	18.69	18.40	18.80
Fixed Carbon	61.45	65.72	61.25	59.35
Ash	20.19	14.90	19.65	21.25
	100.00	100.00	100.00	100.00
Sulphur .....	.590	.494	.892	.727
Specific gravity	1.478	1.418	1.444	1.470
Calorific value	11. 3	11. 9	11. 5	11. 1
Coke	None formed	None formed	None formed	None formed.

Average composition of the whole seam.

Hygroscopic moisture	68
Volatile hydrocarbons	18.38
Fixed carbon	61.94
Ash	19.00
	100.00

The results of these analyses show that on the average this coal contains 19 per cent. of ash. It is therefore wholly unsuited for export.

2. The Wongawilli Coal Tunnel was inspected by Mr. E. F. Pittman with the following results:—
Roof—Hard clay shale.

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	ft. in.	
Total thickness, seen in face of tunnel, 45 yds. long— 4 ft. 4½ in.	0 10	Coal, bituminous.
	0 2½	Coal and bands.
	1 3	Coal, bituminous.
	0 1½	Clay band.
	0 7	Friable bituminous coal.
	1 4½	Coal, splint and bituminous coal, with ½ in. band at 9 in. from the bottom.
	<hr/>	
	4 4½	
Analysis of lower 2 ft. {	Moisture	1·90
	Volatile	23·00
	Fixed	54·35
	Ash.....	20·75
	<hr/>	100·00
Analysis of upper 2 ft. 3 in. {	Moisture	3·45
	Volatile	24·30
	Fixed	53·90
	Ash.....	18·35
	<hr/>	100·00

In this seam also the high percentage of ash renders the coal valueless for export. At Jamberoo we measured the following section of a coal seam in a tunnel on the property of Sir Saul Samuel:—
6 ft. Coal splint and bituminous. This is said to be part of a 30-ft. seam of coal.

The following is an analysis of the sample of coal taken by us from the upper and lower portions of this seam:—

Hygroscopic moisture.....	4·58
Volatile hydrocarbons	9·86
Fixed carbon	59·71
Ash.....	25·85
Sulphur, not determined.	
Sp. gr.	100·00
Calorific value ..	
Coke, none.	

This coal is obviously unworkable, as is the coal in the second tunnel on the same property and on the same seam about half a mile further north. At the latter locality a thickness of 4½ ft. of coal is exposed in the tunnel, and about 7ft. in thickness is seen at the mouth of the tunnel. There is a thin clay band at 15 in. from the bottom of the seam seen in the tunnel.

The following is an analysis of the sample of coal taken by us:—

Hygroscopic moisture.....	2·92
Volatile hydrocarbons	16·97
Fixed carbon	56·06
Ash.....	24·05
Coke, none.	100·0

At Broger's Creek we examined the coal tunnels, and measured the following sections:—

ft. in.	Roof Clay Shale.
1 0	Inferior splint.
0 1	Clay band.
0 4½	Inferior splint coal.
0 1	Clay band.
0 6	Splint coal.
0 1½	Band, clay shale.
0 10	Inferior splinty coal.
0 4½	Hard black clay shale.
0 7	Inferior splint coal.
0 0½	Black clayey parting.
0 3½	Inferior coal, splint and bituminous.
0 4	Band, hard black shale passing into stony coal.
0 4½	Very hard inferior splint coal.
0 1	Band, dark clay.
0 10	Inferior splint coal.
0 0½	Band, dark shale.
0 8	Inferior splint coal.
0 1	Black clay band.
0 9	Stony splint coal.
0 0½	Clay band.
0 8	Stony splint coal.
<hr/>	
4 6	Hard brownish and bluish sandy shale, alternating with bands of stony coal.
2 9	Hard splinty coal (sample taken).
0 0½	Black shale band.
1 2	Hard splinty coal
0 0·1	Band, black shale
0 5	Splint coal
0 0·1	Black shale band
0 11	Splint coal
0 1	Black band
1 6	Splint coal
0 7	Strong coal
.....	Floor, hard grey shale.

The following are analyses by Mr. J. C. H. Mingaye of the two samples selected by us:—

(A.) From upper 2 ft. 9 in. of thickness exposed in tunnel.	(B.) From lower 4 ft. 3 in. of same seam in tunnel.
Hyg. Moisture	·80
Vol. Hyd.	17·05
Fixed carbon ..	38·85
Ash	43·30
Coke	none
	<hr/>
	100·00
	<hr/>
	·90
	23·65
	53·65
	21·80
	Very poor.
	<hr/>
	100·00

The above analyses show that these coals are valueless.

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Fifteen feet lower is a 4 ft. seam ; roof, sandstone.

- | | |
|---------|-----------------------------|
| ft. in. | |
| 1 5 | Heavy splint coal. |
| 0 0½ | Band—brown shale. |
| 1 1 | Splint and bituminous coal. |
| 0 2 | Stony splint coal. |
| 1 3½ | Splint and bituminous coal. |

On the property of Mr. W. Brownlee we measured the following section of the Coal Measures :—

COARSE PEBBLY SANDSTONE (TRIASSIC?).

ft. in.		ft. in.	
52 0	Chiefly dark grey carbonaceous shales.	0 9	Splint coal, showing evidence of contemporaneous erosion at top.
		0 2	Inferior coal and shale.
2 10	COAL SEAM (2nd? in Bulli Coal Measures).	0 2	Coaly shale.
		0 10	Splint coal.
		0 0½	Clay band.
		0 1¼	Coal.
		0 0½	Clay parting.
		0 9	Splint coal.
2 3 (about).	Fine hard sandstone.		
0 2	Sandy shale.	0 3½	Coal.
		0 0½	Band clay.
		1 1	Coal, clayey.
		0 2	Clay band.
		0 3	Coal, splint.
		0 2	Band clay.
		0 7½	Dirty splint coal.
6 11½	COAL SEAM (3rd?)	0 4	Coal, soft bituminous ; dirty.
		1 2	Band, black shale.
		0 10	Coal, splint.
		0 0½	Band.
		0 5½	Coal, splint.
		0 0½	Clay band.
		0 6	Coal, splint.
		0 1½	Band clay.
		0 10	Stony coal.
		6 11½	
2 6 (about).	Hard fine-grained sandstone, laminated.		
0 1	Black shale.	ft. in.	
		0 6	Coal, very stony.
		0 11	Coal, splint.
		0 6	Coal and bands.
4 4½	COAL SEAM	0 1-3	Band, clay shale.
		1 4	Coal, splint.
		0 0½	Band.
		0 11	Coal.
		4 4½	
4 6 (about).	Black clay shale.	ft. in.	
		0 5	Coal, perished from weathering.
		0 0½	Band, clay shale.
		1 3	Coal, perished.
		0 3	Band, clay shale.
		0 9½	Coal and bands.
		0 3	Black shale.
		0 3	Coal.
		0 0⅞	Band, clay.
		0 1½	Coal.
		0 0½	Band.
		0 3½	Coal.
		0 0⅞	Band.
		0 2	Coal.
		0 0⅞	Band.
		0 8	Coal.
13 0 (about).	COAL SEAM	0 0½	Band.
		0 4	Coal.
		0 0½	Band.
		0 3	Coal.
		0 1	Band.
		0 4	Coal, dirty.
		0 0½	Band.
		1 7	Coal.
		0 1½	Band.
		0 7	Coal, splint.
		0 0¼	Band.
		1 3	Coal.
		0 1	Band.
		2 6	Coal.
		0 2	Band, clay shale.
		1 0	Coal, splint.

ft. in.
65 0

ft. in.
65 0 (about). Strata, probably chiefly fine-grained sandstones and shales, passing downwards into a roof of dark gray clay shale.

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	ft. in.	
	5 3	Coal, splint and bituminous.
	0 0½	Clay band.
	0 3	Soft coal.
	0 2	Clay band.
	0 3	Splint coal.
	0 0½	Band.
	0 5½	Splint coal.
	0 1	Clay band.
	0 7	Splint coal.
	0 2½	Band, clay shale.
	0 9	Splint coal.
	0 2	Clay band.
	1 6	Coal, splint.
	0 2	Clay band.
21 9 (about). COAL SEAM	0 2	Stony coal.
	0 8	Band clay shale.
	0 8	Splint coal.
	0 0½	Band.
	1 8½	Coal, splint.
	0 1½	Band.
	0 4½	Coal.
	1 7	Coal, splint.
	0 1½	Clay band.
	0 11	Coal, splint.
	0 1	Band, clay.
	0 4½	Coal.
	0 2½-4	Clay band.
	0 3	Dirty coal.
	0 1	Clay band.
	4 6 (about).	Base of seam; not visible in detail.

At the tunnel on the upper portion of the above seam where Mr. Brownlee is working the coal, the following section was measured by us:—

Roof.—Blue clay shale—fireclay.

	ft. in.	
	0 6	Bituminous coal.
	1 3	Splint and bituminous coal.
	1 8	Splint coal.
	0 4	Bituminous coal.
COAL SEAM	0 3	Splint and bituminous coal.
	0 0½	Intermittent band.
	0 7	Hard clean splint coal.
	0 0-2	Black band.
	0 4	Splint coal.
	5 1½	

Average samples of this coal taken by us for analysis have yielded the following results:—

	Upper half of seam.	Lower half of seam.
Hygroscopic moisture	90	85
Vol. hyd.	23.50	20.85
Fixed carbon	60.50	59.10
Ash	15.10	19.20
Sulphur	100.00	100.00
Sp. gravity .....	.659	.563
Coke—fairly good, except for ash	1.398	1.422
Calorific value	11.7	11.6

These analyses prove that this coal is not suitable for export purposes.

It is, nevertheless, of sufficiently good quality to admit of its being used locally for supplying fuel for the dairy factories of Albion Park. This coal is now in use for this purpose at the Tongarra Factory.

The results of our examination, and the analyses of the samples of coal selected by us, show that, in our opinion, the coal opened on all the seams in the Bulli Coal Measures south of Mount Kembla, is quite unsuitable for export purposes, though in places portions of the seams may be used for local manufactures.

3169. *Mr. Hoskins.*] Is the coal you have referred to good enough for smelting purposes? It is inferior to the coal that is used further north. I would rather leave that question to the Government Geologist, as I have no technical knowledge of smelting. I should pronounce even the best of that coal inferior to the typical Bulli coal for any purposes, on account of the high percentage of ash which it contains.

3170. *Chairman.*] What were the first coal seams to which you refer? Those on the Smelting Company of Australia's property on Dapto Creek.

3171. Lying how far west of Tallawera Point? About 6 miles measured along the railway line. The tunnels are about half a mile further in than that.

3172. The next is Wongawilli;—how far is that due west from Dapto railway station? A trifle over 5½ miles.

3173. And is Mr. Brownlee's pit about 8 miles up the valley of the Macquarie Rivulet, on the southern side of the rivulet from the Albion Park railway station? Yes.

3174. Then the next is Jamberoo? Yes;—that is 8 miles due west of Kiama.

3175. And where is Broger's Creek? That is very close to Jamberoo. It will be about 1¼ mile south-west of Jamberoo tunnel previously described.

3176. *Mr. Fegan.*] In reference to the Smelting Company of Australia's coal, the analyses that you have made have proved that the seams mentioned there are inferior to the Bulli seam? Yes.

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3177. The amount of carbon contained in that coal is much less—something like 79·40 per cent. according to Coghlan? Yes.
3178. You say that you would not like to give an opinion as to its value for smelting purposes? I should say certainly, that the bulk of that coal contains too much ash to make it valuable for smelting purposes. I would not express an opinion as to that 2-foot layer, which contains the lowest percentage of ash.
3179. But you are aware that, in working the coal seam, you could not divide it so closely as to send up the 2 feet of coal by itself? No, I should think not.
3180. After your examination of various portions of the South Coast district, are your ideas pretty much the same as they were upon your last examination in reference to the quantity and quality of the coal? I have seen nothing since the date of my last examination to alter any of my previously expressed opinions.
3181. So that we can take your evidence as being very little different indeed after your investigations with Mr. Pittman as to the accessibility, the quality, and quantity of the coal in the southern district? Yes.
3182. Did you find anything else whilst you were down there which would make the district of great importance? There is a deposit which we have not yet truly explored.
3183. Therefore, you would not like to give an opinion upon it at present? No; it is not a coal deposit.
3184. The seams to which you have referred are, commercially speaking, of very little value at present? That is my opinion.
3185. Therefore, as regards these schemes having to do with the progress of this inquiry in reference to the Port Kembla Harbour, you cannot take them into account? That is my opinion—certainly for export purposes. I have stated that the best coal might be used on a small scale locally.
3186. You have stated that the coal could not be used for smelting purposes? The bulk of it would be unsuitable. Whether it would be possible to use economically coal containing 15 per cent. of ash, I would not give an opinion.
3187. Do you think it possible to use it whilst a far superior coal is close at hand? I should not think so.
3188. Considering the bands that you have to deal with in the seams, do you consider it possible to work them at a profit, even for local purposes, whilst such good coal is near at hand? It would only be possible to do so on a very small scale. It is being worked at Albion Park, and the coal, although it is rather ashy, is being used at the butter factory.
3189. The Smelting Company of Australia have an 8-foot seam, in which there is only about 2 feet which is nearly as good as the Bulli seam? Yes.
3190. Would you be surprised if a witness said that the seam was as good as any found in the southern district for all purposes? I should be surprised.
3191. In taking the position of the Lake Illawarra smelting works, which have been erected with the prospect of smelting 500,000 tons a year, do you think it would be impossible to utilise the coal for that purpose? That coal exclusively.
3192. Yes? I do not think my opinion is worth very much on that matter, but I should give it as being wholly opposed to the idea.
3193. *Mr. Humphery.*] Am I correct in coming to the conclusion that you look upon the coal south of Port Kembla as practically valueless? I do.
3194. Is there any possibility in your mind of any coal being discovered there of a quality suitable for export? I think the chances now are so remote as to be practically negligible.
3195. There is no sign of the Bulli seam south of that point? There is a very thin seam on Mr. Biggar's land, which was taken to be an equivalent to the Bulli seam, but it is only 2½ feet thick. It is between Wongawilli and the Smelting Company of Australia's ground land.
3196. Can you give any idea whether the seams of which you have given a description here to-day, correspond with lower seams further north underlying the Bulli seam? Yes, they do. The present ones can be correlated with the same seams further north. Further south the seams come together very much, so as to make the process of differentiation a very difficult one.
3197. *Mr. Roberts.*] How far south did you make your explorations; did you go as far as Jervis Bay? Yes, I went as far as the head of the Clyde River a few years ago, and also examined further north the Cambewarra Ranges. I was reporting then on the question of putting down a bore on the Wandra Wandian Creek.
3198. I refer more particularly to your recent visit. How far south did you go? Broger's Creek was the farthest point south.
3199. What is the furthest point south that workable coal has been found at? As far as I am aware no workable coal has been found south of Mount Kembla. Even under Mount Kembla itself the coal is inferior. The inferiority has already set in there.
3200. Are the Committee to understand that the further you go south it gradually dies out? Yes.
3201. When you say that the coal is not suitable for export, are you speaking from a commercial point of view? Yes.
3202. That it would not be used by any shipping company? It would not be used by any shipping company because the percentage of ash is so far in excess of that of the coal which is now being used for economic purposes.
3203. Would it not be suitable for any purpose whatever? I have already stated that portions of it in one or two individual seams may be used locally for such purposes as driving engines in dairy factories.
3204. Would it not be suitable for household purposes? I do not think householders would take coal which contains from 15 to over 20 per cent. of ash, when they can get coal with 12 or 13 per cent. of ash close by.
3205. *Mr. O'Connor.*] Mr. Hassall asked you whether, in your opinion, there was any good coal south of Port Kembla. Can you answer that with any degree of safety? In view of my examination of these coal-fields, I think it is extremely improbable that there would be any coal of commercial value south of Port Kembla within a reasonable depth.
3206. Have you had sufficient time at your disposal to be able to answer that question decidedly? I consider that I have.
3207. *Mr. Humphery.*] What extent of coal do you think there is south of Mount Kembla, taking as your starting point, the Smelting Company of Australia's seam? I think it stops at Broger's Creek.
3208. Practically it stops at Broger's Creek? Yes.

3209. That is not necessarily the particular seam that the Smelting Company of Australia are working? I think that probably the same seam continues as far south as that, but the probability is that it deteriorates more and more.

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3210. I want to know if in your opinion it deteriorates as you go to Broger's Creek? It does. The coal which we have had analysed from Broger's Creek is very inferior. 16 Dec., 1896.

3211. And at Jamberoo it is inferior? Yes.

3212. Did you examine any properties there other than that of Sir Saul Samuel? No.

3213. Are there any old works at Jamberoo to which attention is drawn? I think there are some tunnels near Sir Saul Samuel's to the north which I have not seen.

3214. I presume the quality of the coal would be somewhat inferior? Having seen the coal at Albion Park on the north, and Broger's Creek on the south, I hardly thought it necessary to make any further examination.

3215. You had seen sufficient to form an opinion? Yes.

3216. Therefore you are not disposed to modify the evidence you have already given with regard to the value of these coal-measures? No.

3217. *Mr. Lee.*] We must not expect the estimate which you previously gave to be supplemented by these mines further south? I do not think it is likely to be supplemented to any material extent.

3218. *Mr. Clarke.*] Have you heard of any coal being found so far south as Pigeon House Mountain, south of Ulladulla? Yes; I have heard some report of coal in that direction.

3219. But you cannot give any opinion about it? No, except that it would probably be a continuation of the Clyde coal measures, which I have examined already. I have already stated that that coal would be at a great depth under Lake Illawarra.

3220. Would the coal near Pigeon House Mountain be also at a great depth? That would almost certainly be a continuation of the Clyde coal measures, and it would dip under Lake Illawarra. If it were not it would be part of an outlying patch of the Bulli coal measures.

3221. *Mr. Wright.*] What is the average amount of ash which it is considered should be the maximum in a fairly marketable coal? I could not say off-hand; somewhere about 13 per cent. Most marketable coal contains less.

3222. What is the minimum amount of fixed carbon in good marketable coal? It would depend upon what the coal is to be used for. As long as the percentage of ash is under 13, and the sulphur does not exceed about one per cent., the coal could be used for most purposes, no matter what relative proportions the fixed and the volatile carbon might be. If the fixed carbon is high, and the volatile proportion is low, it will be a good steam coal. If the volatile carbon is high, and the fixed carbon is low in quantity, it will be a good gas coal.

3223. You mentioned that you made some examination of the coal-field further south? Yes; at the Clyde River.

3224. Does that extend further south? Not further south than the head of the Clyde. The seams run out to the surface, so far as I know from personal observation.

3225. Is there any possible connection between those coal seams and the coal in Gippsland? No; they are quite distinct.

3226. There is no geological formation which would justify you in the belief that good coal will be found near the surface further south than Mount Kembla? That is my opinion.

3227. *Chairman.*] The Illawarra coal-field lies virtually between Clifton and Mount Kembla? Yes.

3228. The most valuable deposit lies between the cinder belt and Mount Kembla? I think so. I think it exceedingly probable that there are patches of good coal north of the cinder belt. There are certain volcanic dykes, nevertheless, I think there are patches of good coal of importance.

3229. Will you look at the evidence already given, and state your opinion with regard to the answers to questions 2101 to 2110? Speaking generally I consider them correct, but I would sum up in my own words as follows:—That the good coal of the Bulli coal measures, west of a line running from Coalcliff southwards, is limited on the south by Mount Kembla; that from Kembla to Corrimal the coal is good, and very little disturbed; that from between Bellambi and Corrimal, northward to Coalcliff, the coal is deteriorated in places, through faults and volcanic dykes, but that, nevertheless, there are probably considerable areas of good coal in that northern belt between Coalcliff and a point between Bellambi and Corrimal.

Edward Fisher Pittman, Esq., A.R.S.M., Government Geologist, Department of Mines, sworn, and examined:—

3230. *Chairman.*] You have heard the evidence given by Professor David;—do you agree with it? Yes.

3231. *Mr. Hassall.*] Have you a statement to make? I have not any statement prepared, but I can answer generally any questions. The question was asked whether the coal south of Mount Kembla would be suitable for smelting purposes. I should say that it could be used for smelting purposes, but no company would continue to use it if they could get better coal close at hand, as they undoubtedly can. For commercial reasons they would not continue to use that coal when they could get better coal close by at a fair rate.

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3232. Which is the nearest point at which they could obtain coal for smelting purposes? I think they could obtain it from any of those mines north of Mount Kembla.

3233. Would the kind of coal obtainable at the head of Dapto Creek be as suitable as that obtainable at Mount Kembla for such an enterprise as we have at Lake Illawarra? No, it would not be so suitable.

3234. Which would they use? They would use that at Mount Kembla.

3235. *Chairman.*] Is that beyond doubt? I think unquestionably it is. The first consideration is that if you have coal or coke containing 20 per cent. of ash, which you have to carry, say, only a mile, you carry 1 ton of worthless material for every five tons that is of any value to you. If you have coke containing a large quantity of ash it is more liable to form clinkers when used for raising steam. Some years ago I had to report on the coke of the Colony in reference to smelting at Broken Hill, and the statement which led up to my report was that the Broken Hill company could not use Australian coke because it contained 10 per cent. of ash. They said it was absurd to expect them to use that, because it meant carrying 1 ton of useless material for every 10 tons of coal. I made investigation concerning the coke of the Colony, and

- E. F. Pittman, Esq. A.R.S.M. 16 Dec., 1896.
- and I found that we were producing sufficient coke in New South Wales which contained under 10 per cent. of ash, some containing only between 6 and 7 per cent. of ash—some of the northern coke, whereas some of the imported coke, actually used by the Broken Hill Company—German and Welsh coke—contained as much as 9 per cent. of ash.
3236. *Mr. Hassall.*] Showing that the Australian coke compared favourably with that which was being used by the company? Yes.
3237. Did they know that? I think the managers must have known it; it is doubtful whether the secretary knew.
3238. Then you practically agree with the opinion expressed by Professor David that there would be no coal suitable for export purposes obtainable south of Mount Kembla? Yes; that is my opinion.
3239. That the whole of that coal which has been described is actually valueless? Undoubtedly valueless for export.
3240. Do you think it might be used for local purposes? It might be used in a small way.
3241. *Chairman.*] Is it your opinion that coal such as has been found at the head of Dapto Creek, cannot stand in competition with the Bulli seam? That is my opinion.
3242. And is it your opinion that in any smelting operations to be successful they must use Bulli seam coal? Yes; I am of that opinion.
3243. In making that reply you take into consideration the cost of hewing and the question of price? Yes. I consider that the coal north of Mount Kembla is not so very much more distant from the locality that you are considering than the coal at the head of Dapto Creek; but that the better coal should win the day by reason of its superiority.
3244. *Mr. Hassall.*] You think that the coal of better quality will be used, although it may be higher in price? Yes; but I do not see why it should be higher in price, though it may cost a little more in carriage.
3245. *Chairman.*] You mention as one objection to coal having a large quantity of ash, that the ash increases the cost of the carriage? Yes.
3246. Can you make a statement with regard to the effectiveness of the coal for smelting purposes? You can only compare the ashy substance which adulterates the coal. It diminishes by so much per cent. its useful character, and is just so much dead weight.
3247. Can you tell us how it would affect the cost? It would affect the smelting, and there would be more probability of its forming clinkers, and it would give more trouble and expense in cleaning the furnaces and handling the material generally, and there would be more cost in the carriage of useless material.
3248. You say definitely that it is an inferior coal? I have no doubt about that.

THURSDAY, 17 DECEMBER, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN.)

The Hon. FREDERICK THOMAS HUMPHERY.	HENRY CLARKE, Esq.
The Hon. JAMES HOSKINS.	CHARLES ALFRED LEE, Esq.
The Hon. CHARLES JAMES ROBERTS, C.M.G.	JOHN LIONEL FEGAN, Esq.
The Hon. WILLIAM JOSEPH TRICKETT.	THOMAS HENRY HASSALL, Esq.
The Hon. DANIEL O'CONNOR.	GEORGE BLACK, Esq.
	FRANCIS AUGUSTUS WRIGHT, Esq.

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

Stephen Henderson, Esq. (Messrs. Harper, Harper, and Henderson, Engineers to the Illawarra Harbour and Land Corporation, Limited), sworn, and further examined:—

S. Henderson, Esq. 17 Dec., 1896.

3249. *Chairman.*] There were various things which you were to look into? Yes. You asked for a copy of the quantities of Mr. Amos' contract, which I produce. They are as follows:—

Illawarra Harbour Works—Quantities and Cost.

	Tons.	Rate.	£	s.	d.
Northern Breakwater	139,000	3/7½	25,193	15	0
Southern	153,000	3/7½	27,731	5	0
Northern Training Bank	35,000	3/1½	5,468	15	0
Southern	72,000	3/1½	11,250	0	0
Tie Bank	16,000	2/9	2,200	0	0
Rubble Reclamation Bank	50,000	2/11	7,291	13	4
Fascine Banks			1,050	0	0
Excavation			81,200	0	0
Drift Pences	160 chains.	93/-	744	0	0
Two Jetties, 450 ft. long each, including shoots and loading gear, sidings, jetties, and connections with present railway line			13,830	0	3
Buildings—2 cottages, 1 house			1,100	0	0
			£177,059	8	7

The above are prices and quantities of Mr. Amos' contract.

3250. Have you anything else to lay before the Committee? You asked for an estimate of the cost of maintenance. I think that after the channel has taken its permanent dimensions £2,000 per annum ought to cover the dredging. This allows for the sinkage over 100 acres of 3 inches, and the removal of 50,000 yards of bar-forming material. There will not be any other maintenance except for the first few years. There may be some expenditure in connection with the breakwater. I think it ought to be covered by a couple of thousand pounds a year for three years, because the position is a very sheltered one. I do not think that the breakwaters ought to cost more, and after that they should cost nothing at all. It may or may not be required.

3251. Then the next point is with regard to the scour? Yes. You asked me to take out the area of the lake, and the quantity of water in every inch or so. There are about 32,000,000 cubic feet in every inch of the lake. I took the lake at 13.8 square miles—that is much more than 8,000 acres.

3252. That is within one-fifth of 14 square miles? Yes, it is practically 14 square miles.

3253. Within 40 acres of 9,000 acres? Yes. I reckon that a fall of 3 inches an hour over the whole lake is, approximately, equal to a velocity of 2 feet per second through the breakwaters.

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3254. How many miles is that per hour? About $1\frac{1}{2}$ mile per hour.
3255. That is the velocity? Yes. A fall of 6 inches an hour would be 4 feet per second.
3256. Two and two-thirds miles per hour? Yes.
3257. If there was a fall of 6 inches it would be running at the rate of $2\frac{1}{2}$ miles per hour? Yes.
3258. Then that would just about move sand? It would more than move sand. It would keep the channel clear. Nine inches an hour will give a velocity between the breakwaters of about 4 miles an hour.
3259. Do you think that would be the extreme velocity? I believe it would. I have got it 4 knots, but there is not much difference for practical purposes. I assume the whole channel from the island to the breakwater to have been scoured out to have a section fairly uniform with the channel between the breakwaters, thus giving a much freer flow between the lake and the sea than the contract will leave the channel. I first assume a surface fall between those two points of 2 feet 6 inches between the island and the end of the breakwater is a fall much greater than can actually occur, because that corresponds with no rise and fall in the lake at all. Then, calculating the velocity by Kutter's formula, which is the most accurate known to engineers, the result is 5.2 knots.
3260. *Mr. Wright.*] What is the distance? 7,920 feet up to the island.
3261. And the fall is 3 feet? I assume the fall to be 30 inches, which, of course, it will never be.
3262. *Chairman.*] Your result is what? 5.2 knots.
3263. Dependent upon a problematical state of things? That will give a higher velocity than will ever exist. I get a velocity of 5.2 knots, at which velocity I consider that no undermining action can take place at the breakwater and training bank. But what the actual velocity will be is a much more difficult problem—I think it will be about 4 knots. About mean-tide level in the lake the velocity will be the greatest.
3264. And as the time runs on, it will come to nothing? Yes.
3265. Do you know the exact length of time during which the tide runs in? Not exactly; it is about 6 hours. The rise and fall occupy $12\frac{1}{2}$ hours. I do not think you will get the maximum velocity during a longer period than 3 hours.
3266. That is all you can tell us with regard to the tide between the walls;—you estimate the maximum by one calculation at 5 miles an hour, and by another at 4 miles? No; the 4 knots is not a calculation, it is an assumption. Five knots I reckon we cannot exceed. That is a maximum, but it will not come up to it.
3267. The tendency, as soon as the scour passes the ends of the breakwaters, will be to spread and deposit silt? Yes.
3268. Although it might keep the channel clear, it cannot have the same effect when it runs into the ocean at the end of the channel? No.
3269. You said that you believed that there would be no silt in suspension? Practically none after the channel is once formed to the stable equilibrium of things.
3270. Then the only question is as to the piling-up power of the waves;—will the velocity furnished by the contraction of the water between these walls be sufficient to counteract the piling-up power of the waves? Our harbour being protected by Windang Island, and the main weather and all the worst weather coming from there, there would be almost none of that piling action. After a heavy storm at home on a sandy coast, there is often a very big deposit; but in ordinary weather there is little or none. In this case the heavy weather comes over Windang Island, and it would not form a bar at all. It is very seldom that we get any weather that would form a bar there.
3271. You believe that the velocity will be sufficient? I do.
3272. Will the carrying out of this work have any effect upon the surface level of the lake? Not very much; it will tend to keep it lower on the average. At present it is often banked up by floods. The rivers fill the lake. And if the entrance is not open it rises often about a foot or more.
3273. You think it will not affect it materially? I do not think it will make any material difference. It will tend to lower the level a little.
3274. In your opinion, would it be sufficient to interfere with the amount of water for scouring? Not materially.
3275. The Act under which you are working provides that you shall construct sand-traps along the beaches at such distance, and in such positions, as shall be found necessary? I do not know what that refers to. We are going to erect drift-fences for keeping out the sand that blows. I presume that it refers to that.
3276. You have no knowledge of that? No; the Bill was passed before I came to Sydney.
3277. Was your design the same? No; the design which was before Parliament was different.
3278. Is there anything further which you have to state? You are thinking of getting the quantities taken out, and I have brought the section as I thought that it might assist you.
3279. *Mr. Lee.*] You said that eighteen months was the time which would be required to carry out the work? Eighteen months is the time in which Mr. Amos reckons he can do it.
3280. I am speaking of the work being completed so as to admit of large steamers and large sailing vessels going in there to carry coal;—how long would it take? I believe it can be done in that time. They want to hurry on with their dredging, that is all. The breakwaters can be built in eighteen months. The dredging depends upon the amount of plant that they put on.
3281. When your works, as at present designed, are carried out, how many vessels could be accommodated at the proposed jetties, and how many could lie at their moorings waiting to be loaded in the area which you propose to provide? There are four berths, two at each jetty for the ships to discharge and load at; and in the area I am sure that eight or ten others could be accommodated.
3282. Could lie at their moorings? Yes; and if they pack them as close as they do in London, a lot more.
3283. But they are in docks there? Yes; and they will practically be in dock at Illawarra.
3284. But still exposed to the influence of any gale, though not to the influence of the water? Exactly. But I have seen ships in the docks at home exposed to gales too. I have seen a punt smashed between a ship and a wall, owing to the wind.
3285. Could Lake Illawarra be made capable of carrying on the coal shipping business of the south? Yes, with an expenditure of £25,000, increasing the area of the basin to 40 acres, and providing in all five jetties, all equipped.
3286. With what accommodation each? Accommodation for two ships at each. There would be 400 feet of space for vessels to lie in at each jetty.

S. Henderson, Esq., 3287. Would it be possible to handle ships of that size within the port, to move them between their moorings and the jetties? Certainly.

3288. If there were a large number at their moorings, would you be able to handle them? Yes, there is a great deal of space in 40 acres.

3289. Then your reply is this: you think Lake Illawarra could be made a port suitable to the south? Yes.

Andrew Armstrong, Esq., Managing Director, Illawarra Harbour and Land Corporation, Limited, sworn and examined:—

A. Armstrong, Esq., 3290. *Mr. Roberts.*] Do you wish to make any statement? Yes, I want to make a few remarks. I should like to remark that at the opening of the inquiry I asked the Committee to allow me, as representing very important interests, to be heard by counsel. I feel that in taking it upon myself to appear here, I am running a great risk in regard to very large interests. Consequently, I wish it to be noted that I give my evidence entirely without prejudice to any existing interests of the Illawarra Harbour and Land Corporation. If I make a mistake in behalf of very important interests here and in London, the fact that I made such request ought to be taken a note of.

3291. *Chairman.*] What is the end in view? It is to assert that Parliament has already practically, in giving us an Act, dealt with the question now being inquired into by this Committee, and as this matter is referred to the Committee by Parliament, I have every desire to meet the Committee in the most courteous manner possible, and to tell them everything that I know, in order to assist them in coming to a decision. But in giving evidence, it is possible that I may, unintentionally or unknowingly, in shepherding the interests it is my duty to watch over, give my people away. Consequently, I ask that my evidence be taken without prejudice to any interests created under the existing Act of Parliament. I feel very strongly upon the matter, because very great interests are affected.

3292. *Mr. Roberts.*] You are the managing director of the Illawarra Harbour and Land Corporation? Yes. I also hold power of attorney as representing the Illawarra Harbour and Railway Corporation of London.

3293. You are aware that this Committee have to consider the desirableness of forming a deep-water harbour at Port Kembla? I thought that the Committee had to consider as to the best part of the southern coast to form a harbour, without any restriction to Mount Kembla.

3294. Have you prepared any statement which you would like to place before the Committee? No statement, but I have a few heads which I am prepared to give evidence upon. I have to point out that one main object of my company was, first of all, to connect the very important cheap coal of the eastern seaboard of New South Wales with the vast refractory ores of New South Wales. I may say that in doing that my promoters, jointly with myself, have taken, I think, one of the largest steps, and made one of the greatest advances ever made in Australia. To do that, it became absolutely necessary that we should have under our control a still-water harbour, not a harbour on the open coast, which would never meet their views, but which would be a failure. We spent some two or three years in making the most absolute calculations with regard to the importance of the great bulk of refractory ores. The only statistics that were obtainable of a reliable character, had reference to Broken Hill; but our knowledge of the country showed that good as Broken Hill is, it is a very small thing compared to what exists in the richer deposits of refractory, but more scattered ores of the country, not immense deposits in one place. We ascertained that to treat these things economically, and to carry out a scheme of this kind, it is absolutely necessary to have the strictest economy—it would have to be done by the admixture of ores, and a combination of the refractory ores of the interior with the cheap coal on the sea-board. In connection with this matter I lodge a set of figures prepared for the purpose, and this paper has been considered in London of sufficient importance to lead to the formation of the company we promoted, and also of another company which, prior to our going on to the London market, had made all its arrangements for the carrying of refractory ores from Broken Hill to London to be dealt with in England. All arrangements of the Sulphide Corporation were made before we lodged our figures on the London market with that object in view. The promoters placed the figures before the London market, and two large companies have been formed. I cannot remember the capital of the Ashcroft Patent Company, but the capital of my company is £300,000 of working capital upon a total of £500,000. That £300,000 is now in course of expenditure. The promoters placed figures on the London market which have already caused capital to be raised for the development of the object entirely in connection with a still-water harbour. Capital for the different companies has already been raised in England to the extent of £1,500,000—that is to say, a certain combination has been promoted by my company, the interests of which particular company are kept entirely separate. They are different companies promoted for one object. I need not tell you that a few gentlemen starting a scheme such as the Illawarra Harbour and Land Corporation scheme, if they had enough capital to carry out that object, would not bother about the object,—they would be wealthy enough not to take so many years' risk and its concomitants; they would simply retire. It is such an enormous object, that it will take at least £250,000 to carry out the work provided for by Act of Parliament, on the top of an expenditure which my company have already made. My company have already expended £50,000, and to carry out the object in view they will have to find another £250,000. It is necessary for them to see their way to make an immense trade first. Then, naturally, to finance by debentures upon the security of the trade created. All that is in progress, and has progressed so far, that a capital of £1,500,000 has already been raised, and that is being devoted principally towards carrying out;—to put it very shortly, the combination of the refractory ores with the cheap coal on the eastern seaboard. In doing that we chose Illawarra, and in choosing Illawarra the greatest possible care and caution were given to the question as to the most suitable site, and Port Kembla was very carefully considered by my promoters, who found that their scheme would fail if they had to depend upon an open roadstead harbour. On that point I have said enough. I lodge the paper with my evidence as an exhibit. It shows the importance of the connection between the refractory ores of New South Wales and the coal of a low price of the eastern seaboard.

3295. *Chairman.*] Dealing with general principles? Dealing with the general principle. It is a very big question. I may say that that document has been through the mill of the severest metallurgical critics that

that it is possible to submit any document to—five different committees of the leading metallurgists of the world dealt with that question, and upon their report my smelting company was formed with a capital of £500,000, and following that the Sulphide Corporation gave up the idea of dealing with English coal, and determined to use the coal on the eastern seaboard of New South Wales. In other words, the figures that were put before the Parliament of New South Wales following our Act, led to the formation of a smelting trade, as far as it has gone at present. I have no hesitation in predicting that in the next ten years it will lead to ten times as much.

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3296. *Mr. Roberts.*] How long have you held the position of managing director of the Illawarra Land Corporation? About two years. I was a director, but not the managing director, until about two years ago.

3297. Had you been connected in any other way with the corporation before that period? Yes, as a promoter—a shareholder in the first syndicate formed and in the company following.

3298. When was the company floated? About 1889 we applied for our Act of Parliament; that was immediately after the formation of the company.

3299. May I ask you how many shares there are in the company, the price of each share, and the amount paid up? I would rather give that in the form of a return. There are 10,000 shares of £100 each.

3300. How much was paid upon application? I will make out a return. I could not speak on the subject from memory. It was a large syndicate first of all. That was formed into a company, but what was paid in cash I could not tell.

3301. I think the Committee would like to know how much was paid upon application, how much upon allotment, and the total amount paid in cash up to the present date? The shares stand 16,000 paid to £60. It was a syndicate which went through a great crisis following the formation of the company. I have no hesitation in putting in the reports of, and the evidence given before, three Select Committees of Parliament by whom the question was very elaborately gone into.

3302. If you are unable to afford the information at present, you can give it at another time? I will make out a return. In the mean time I will lay before you the reports of the three Select Committees of the Legislative Assembly.

3303. Would you have any objection to tell the Committee the amount of money that you have invested in this corporation yourself;—I understood you to say that you have been a shareholder from the commencement? I have.

3304. Have you invested in it? Yes, I have invested largely.

3305. What amount? I am quite safe in saying at least £18,000.

3306. Are the Committee to understand that you have actually paid £18,000 in cash into this Illawarra Land Corporation? I have.

3307. I suppose you have not had any return for that money? None whatever.

3308. How many years' interest have you lost on it? The larger proportion of my payments was made in 1888—£7,000 to start with. I have lost between seven and eight years' interest.

3309. Before you took office as managing director, who occupied that position? There never had been a managing director. I was the first to accept the position of managing director in order to save a great many meetings.

3310. Who was responsible to the Board? The Board sat regularly. There was a very full Board. Until Mr. De Wolfe went to London, he was leading director.

3311. Who was manager or secretary? For some years the secretary was Mr. F. W. Orr.

3312. Who is secretary at the present time? Mr. Frank Jarvis.

3313. Do you appear here at the request of your co-directors? I do.

3314. Did you express a desire to give evidence, or have you been requested by the Committee to attend? I have been requested by my Board to attend.

3315. Upon what question particularly do you wish to give evidence before the Committee? Nothing more particularly than I have embodied in the statement which I have just made.

3316. Do you wish to make any statement as to the desirableness or otherwise of constructing the proposed harbour at Port Kembla? I do not wish to interfere with Port Kembla. I only wish to point out the advantages of the position which my company took after the most elaborate inquiry as to which was the best place to show the Committee that we knew what we were doing. I could put in certain evidence of experts, which led us to accept the Illawarra Lake as the best position on the southern coast, and I think I can give you evidence with regard to the fact that without a still-water harbour all the industries started would be very severely handicapped, I will not say ruined, but handicapped so much so that they would all be bound to reckon Darling harbour as the only suitable place to which to direct their shipping.

3317. If the proposed work were carried out at Port Kembla, would you feel that your scheme would be damaged in the way of probable trade? Yes, it trenches upon rights which have already been conferred by Parliament upon my company.

3318. You are fairly familiar with the South Coast? Yes, I am a native of it. I have had a very intimate connection with it for the last 35 years.

3319. Do you admit the necessity for the construction of a harbour on that coast to facilitate the shipment of coal? Not to facilitate the existing trade. A still-water harbour will lead to further development of trade. As a matter of fact, the shipping is able to do all the present trade with the present natural harbours. In other words, some of the notes in the later portions of the memorandum which I sent to the Committee mean that up to the present moment the whole trade of the Colony is done by ships which come here with a lighter set of cargoes than the cargoes which they take away—that is to say, there is no encouragement for the development of the coal trade unless ships come in ballast, and ballasting a vessel adds so much to the cost of the coal that it would be cheaper in many parts of the world to carry coal from England. We had very strong evidence on that point from the Consul for Chili, who said that if they went to England for coal they had a trade each way, but if they come here they must come in ballast. They must buy ballast and throw it away. A portion of the Illawarra Harbour and Land Corporation scheme is to encourage the shipment of profitable ballast, principally on the South American coast, of cheap ores, and by carrying out an arrangement of that kind to make it pay to bring the ore here as ballast, and by that means an impetus will be given to the coal trade. And no ship will come to Kembla in ballast, and then have to go to the expense of discharging the ballast in order to take coal. No place in the world could stand such a handicap. At present a large trade is done by vessels coming from the west coast of America with timber. They come to Sydney, then return to Newcastle,

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Newcastle by tug, the tug bringing down half their cargo of coal. Our scheme would encourage vessels to become purchasers of iron-ore and the low-grade copper-ores and lime of South America, and provide a natural want of the Colony by the increase of freightage inwards. We are bidding for an immense development of the coal trade, in conjunction with the treatment of ores.

3320. Is it not a fact that at the present time steamships of from 5,000 to 7,000 tons load at Port Kembla?

Yes.

3321. And is it not a fact that there are numerous instances of these large steamers not being able to get there for want of protection, such as the proposed breakwaters would afford? It is partly so, but not entirely. Any breakwaters at Port Kembla will not keep out a rough sea. The Pacific has many thousands of miles of cyclone catchment area, perhaps the greatest area for wind collection in any part of the world. Although I have not had an opportunity of absolutely measuring the waves at Kembla, I should think I was safe in saying that in an easterly gale the height of the wave to be withstood by a breakwater would be at least 40 feet.

3322. I suppose you are familiar with breakwater construction at Newcastle;—do you wish to make the Committee believe that the gales are more severe at Kembla than at Newcastle? I do not. At Newcastle you have Nobbys, which acts as a breakwater to some extent. Nothing could move it. It is the same with regard to Windang Island; but Windang Island is larger than Nobbys, and affords greater protection. If Nobbys were built artificially, and rested on a base of 120 feet of stone, I would not mind predicting that it would not stand one easterly gale. That is the difference between a natural barrier like Windang Island or Nobbys and an artificial one.

3323. Do you not think that a large sailing ship trade with Singapore, Bombay, San Francisco, and Chili, would spring up if breakwaters were constructed at Port Kembla? No, I do not, because at the present moment, in certain seas, the harbour is as good as ever it could be made; but vessels in the London trade will not lie out to take in that port unless powerful interest is used to make them do so. Over and over again, during the last ten years, strong interests have been used in London to make Kembla a port of call. Wealthy people have put a great deal of money in the coal trade, and it is paying very well, but they would like to make it pay better, and they have attempted to induce the underwriters to make Kembla a port of call, but it is considered too risky. If breakwaters were made it would not alter the position a bit. I have taken the liberty of listening to the evidence given before the Committee, and I noticed that one pilot gave evidence so thoroughly confirmatory of my own knowledge of the coast, that I take the liberty of repeating it. Mr. Mills was asked whether the eastern breakwater could be used as a wharf. He laughed, and said that the average seas would be breaking over it. The breakwater is to be 15 feet high, and it would have to withstand waves of more than that height in ordinary weather. It is a very important point, showing that in an average easterly gale a 15-foot breakwater will have the breakers going right over it.

3324. Do you wish the Committee to believe that it would be impossible to put a breakwater there at a cost of £158,000 that would keep out an easterly gale? I have no hesitation in giving my opinion—an unprofessional opinion, but by no means without good ground—that New South Wales could not borrow enough money to build there a breakwater that would stand.

3325. Have you seen any breakwaters in different parts of the world? No. My sole knowledge of this world is limited to New South Wales, but I have a very intimate knowledge of that coast. The first important jetty built on that coast was built by money found by my father for the contractor, thirty-five years ago. I think it cost £30,000, and it was built end on. That jetty has been renewed five times since although it is perfectly open, and the sea has no united action against it as it would have against a breakwater. Five years after it was built the contractor was running out a lot of trucks for top hamper when the whole mass was thrown down, and several men were drowned. Even an open jetty there cannot withstand the ocean.

3326. Do you not regard that as strong evidence in favour of the construction of a breakwater? No. The kind of trade that is done at Kembla is a class of trade which will not increase.

3327. Assuming that you have nothing to do with Lake Illawarra, which of the three ports—Wollongong, Bellambi, or Port Kembla, would you regard as most suitable for a harbour? Most decidedly Kembla.

3328. On what grounds would you prefer Kembla? Because the action of the north-easterly is partially broken—very partially—but more than in the other cases, and the southerly sand drift is completely checked by Red Point.

3329. Do you know anything of Port Kembla as to its being good holding ground? No.

3330. You have never heard that it enjoyed that reputation? Not more than other places. I have not known any fault to be found with any of those places.

3331. I think that in the memorandum which you placed before the Committee you speak of the complete failure of the southern coal companies through want of individual enterprise to compete with Newcastle, notwithstanding the advantages of the natural position of the coal;—is it not a fact that the southern coal differs in its quality in a marked degree from the Newcastle coal? It does differ materially, but as far as the world's requirements are concerned, it is the most marketable coal. It contains more caloric than the Newcastle coal. Although the preponderance of ash is against the Illawarra coal it has more caloric power. There is more fixed carbon, and less volatile carbon in the South Coast coal than there is in the Newcastle coal. A certain amount of Newcastle coal will pass away as gas and flare.

3332. Will you not admit that there are markets in the world for the southern coal without interfering with the Newcastle coal? Yes, Newcastle coal is used for lighting many foreign towns. Each coal has its own destiny. The destiny of the South Coast coal is a wider one, and it commands a larger market than the Newcastle coal, that is to say that the requirements of the world will be better met with a plentiful supply of Illawarra coal than by Newcastle coal.

3333. Do you regard a still water harbour then as absolutely necessary for the shipment of this coal to foreign ports? Yes, because London being the great seat of trade, trade is directed from there, and a large firm will deal with a ship broker. They will say, "Let me have a ship to do so-and-so, and wait orders." A ship may come out and lie for a month or two, and then take a cargo of coal knowing that they have a sale for it at a certain port at a certain price. They will not come out for coal, and then go back—that would make it too dear. If, therefore, we could get a still water harbour there would be an immense development of trade, but such "await orders" could not be adapted to Kembla.

3334. Do not large steamers at present go to the jetties at Port Kembla, and is it not a fair thing to assume that if a harbour were constructed, a larger number of ships would come there? Ships come there,

there, but they come in certain channels of trade, which are limited. It is confining the trade within certain limits. A. Armstrong, Esq.

3335. That is your opinion? That is my opinion most emphatically.

3336. Do you think that if the works at Lake Illawarra were carried out a larger number of vessels would go there to load coal than would go to Port Kembla? We should never in still weather interfere in any way with the general traffic. If all our ideas were carried out, we should naturally, in order to pay interest on the immense cost of the harbour, have to impose a harbour tariff. If that could not be reduced they would go somewhere else in still weather, and we should only get the stormy weather portion of the trade. But we have calculated the matter thoroughly with a full knowledge of what can be done, and we consider that that increased traffic, not interfering with the fair weather traffic would pay a fair interest on the cost of creating the harbour.

3337. Would you regard the two harbours as necessary if the improvements are carried out at Lake Illawarra and breakwaters are made at Port Kembla? We do not think that they are both necessary, but we think that a still-water harbour will cause further traffic without interfering with what has been done in other places. We also think that the trade in time would drift into a still-water harbour. We think that because, when our Bill was before Parliament, certain parties took action thinking that they might be deprived of certain rights, and they asked an amendment of the Bill, which we readily agreed to. Supposing that the Brownlee Colliery or the Kembla Colliery wished to make a canal into the harbour, it was thought desirable that they should be able to do so, and the Bill was amended accordingly.

3338. Do you not think that if the Lake Illawarra scheme were carried out, and the Port Kembla breakwaters were made, that the coal trade would so largely develop that both undertakings would prove remunerative? The opening of a still-water harbour, with an inlet for fluxes and the cheap ores of the world—and there are millions of tons in South America that might be ballasted over here if they would pay the cost of ballasting—would, we think, create a trade to the extent of an extra 1,000,000 tons of coal, without a bit of trouble, letting the old channels of traffic run on.

3339. Are you prepared to admit that there would be a large trade in connection with Port Kembla if breakwaters were constructed that Lake Illawarra would not get? Port Kembla would get the class of trade that it now gets. The present steam traffic would still go to Kembla for some years, but eventually come to us in preference to maintaining jetties.

3340. What I asked you was, whether you were prepared to admit that if the proposed Port Kembla breakwater were constructed, a largely increased trade would spring up in Port Kembla, which would never go to Illawarra? No. The present channel through which Kembla supplies coal has been worked to the utmost for many years, and it is not at all likely that that trade will increase.

3341. If a harbour were made at Lake Illawarra, would you expect to get the foreign sailing-ship trade? Yes, the whole of it; that is to say, the whole of it outside of what naturally goes to Newcastle. Some want gas-coal, and some want steam-coal. If Illawarra had a still-water harbour the trade would increase by leaps and bounds. It would become a 3,000,000-ton traffic, instead of at present 750,000 tons. The present traffic could only be increased by giving immense facilities at Darling Harbour, and carrying very cheaply from distant mines; but the grades on the railway practically kill that, so that the only thing is to have a still-water harbour in the centre of the south coast.

3342. Do I understand you to say that a large foreign sailing-ship and steamship trade would be developed if a harbour were made at Lake Illawarra, but not if breakwaters were constructed at Port Kembla? Most emphatically, that is my opinion.

3343. And your reason for the statement is that whatever harbour is made on the South Coast it must of necessity be a still-water harbour? A still-water harbour in connection with business that can buy ballast will have a greater effect in developing the coal trade than any industry that has been started in the Colony.

3344. You have been present at this inquiry on several occasions? I have heard nearly all the evidence.

3345. Have you heard the evidence of several nautical men, who have had experience of various harbours in different parts of the world? Yes.

3346. Have you not heard them say that the construction of that eastern breakwater is all that would be necessary in order to facilitate the shipment of coal in large steamships and sailing vessels? Yes, I have heard them say so, and I admit their evidence to a certain extent; but that would not create a trade of the character which I have been trying to describe. It would not attract vessels. Sailing vessels will not come from Brazil if they have to buy ballast to come over here, then pay the cost of discharging it, afterwards to take in coal. They would rather go to England.

3347. Notwithstanding all the evidence you have heard on the point, am I to understand that notwithstanding the opinions expressed by these various commanders of vessels, you take an altogether opposite view. I do, entirely. I do not wish to dispute the evidence of nautical men as to whether a ship could get in or not. I am speaking of the matter commercially, and I say that there would be no inducement for ships to come here.

3348. But you think that they would come to Lake Illawarra? Yes, because owing to the ramifications of business, the cost of their ballasting would be paid. They would be able to sell their ballast; consequently the ships would come across in ballast. That would cause an immense addition to the trade of the Colony, and it is one of the principal aims of my company.

3349. Was it in 1890 that your company obtained an Act of Parliament giving them certain powers? Yes; our Act is dated 20th December, 1890.

3350. I think that in the year 1895, you applied for an extension of time? We applied for two-years' extension, and Parliament granted one year.

3351. What has been the cause of the delay in regard to the operations of the company? The reasons were very fully explained to the Select Committee of Parliament on that occasion.

3352. After the passing of the Act what period of time elapsed before any of your proposed works were commenced? There were certain preliminary works in compliance with the Act, which meant that something must be done at the entrance within two years, and enough was done to maintain the integrity of the Act. It was done at the time of the terrific crisis of the Colony. One of the very largest financial institutions in the colonies—the Mercantile Financial Company of Melbourne—had taken up the scheme, and agreed to place the debentures, but that company failed at a time when nearly every Bank in the colonies was breaking. That threw out the calculations of the shareholders, who were relying upon a company that seemed financially strong enough to carry them through. What had occurred was submitted to

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to

A. Armstrong, Esq. to Parliament, the result being that the time was extended. It was, perhaps, one of the most fearful crises that the colonies ever saw, but my company maintained the whole of its possessions, and the integrity of its position, and has complied with the Legislature's conditions to date.

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3353. Have all the conditions laid down in the Act been fulfilled by your company? They have been strictly adhered to. We hold a certificate from the Treasurer to that effect. Private Acts of Parliament are administered under the Constitution of New South Wales by the Treasurer, and a certificate from the Treasurer is proof that the Minister administering the Act is satisfied that the preliminary conditions have been fulfilled.

FRIDAY 18 DECEMBER, 1896.

Present:—

THOMAS THOMSON EWING, Esq., (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.
The Hon. JAMES HOSKINS.
The Hon. CHARLES JAMES ROBERTS, C.M.G.
The Hon. WILLIAM JOSEPH TRICKETT.
The Hon. DANIEL O'CONNOR.
HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.
JOHN LIONEL FEGAN, Esq.
THOMAS HENRY HASSALL, Esq.
GEORGE BLACK, Esq.
FRANCIS AUGUSTUS WRIGHT, Esq.
FRANK FARNELL, Esq.

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

Mr. William Beach, farmer, Dapto, sworn, and examined:—

Mr.
W. Beach.
18 Dec., 1896.

3354. *Chairman.*] What are you? A farmer, residing at Dapto.
3355. Close to Lake Illawarra? Yes.
3356. Have you a good knowledge of Lake Illawarra? Yes, an intimate knowledge of it, having resided there forty years.
3357. *Mr. Black.*] Have you an intimate knowledge of the shores of the southern coast and Lake Illawarra? Yes.
3358. In what direction do you prefer to give evidence? I propose to give evidence in regard to Lake Illawarra.
3359. With regard to the lake, what depth of water is there in it? The average depth, I suppose, would be about 15 feet; but you can get a depth of 25 feet in some parts.
3360. Do you know Tallawera Point, where it is proposed to erect a jetty? I do.
3361. What is the depth of the water there? About 50 yards from the shore there is a depth of about 12 feet, then it gets deeper; at 150 yards distance I suppose there is a depth of 20 feet of water.
3362. What is the character of the bottom of the lake? Very soft mud.
3363. For how many feet? I took Mr. Higgins on the lake, when he came up from Victoria in reference to the dredging, and we put a paddle down tied to a sprit, and the paddle and the sprit went down out of sight. I should think the depth was 25 feet.
3364. You mean to say that the mud and water was sounded to a depth of 25 feet? Yes. That is about 100 yards from where they propose to erect the wharf at Tallawera Point.
3365. Is the character of the lake similar to that? It is quite similar right across.
3366. It is not rocky? No; you cannot find a rock in the middle of the lake.
3367. Is the mud fairly solid? It is quite soft soaky stuff.
3368. Then if a channel were constructed the operation of dredging would be easy? I think so.
3369. But if a channel were dredged out, would there not be a danger of the banks falling in from time to time? Probably they would if the channel were not pretty wide. It is very soft mud.
3370. You think it is a matter of width? Yes.
3371. You think then that the sole thing likely to affect the bank would be the wash of the vessels going in and out? I suppose if it was 100 yards wide there would be no fear of the mud shifting.
3372. Do you not think that the natural action of the water would have a tendency to eat away the sides? I do not think so; it is never very rough.
3373. There is no under current? I do not think so.
3374. Are there many streams running into the lake that are likely to carry in silt? None near Tallawera Point.
3375. There are only Mullet Creek and Macquarie Rivulet? Mullet Creek would be about 2 miles from the proposed site of the wharf, and Macquarie Rivulet about the same distance on the other side.
3376. Of course once the entrance was gained, it would be a safe harbour? Yes, quite safe. There are no rocks, so that if a vessel bumped on the bottom it would not hurt her.
3377. Do you know the proposed entrance? Yes.
3378. Is there any entrance now? The water is running in and out.
3379. What depth is it? About 6 or 7 feet.
3380. How wide is it? It is wider some days than it is on other days. It is 50 yards wide at present at high tide.
3381. What is the width between the lake and the sea? There is about 200 yards.
3382. And that is only broken by a passage-way of about 50 yards wide, and 6 or 7 feet deep? Yes.
3383. If that bar of sand were removed, do you think it possible to keep the entrance open? I think it would be.
3384. Do you not think that the action of the ocean would have a tendency to pile up sand there as it has done before? It might, unless a wall were built to prevent the sand from coming in.
3385. Do you think the construction of two breakwaters would be sufficient protection? I think it would.
3386. Do you think if those two breakwaters were constructed, as shown on the map, that sailing vessels could make the entrance in an easterly gale? I believe they could. They could come straight in.
3387. How about a north-easterly gale? It is protected by the Red Point from the north-east wind.
3388. How about a southerly? It is protected from that by Windang Island.
3389. You think that it would be an easy harbour to make in rough weather? I believe it would be.

3390.

3390. I suppose that sailing vessels would have to be towed out in the case of an east wind? I think so. The water gets deep as soon as you get into the sea.

3391. Have you any knowledge of the coal products of the district? I know there is coal right round the face of the mountains, as far as the south-western end of the Lake.

3392. Are there any coal mines working now in the neighbourhood of Lake Illawarra? Not further south than Mount Kembla.

3393. Then Port Kembla would be more easily accessible to them than Lake Illawarra? I do not think that it is any nearer to Port Kembla from the coal mines.

3394. Then there are the mines north of Mount Kembla? The mines north of Mount Kembla would be nearer to Port Kembla than they would be to the lake.

3395. It would only be in case of new mines being discovered further south that Illawarra Lake would be more central than Port Kembla? Exactly so.

3396. Do you know anything of Port Kembla as a port? I think it is a fairly good harbour, except in case of an easterly or north-easterly wind. It is exposed to both these winds.

3397. Do you think that if breakwaters were constructed as shown on the map they would sufficiently protect the port from east winds? The Southern Coal Company's jetty would not be so well protected as the Kembla Coal Company's jetty.

3398. To what height do the waves run there in rough easterly weather? There is a very big break there.

3399. If a breakwater were constructed 16 feet over high-water, and 20 feet over low-water, do you think that in a gale it would make the harbour sufficiently smooth for vessels to load and unload? I think that in a rough gale the waves would go over a 20-foot breakwater. It is exposed to the full force of the ocean.

3400. Do you know the port of Newcastle? Yes; Kembla is very similar to that.

3401. Is there no protection on the outer side of the proposed breakwater? There are the Five Islands further south.

3402. How about a north-easterly gale? Wollongong Point runs out to the north-east. I do not think they would get the full force of that as they would of a gale from the south-east. It would be very much exposed to the south-east.

3403. Do you not think the Five Islands would break the force of a south-easterly gale? No; it would come straight on to the wharf—the Five Islands are further south.

3404. You think that when there is a south-easterly gale, unless the breakwater were of great magnitude and strength, it would be washed away? I do. In Wollongong harbour there is a breakwater of concrete blocks, and it washes that about, and Wollongong is fairly well protected from south-east gales.

3405. Then you have not a very high opinion of Port Kembla as a harbour? It is all right for calm weather, but not for rough weather.

3406. And you are not very much impressed with the advantages of Wollongong? No.

3407. Do you think the money expended there has been thrown away? I think so. I do not think it can ever be made a good harbour. The entrance is too shallow.

3408. What about Bellambi? I think that a better harbour could be made there than at Wollongong.

3409. How does it compare with Port Kembla? It is about equal. There is a big reef at Bellambi.

3410. Do you know anything about the depth of water inside the reef? No, I do not know much about it.

3411. Do you not know that it is much shallower than Kembla? No.

3412. Do you think that if such works were carried out, as were proposed at Lake Illawarra, it would afford a harbour of refuge which would be easily accessible to vessels? I do.

3413. You think also that it could be made a good harbour for the shipping and unshipping of minerals? I do not see what is to prevent it once they make the entrance.

3414. Do you know what it is proposed to do? To make an entrance so that large vessels can come in and ship coal.

3415. As a man of practical common sense, how long do you think that it will take to carry out a work of that kind? Two or three years I should think.

3416. Do you think it could be done in three years? They would have to put on a good few hands to do it in that time.

3417. How many? I am not much of an engineer.

3418. You think it would require a great number of men to carry out this proposed work within three years? I do.

3419. What is the difference between high and low water in the Lake? At the present time on the western side you cannot see any difference. At the entrance to the Lake there is a difference of about 18 inches.

3420. Not sufficient water runs in whilst the tide is running to make any appreciable difference over the large body of water contained in the Lake? No.

3421. *Mr. O'Connor.*] Do you know the different schemes now under consideration? I know the Lake harbour scheme pretty well.

3422. Do you know Port Kembla and Wollongong? Yes.

3423. How long have you been there? Forty years.

3424. And you have considered this matter? Yes; I take an interest in this scheme.

3425. Which do you think is the better? I think the Lake harbour scheme is preferable to the Port Kembla scheme, because when a vessel gets inside the Lake it would be sheltered—no storm can damage it.

3426. Have you any idea what it would cost to make a scour? No, I could not say what it would cost; it would cost a good lot of money.

3427. Do you think that if there was a reasonable sum of money spent at Lake Illawarra it would be thoroughly safe? I believe it would be.

3428. Have you ever considered the tonnage of ships that could come into Lake Illawarra with safety? That would depend upon how deep they made the entrance.

3429. There are many natural advantages at Port Kembla, vessels of considerable tonnage being able to come in there without the expenditure of a shilling on harbour works? Quite so.

Mr.
W. Beach.
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3430. What is the largest sailing vessel or steamer that could come into Lake Illawarra? No vessel could go in now—it would have to be dredged.

3431. You could not tell how much it would cost to dredge it? No. When the Lake has been full, and the water has been backing over the low land, I have seen the entrance cut and the sand washed away to a depth of 12 or 13 feet, but it would close up again in time.

3432. *Mr. Hassall.*] What was the width of the opening? About 100 feet.

3433. *Mr. O'Connor.*] Is there a good entrance at present? There is only 6 or 7 feet of water.

3434. The result of your experience is that if a sufficient sum of money were spent in making a harbour to receive the biggest vessels afloat, Lake Illawarra would be the preferable port? Yes.

3435. You do not deny the many natural advantages of Port Kembla? It is alright in calm weather, but in rough weather it is dangerous to go in there.

3436. You have been to Port Kembla many times? Yes.

3437. Will you give the Committee your opinion of Port Kembla? I think it is as good as any other place on the coast for loading coal.

3438. Would it be necessary to extend the proposed breakwater to its full length as shown on the plan? I do not think it would be at all too long. It should be made the full length, as shown, then it would not give too much protection to one of the wharfs.

3439. Supposing that Lake Illawarra were improved to the fullest extent, how many ships would be able to load there? I suppose 500 or 600 if the Lake were all dredged out. It is about 9 miles long.

3440. I mean with an expenditure of about £250,000? I should think at the very least it would accommodate 40 or 50 vessels.

3441. *Mr. Trickett.*] Since you have been down at the Lake I suppose you have watched the proceedings of the Illawarra Company for the last 6 years? I have.

3442. Could you tell us what they have done in regard to improving the Lake since the 20th December, 1890? The only thing that I know of that they have done has been to make the railway to Tallawera Point.

3443. But that has nothing to do with the Lake? There was some work done over at Windang Island.

3444. As far as improving the Lake is concerned, and making it available for a port, I suppose it is in the same condition that it was in in 1890? Just about the same.

3445. Have you taken up any shares in the company? No.

3446. Would you like to take any? I have no money to spare.

3447. You have not been asked, I suppose? No.

3448. Would you like to take up the job of making a harbour? I am not an engineer.

3449. You say there is only a fall of 18 inches in the tide at the mouth of the Lake? Yes. The entrance is shallow.

3450. We heard a little while ago that there were some hundreds of men employed on the Lake? There were some employed at Windang Island for some time—I do not know how many.

3451. When was that? About 12 months ago.

3452. What were they doing? They started to make a breakwater to connect the mainland with Windang Island.

3453. How long were they there? A couple of months.

3454. Have there recently been any men at work there? Not that I know of.

3455. Do you see pretty well all that is going on there? Yes; I should be sure to know if any men were employed there.

3456. When was the railway extended down to Tallawera Point? That has been finished about 6 months.

3457. Is it being used? At times it is used. The smelting company run out on part of it, and there is a branch line on to their works.

3458. You have not seen any men employed on the railway works, or on the Lake works? Only when the railway was being constructed.

3459. But there are men employed in connection with the smelting works? Yes, a great number.

3460. But that is distinct from the Lake improvements? Yes; it has nothing to do with it.

3461. So that, beyond constructing this railway, and making a sham of constructing a breakwater to Windang Island, nothing has been done in regard to the improvement of Lake Illawarra for the last six years? No.

3462. *Mr. Clarke.*] I suppose you are aware that all these coast lakes and lagoons are often blocked up with sand? Yes.

3463. Are not the easterly gales generally the cause of it? No; the easterly gales generally open them. The north-east wind is the worst.

3464. As a rule is it not the floods from inland which open the lakes? They may have some tendency to do it.

3465. Is it not a fact that when the lakes are blocked up with sand sometimes people have to go and open them? Yes; we had to do that last year at Lake Illawarra. It blocks up every two or three years.

3466. What is your opinion about the opening of Lake Illawarra—if a harbour were formed would it not involve a great expense in dredging? As far as the inside is concerned, I think that once it was dredged there would be no more bother with it.

3467. Would it not cause a great expense? The stuff is easily shifted; it is quite soft mud.

3468. Do you think it would not fill up with sand or some other material? There is no sand in the Lake, except round the shore.

3469. You think that if a channel were dredged there would be no difficulty in keeping it open for a width of about 25 feet? I do not think there would be the least trouble in the world. *Mr. Higgins* told me that he could fix his apparatus in the middle of the Lake, and send all the stuff by means of pipes to either shore, a distance of about a mile and a half.

3470. What did he say about keeping the entrance open? He thought that would be more trouble than the inside of the Lake.

3471. Would it be more difficult for vessels to enter Lake Illawarra than to enter Port Kembla? I cannot see how it would be more difficult. They could go safely in.

3472. Is the entrance to Port Kembla not protected by the Five Islands? It is a bit.

3473. And if a breakwater were formed would not that make it better? It would make it a good deal better.

3474. Would there be any more difficulty in getting into Port Kembla than in getting into Lake Illawarra? I do not think there would.

3475. They would be about on a par? Yes.

3476. You are aware that a large quantity of coal has been shipped from Port Kembla? A great deal of coal goes away from there, I believe.

3477. If a harbour in Lake Illawarra were constructed, do you think that any of that coal would go to Lake Illawarra? They would be able to get in there, and lie there in rough weather.

3478. Can you give any idea of the quality of the coal south of Mount Kembla? Different seams have been tested, and I have never found any fault found with it. I see that Mr. David found coal the other day at the head of the Macquarie Rivulet, and he said that it is very good. That is much further south.

3479. We have information to show that south of Mount Kembla there is no coal suitable for export purposes? I do not know the quality of the coal, but I know that there is coal there.

3480. *Mr. Fegan.*] Have you been in the employ of that company at any time? Never.

3481. You have had every means of becoming thoroughly acquainted with the lake? Yes.

3482. You have been there in all weathers? Yes.

3483. And you think that if money is spent there Lake Illawarra will make as good a harbour as Port Kembla? Yes; I think Lake Illawarra is preferable.

3484. Do you not think it costs a large sum of money in dredging? I do not think it would once it was made.

3485. You think there would be a sufficient scour to keep it clear? Yes.

3486. Taking the coal trade as it stands now, the coal south of Mount Kembla being of very little value, and that the bulk of the trade comes from north of Mount Kembla, would you not think Mount Kembla a central position for the harbour? It is all on one side.

3487. Then you think that the advocates of Port Kembla have a very strong case as against the advocates of the harbour at Lake Illawarra? Yes, if there is no coal further south.

3488. You think that Port Kembla has a prior claim? It may have at the present time, but if a harbour were made in Lake Illawarra you could load there when you could not load at Mount Kembla.

3489. Ship-owners and colliery-owners consider the distance which they have to carry their coal, because every mile that the coal is taken depreciates its value? The distance would be about 5 miles by water.

3490. I am speaking of carriage by rail. Take the Bellambi, the Kembla, and the Metropolitan collieries, which are to the north of Kembla, and the fact that there is very little coal of any value south of Mount Kembla, would not Port Kembla be the proper harbour for that coal? Under those circumstances, yes.

3491. *Chairman.*] You said that by tying a spit on to a paddle you were able to put it down 25 feet? Yes; there is 25 feet of mud and water altogether about 150 yards from Tallawera Point. Mr. Higgins sounded it all the way across.

3492. Is it your belief that all the distance from Tallawera Point to the entrance of the lake is soft mud? It is.

3493. You have no doubt whatever about it? Not the slightest.

Andrew Armstrong, Esq., Managing Director, Illawarra Harbour and Land Corporation, Limited, sworn, and further examined:—

3494. *Mr. Roberts.*] Can you remember what sum had been expended on works by the Illawarra Harbour and Land Corporation up to the 30th September, 1894? Not more than £2,000 or £3,000 on harbour, not including expenditure under the railway conditions of the company's Act. It was principally in preliminary surveys and preliminary work in tie-bank.

3495. It was strictly in compliance with the Act of Parliament? Yes; in preparation for larger works.

3496. Who were the contractors up to that period? A firm called Brand and Dryborough.

3497. Can you tell the Committee the nature of the works that were carried out by the firm up to September, 1894? Carrying out the bank connecting Windang Island with the main land, known as the tie-bank. At that time the company had placed its affairs in the hands of the Mercantile Financial Company of Melbourne. A great crisis came, and the company thought it was not wise to go on with the contract, and the contract was terminated under a clause in the agreement.

3498. What was the amount of the contract, and what was the amount of cash paid for the works carried out? I cannot remember the total amount of the contract, but the cash paid on that particular item was about £1,200. The contract was a schedule one.

3499. I understood you to say that about £3,000 has been expended? Yes; but this included preliminary work. There was a costly and extensive survey. There had never been any Government borings of the bottom of the lake, and we had to do that. Our expenditure up to that date was £2,000 or £3,000.

3500. I do not think you quite answered my question as to what was the amount of the contract entered into by Messrs. Brand and Dryborough. You led me to believe that the whole of the contract money had not been expended? It had not.

3501. What was the amount? I think that the tie-bank cost about £3,000 or £4,000. I am not clear; but I can ascertain for you from the engineers.

3502. Can you more clearly describe the nature of the work? The opening up of large stone quarries around Windang Island, and the formation of a connection between Windang Island and the mainland where one of the training walls was to be built.

3503. Was that with a view of constructing the breakwaters? Yes, using the top of that for breakwaters and a line to convey stones to form side walls for the main channel.

3504. Do you remember the date of the acceptance of the contract and the date when the work was discontinued? I could not give you that from memory.

3505. You said that the work was suddenly terminated owing to the financial crisis throughout Australia? Yes.

3506. How many men were employed on the works at any time, and how long were they employed? I will put in a return giving you all that.

3507. Are you not in a position to give the information? No. We had power to break the contract when we pleased. I cannot tell you how many men the contractor had. The number of men was limited, because until this main track from the quarry and the tie-banks were completed the number of men engaged could not have been very large.

- A. Armstrong, 3508. Had the company the power to cancel this contract at any moment? Yes.
- Eq. 3509. Did not the company enter into a contract to complete certain works? Yes; but we had the power of cancellation. It was at schedule rates.
- 18 Dec., 1896. 3510. Your company had power to cancel it at any moment? Yes.
3511. Are you quite sure about that? Yes.
3512. You took advantage of that clause in the contract, and owing to the financial crisis the work was stopped? We terminated the contract.
3513. Can you recollect the date when this contract was terminated? No; I will give you a return.
3514. Was it prior or subsequent to the receipt of the letter from the Under Secretary for Finance and Trade in 1894? I think it was prior; but on that point I could not speak definitely.
3515. I understood you to say that you spent £1,200 on the island up to September, 1894, and in incidental expenses another £1,800, making a total of £3,000 spent in connection with this work? Yes, approximately.
3516. How much money has been expended since then? I can give it in the form of a return in detail. The company's expenditure in harbour and railway construction up to date has been £41,516; in connection with coal-mines about £600; in connection with certain quarries about £10; in connection with water supply and conservation about £32; giving a total of about £43,000.
3517. Does this £43,000 include the construction of the railway from Dapto Creek to Tallawera Point? Yes.
3518. How much of this £43,000 was expended in railway construction? About £40,000.
3519. What is the total length of the line? Roughly, $7\frac{1}{2}$ miles—about $4\frac{1}{2}$ miles from Dapto station to the coal-mine; $1\frac{1}{2}$ to Tallawera Point; and $1\frac{1}{2}$ to the smelting works.
3520. The other £3,000, I presume, were spent in the manner you have previously stated? I am giving you approximate figures.
3521. Do not the books of the company show the exact expenditure up to date? They do; but I have taken a double balance in one. I can give you accurate details on these points.
3522. You say that £40,000 has been expended on the railway, and £1,200 on Windang Island? To speak more correctly, it is £39,000 for the railway, and £3,000 on the harbour.
3523. So that the total expenditure up to date has been on the railway and the harbour? £42,000.
3524. Does this £39,000 include rolling-stock? No; we have no rolling-stock.
3525. Do you contemplate procuring any, or are you making arrangements with the Government? We shall require to have our own locomotives; but we do not intend to have much capital locked up in trucks. The coal for shipping will come to Dapto station in trucks, and they can be run on to our line under an arrangement with the Government. On all these points negotiations are pending between us and the Railway Commissioners.
3526. Have your directors approached the Railway Commissioners with a view of making arrangements for the supply of rolling-stock? Not for the supply of rolling-stock, but mutual arrangements are in course of discussion between us.
3527. No definite arrangement has yet been arrived at? Matters are pending.
3528. When you gave evidence yesterday I did not understand whether the Illawarra Harbour and Land Corporation and the company that is to deal with sulphide ores are one joint-stock company, or two companies? There are two distinct companies. In the first place, the Illawarra Harbour and Land Corporation, having their rights, sent one of their leading directors, Mr. De Wolf, to London, and his first action was to form a company called the Camden Syndicate, with a capital of £300,000. That syndicate was formed with sufficient capital to invest money, and take advantage of the rise in values which would result from the carrying out of our undertaking. That company, having acquired immense interests in mines at Broken Hill, formed a smelting company, and the smelting company are shareholders in the Camden Syndicate and in our company.
3529. Is that smelting company the company of which Mr. Howell is the manager? Yes. That was the first operation of Mr. De Wolf in carrying out large financial operations necessary to bring the whole thing to a success. He formed the Camden Syndicate, out of that sprang the Smelting Company of Australia, and out of that several other large companies. A company is now projected for supplying coal and water for Dapto Smelting Works, and I shall probably hear of the successful floatation of that during the next week or two. To give complete effect to the powers given us by Act of Parliament we have had to extend our field of operations very largely. Merely to form a harbour for the export of coal would, in view of the decreased value of coal a year or two after we got that concession, have resulted in failure.
3530. With regard to this £42,000 that you say your company has spent, has that been paid in cash by the company? Not entirely. We have had to carry out some financial operations. I can put it in this way. In the first place, my company purchased coal and land estates, to the value of £100,000. Up to the time of Mr. De Wolf's going to London we owed a balance of about £35,000, secured upon our debenture issue. But we had a call upon our 40,000 shares of £10 each—we have a calling-up power of £400,000.
3531. How much money has been raised by debentures or guarantees or otherwise by your money? Nothing more. We have one combined debt of £34,000.
3532. Were the Camden syndicate guarantors for the Illawarra Corporation? There are London arrangements by which a company formed by the syndicate are going to guarantee a loan whenever the time seems ripe for launching debentures to meet harbour expenses. The Camden Syndicate are prepared to see that loan through.
3533. When asked a question yesterday you said that you had invested £18,000 cash in this company. Are we to understand that that is cash actually put in, or is it a liability for cash? No. I have paid that much in absolute cash as investments of money in the early stages in the purchase of estate. My investments cost me £18,000 cash.
3534. Then although the company within a period of six years expended £42,000, £18,000 of your money has been lying idle all that time? I have never had any return. There has been nothing to get a return from. The mere grazing returns would not come to more than £1,000 a year, and it only paid office expenses and management.
3535. Were you one of the original promoters? I was.
3536. How many shares are you entitled to by virtue of your position as one of the promoters? I think I had about one-sixth interest. A large syndicate was formed, and that syndicate registered itself into a company.

company. The Lake Illawarra syndicate is dead, and has been wound up so long that without going back upon the past I cannot give you the information. A. Armstrong,
Esq.

3537. Can you recollect in what year the syndicate was formed? About 1888. That syndicate registered a large company with a capital of 16,000 shares of £100 each. 18 Dec., 1896.

3538. Was any cash put down? The estates were put in, having been paid for, or nearly paid for. They cost a total of £90,000. There were probably debts amounting to £30,000 at the time when the syndicate was formed into a company.

3539. Of course a company cannot do anything unless they have cash in hand or a way of obtaining cash. Will you inform the Committee what their financial prospects were at the time of the formation of this syndicate—whether there was so much money put down, or whether it was to be guaranteed by a bank or overdraft, or how money was to be obtained to carry out the work contemplated by the syndicate? The syndicate having been registered into a company with a capital of 10,000 shares paid-up to £50, they had a calling power of £50 per share.

3540. What was the name of the syndicate? I think it was called the Lake Land Syndicate. That call was never exercised beyond one £10 call. There were practically no shareholders except the same syndicate.

3541. How many men were there in the syndicate who paid £10? I can make out a return of that. It is going back to almost a forgotten past.

3542. Did you pay then? Yes.

3543. Did you pay more than one £10? I made two different payments of £2,000 each—about £4,000 altogether.

3544. *Mr. Humphery.*] The first call was £100,000? I think so.

3545. *Mr. Roberts.*] Did you say that each individual paid £10? In the first place the syndicate merged its rights in a company, and afterwards made a call of £10 a share.

3546. Did not the Illawarra Land Syndicate put down any money at all? They furnished their own cash and put the estate in. They purchased an estate and a coal-mine which came to £90,000.

3547. *Chairman.*] There was a call made of £10 a head;—how many shareholders were there in the company? The number who had shares then I could not say.

3548. You invested £90,000 in mineral and landed property;—how much of that represented land? We gave £65,000 for land, and £25,000 for coal property.

3549. *Mr. Roberts.*] This Illawarra Land Syndicate commanded capital to the amount of £100,000;—is that a fair statement? Yes, I think so.

3550. Are you not able to say so as a fact? No. I have satisfied myself to-day as to the position of the company as it stands, and to go back into circumstances connected with the formation of the company is a thing that I cannot see the advantage of.

3551. We want all the information possible? I can get the list compiled from the books of the company.

3552. We want to trace the efforts which your company have made to carry out the powers granted to you by Act of Parliament;—it seems to me fair to ask you to give all the information possible, and to show what expenditure has taken place from the inception of your syndicate up to the present day? I came to-day prepared to give a summary of what we had done up to date, but not to give a history. But the secretary of the company can compile a complete return which can be put in as evidence.

3553. If you have no objections to put in the details, I am at a loss to understand what objection you can have to my asking you these questions? I have no objection; but it is going into the thoroughly forgotten past. I do not feel that my memory is fresh upon all these important points. I can tell you how much money I put in, and how much one or two of my friends put in.

TUESDAY, 22 DECEMBER, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.

The Hon. JAMES HOSKINS.

The Hon. CHARLES JAMES ROBERTS, C.M.G.

The Hon. WILLIAM JOSEPH TRICKETT.

The Hon. DANIEL O'CONNOR.

HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.

JOHN LIONEL FENAN, Esq.

THOMAS HENRY HASSALL, Esq.

GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

FRANK FARNELL, Esq.

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

Andrew Armstrong, Esq., Managing Director, Illawarra Harbour and Land Corporation (Limited),
sworn, and further examined:—

3554. *Mr. Roberts.*] When the Committee rose on Friday last, I was asking you for some information regarding the financial operations of the Illawarra Harbour and Land Corporation, and you were good enough to say that you would supply information by way of a return? Not exactly. You were asking for information regarding the early part of the syndicate, prior to its formation into a company. The company's financial operations, of course, are only obtainable from the books of the company. The particulars of the operations of the syndicate are not so readily obtainable. A. Armstrong,
Esq.
22 Dec., 1896.

3555. Have you prepared a return as promised? I have not. I find that the papers leading up to the formation of the company are not in my possession. I know nothing of them, except that I was a shareholder, and occasionally met others to advise. The difficulty of putting in the documents of the syndicate is, that they were merged into two contracts, which formed the registered basis of the company. One was a document by which myself and Mr. Thomson were appointed trustees of the existing syndicate, dated 28 September, 1888; also the contract from them to the company dated 1 October, 1888. Those were the two documents which formed the basis of my company. Behind those documents I find it absolutely impossible for me to go.

3556. *Chairman.*] When does the information you have commence? The registered document is dated 1 October, 1888. 3557.

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3557. Is it complete since then? I can give you the returns from my company, which have been registered each half year in the Registrar-General's Office. I can give copies of the balance sheet from that date.
3558. Can you give us the information from 1888? Yes; I can lay before the Committee each of my half-yearly balance sheets of the registered company, all of which are filed in the Registrar-General's Office.
3559. You have not got them with you? That is not the information which I have been asked for. I have been asked for information which led up to the company, and not about the company itself.
3560. *Mr. Roberts.*] I want to get the history of the company from the very beginning? If you subpoena our solicitor all documents can be produced.
3561. You have not got the documents with you now? No; they are with the solicitor for the company.
3562. If you think they bear on the questions I was putting to you, I shall be glad if you will produce them? I have no doubt that I can easily arrange for the solicitor to the company to bring those documents. I will make a note of it. I would recommend the Committee to take the evidence of Mr. William Andrews, solicitor, of the firm of W. W. Billyard, Andrews, and Mosely, who is the keeper of the legal documents of the company.
3563. Will you state what company or companies have been formed since 1888, with the view of carrying out the scheme at Lake Illawarra, and how much capital has been expended? You have already got that very fully in my previous evidence. The company has spent, in estates and improvements, approximately £150,000, and our total debt at present is £35,000, secured upon advanced mortgage. The position is entirely summed up in that.
3564. How many acres of land does your corporation own in the vicinity of Lake Illawarra? 2,410 acres fronting the Lake, 265 acres of farm land as the key to a lease within the water reserve behind it, and 1,280 acres of leased land, colliery property, marked on the official map before the Committee as the Ocean Colliery.
3565. Is the Smelting Company of Australia a distinct company from the Illawarra Harbour and Land Corporation? Entirely; it was formed by us in London.
3566. It was formed by your company? By the Camden Exploration Company.
3567. *Chairman.*] Does that 265 acres form part of the property of the original syndicate? Yes; they held a lease of 1,280 acres from the Crown, in addition to that 265 acres of freehold, and is now the property of the company.
3568. Does the 265 acres adjoin the coal land that you lease from the State? It does.
3569. *Mr. Roberts.*] How many companies altogether are there interested in this scheme? First, there is the Camden Syndicate, since registered as the Camden Exploration Company; then the Illawarra Harbour and Railway Company, and the Australian Smelting Company.
3570. Were all the preceding three companies merged into the Smelting Company? Certainly not.
3571. Are they four totally distinct companies? Yes. Then the fifth company registered was a company with different capital for dealing with mines which merged into the Smelting Company—for instance, the White Rock Company.
3572. That makes five? Yes.
3573. Can you tell the Committee what the capital of each of these companies is? Not exactly. The Camden Syndicate is entirely paid up with a capital of £300,000.
3574. Was that subscribed in cash? In cash in London.
3575. Or is it only nominal? The absolute capital of the syndicate which started a year ago, and has since been registered as a company is £300,000 absolutely paid up.
3576. Was that absolutely paid down in cash? As far as I knew. It is entirely a London company, intended to take advantage of the enormous increase in the value that would be given to shares through dealing with refractory ores. That is its principal object; but to carry out that object we had to form first a smelting company in connection with the cheap coal of the Illawarra district. That has a capital of £500,000, with £300,000 paid up.
3577. Was that £300,000 of the smelting company considered paid up, or was it cash actually put down? The £300,000 was cash actually subscribed, as I understand from my London correspondence, and the greater portion has been expended at the Lake.
3578. Does that make £600,000? Yes; subscribed under the operations of my company.
3579. You have given the capital of two companies;—what about the remaining three? I do not know that I can give much information about the White Rock Company. It was formed, just as a mine, with a paid-up capital of £100,000. That mine is actually at work at present, a large number of men being employed, with the object of furnishing refractory ores to be dealt with at Illawarra.
3580. Where are the works of the White Rock Company? At Tenterfield.
3581. What other capital have you got invested in connection with Lake Illawarra? The old Illawarra Harbour and Land Corporation have a nominal capital of £600,000, in 10,000 shares paid up to £60.
3582. How much of this £600,000 has been paid in cash? That could be more accurately answered by the production of the documents. Various syndicate matters were merged into these accounts. It was done by putting certain property in the syndicate into the form of paid-up shares in the company. The absolute sum expended by that company I gave you in my former evidence. The company, purchased £90,000 worth of property. They have expended a certain sum on the railway, on legal matters, and in stamp duty, making a total of £150,000.
3583. You have spent £150,000? We have spent £150,000 approximately.
3584. Assuming your statements to be correct, as you of course believe them to be, you must have a great deal of capital lying dormant; I understand you to say that there was £600,000 paid down in London, then came another company with another £600,000;—that makes £1,200,000 which you say was paid down in cash? These are operations for securing expenditure contingent upon the harbour, and are by different companies. The smelting company are spending about £300,000 in carrying out works which were to be contingent upon our works being carried out.
3585. Did the Illawarra Harbour and Land Corporation sell land to the Smelting Company? They did. They sold 500 acres to the Camden Syndicate in London, and the syndicate sold 300 acres to the Smelting Company.
3586. At what price? £25,000.
3587. How many miles of railway is the Harbour and Land Corporation Company constructing? Since I last gave evidence I have checked the figures. I said that the length of the line was $7\frac{1}{2}$ miles; I find that it is 7 miles 75 chains.
- 3588.

3588. What was the cost of construction? About £39,000. I showed that £39,000 had been spent in railway construction, about £3,000 on the harbour, and £3,000 or £4,000 in engineering commission on all these works and other incidental expenses, bringing the total up to £150,000.
3589. How much money has the Illawarra Harbour and Land Corporation in hand at present? I could not tell you exactly. By last balance-sheets our London balance is about £8,000 or £9,000, and our Colonial balance, approximately, £2,000.
3590. Is there any money to be called up in connection with the shares in the Illawarra Harbour and Land Corporation? Yes; something like £40 each on 10,000 shares—about £400,000. I may say that that is the principal basis of finance that my company intends to operate upon. They have formed a London company to take over those shares.
3591. How many shareholders are there in the Illawarra Harbour and Land Corporation? I should think about forty. I cannot speak accurately from memory. On the first register there were thirty, but there have been some subdivisions since.
3592. Is one object of the company to export coal? No; to furnish means for the better exportation of coal is our object, but not to enter into the shipping trade itself. It may have power to do it, but I do not think that it has ever been contemplated up to the present.
3593. How does your company expect to get a return on the capital which they have invested? The capital invested so far will pay very well. The intercolonial trade would probably give a big return on the capital, because the company has power to collect harbour rates to a greater extent than the state has. It has a maximum of 1s. per ton for harbour dues besides certain wharfage rates.
3594. Can you tell me the object of constructing that railway which runs up towards Dapto Creek? It was for the development of the colliery properties owned by various holders including the company. There is a large district extending from Mount Kembla and going down by Jamberoo containing coal, workable by adit, and giving a great variety of coal. The Act of Parliament gives the right to furnish a line extending about 12 miles along the face of the mountain.
3595. Do you know for what purposes the coal would be suitable? We consider, notwithstanding some very strong evidence given here the other day, that the quality of the coal is superior for local manufacturing purposes, and we consider that it is beyond all doubt that when we have gone further the character of the coal will be established as suitable for all uses.
3596. Do you contemplate using that coal for smelting purposes? I can sum up what has been done in regard to it in this way: We gave the smelting company the option of testing the coal and to elect whether they would lease it, and they made several tests. They have driven into the coal a distance of something like 400 feet, and they have elected to lease it. The lease is no great profit to us. Where we pay the Crown 6d. we get 9d. We look upon it as a lease worth £5,000 a year to my company.
3597. Were you present a few days ago when the Government Geologist gave evidence as to the quality of the coal in the Illawarra district after a recent visit to the neighbourhood? I was.
3598. Have you heard Mr. Pittman say that the coal of Dapto Creek would not be used for smelting purposes when Mount Kembla coal was available? I heard his evidence, and it seems to me so very extraordinary that I will take the trouble to have his remarks fully inquired into. I can only point out that some of the most practical men of the Colony have tested the coal, and have advised the smelting company to take a lease. It may be that the evidence of Professor David is correct; but Mr. Howell is such an exceedingly cautious man that he would not take any coal which he was not perfectly satisfied with. I would also draw attention to the fact that those assays given by Professor David are contradictory of the assays given in the report of the Department of Mines for the year 1890 (p. 297), in which the coal is shown to have 61 per cent. of fixed carbon and only 7 per cent. of ash.
3599. Can you tell the Committee what contracts have been entered into by the Smelting Company of Australia? I am afraid I cannot. The main contract is the one I have alluded to.
3600. Is the scene of operations of the smelting company connected with the railway which is the property of the Illawarra Harbour and Land Corporation? Smelting works are being constructed on land purchased from my company, and connected with the coal-fields and the State line by our railway.
3601. Is it connected by the railway? Yes.
3602. Is that a branch line? It is a branch line leading to a Government line.
3603. Who constructed that branch line? The Illawarra Harbour and Land Corporation.
3604. The idea is to carry it to Tallawera Point? It is complete, connecting Tallawera Point with the general State line and the coal-fields. The intention of the company first was to make a branch line to connect Tallawera Point with the present site of the smelting works at a lower level.
3605. One of these smelting works is nearly finished? The smelting works are almost finished now. A couple of smelters could start to-morrow; but a certain difficulty has arisen under the new Act, dealing with riparian rights. This has necessitated an application to the Government, pending which the works are at a standstill. They hope to make a start by next March.
3606. I understand that ores will come from Broken Hill to be treated at the smelting works? Broken Hill ore, pending the construction of the harbour, will be landed at Darling Harbour, conveyed by railway to Dapto, and then along our branch line.
3607. I want you to give me all information respecting any contracts you may have entered into for improving the entrance to Lake Illawarra, forming a channel across to Tallawera Point, the deepening of the harbour, and so on, stating the amount that the works are to cost, and when they are to be completed? The company at present has a contract with Mr. Robert Amos.
3608. When was that contract signed? In August or September last year.
3609. Have you a copy of the contract? Yes.
3610. Have you brought it with you? I have not.
3611. Would you kindly bring it with you when you come to give evidence again? I have no objection to have it copied, but would not like it placed on the Parliamentary records. It is a very voluminous document.
3612. You say that it was signed in September last year? Yes.
3613. What is the amount of the contract? It is entirely at schedule rates—that is to say, our engineers estimate for both the railway line and the dredging at a lump sum of £90,000. The total will come altogether to about £200,000, work to the value of £34,000, completed, to be deducted.
3614. Will you explain to the Committee how you are going to make money out of this scheme? I have done so already.
3615. How do you expect to pay interest on the capital invested? We look upon it as certain that within

A. Armstrong,
Esq.

22 Dec., 1896.

- A. Armstrong, Esq.
22 Dec., 1896.
- within five years we shall create trade to the amount of 2,000,000 tons of ore and fluxes, with probably one-fifth of that outwards in bullion-lead, copper, and nickel-ores, including coal shipped outwards. We look upon it as certain that ships will never come there, bringing 2,000,000 tons of ore and go away empty. We are not bidding for the coal trade of to-day. We believe that by the carrying out of this harbour such an immenso impetus will be given to the coal trade that it will naturally flow there.
3616. *Chairman.*] Do you expect to make money by the sale of your land? By that we hope to recoup the harbour debt within the next twenty years.
3617. *Mr. Roberts.*] What would the amount of the harbour dues be? They would amount to between £60,000 and £70,000 a year when the whole scheme came into full operation.
3618. You expect a revenue of £70,000 a year from the harbour dues that you are entitled by Act of Parliament to collect? These calculations are made on a maximum charge, which would not be imposed to the full if it interfered with trade.
3619. From how far north do you expect coal to be brought down to this still-water harbour;—do you expect any coal from north of Bulli? Not north of Bulli.
3620. Do you expect any from Bellambi? Bulli is the limit of what might properly be considered the South Coast field, and it has a good gradient to Sydney, but the coal from the whole of the district must find its best market in a still-water harbour.
3621. Do you think that a large quantity of coal will come down from Bellambi to Tallawera Point, seeing that there are already two jetties at Bellambi? Yes; I think it would well pay the colliers going there to pay the freight to the harbour. It costs a great deal of money every year to renew the jetties.
3622. Does it not appear to you that Lake Illawarra is too far south to develop a large coal traffic? It is no further south than Kembla from the coal-field.
3623. Would you expect to get a large portion of the coal that is now shipped at Port Kembla? Most certainly. But what we are now doing is not interfering with that trade. We are working hard to get a better loading-place which would attract trade without injuring existing arrangements. We hope to have a still-water harbour which will attract a trade of 3,000,000 tons on its own merits, including the existing trade inwards and outwards.
3624. Would not slipping coal from Tallawera Point cost more than the present system? Not necessarily. Power is given under the Bill to colliery owners to connect with our harbour.
3625. Can you tell the Committee what has caused the delay in regard to the proposed works at Lake Illawarra, seeing that the contract was signed some fifteen months ago? I think it is easily explained. It cannot be done until the company see their way to make things pay. The raising of capital is a very difficult matter. They have done a great deal in that direction during the last twelve months, so that my last advices lead me to hope that the final landing of a debenture loan will certainly be effected early in the new year. It is merely a question of the price of debentures. If we were content to let John Bull have all the profit, we could have obtained long ago £70 on our debentures. At present we can get £85; by delaying it we shall probably get £95. It is a mere question of working things properly. We have carried out enormous ramifications of interests backed by a sound capital, and each made with the object of forwarding the main scheme, which is the harbour. The harbour is the key to the whole thing. I think from latest advices that we have now advanced sufficiently to make a trade for the harbour, that that will make the debentures of such value that we shall put them on the market.
3626. Is it a fair thing, then, to come to the conclusion that the cause of the delay in going on with this work at Lake Illawarra is the want of ready money? It is a very natural conclusion.
3627. Until you float debentures in the London market you will be unable to proceed with the work? Yes.
3628. You are unable at present to say when those debentures will be put on the market? To give an absolute date, yes.
3629. You have power to go on with the work, but when you are likely to start you are not in a position to say? My own company have no doubt whatever of being able to do it within the term fixed by the Act of Parliament. I think I can say that. If we felt that we were not able to do it, we should discontinue our arrangements, and give up the scheme altogether.
3630. If the contract is signed, there must be a time named when the work is to be carried out;—does Mr. Amos decline to proceed with the work? Not at all. Mr. Amos is only too anxious to proceed with it. The first portion was the construction of the railway, which had to be done in time to comply with our Act of Parliament. That portion of the contract has been carried out.
3631. Has Mr. Amos been paid for that work? I think I answered that question in my former evidence. I summed up the whole position by showing you that the only debt due by us was a temporary mortgage for the purpose of settling with Mr. Amos in advance of certain pending financial operations in London.
3632. Have you requested Mr. Amos not to proceed with the work pending satisfactory financial arrangements in London? We have.
3633. And he has consented to stay his hand until you are able to raise the necessary capital to carry out the work? That is exactly how it stands.
3634. *Mr. Hoskins.*] Are you acquainted with the terms of the resolution of the Legislative Assembly requiring this Committee to make an inquiry into this matter. The resolution says that the Committee is to inquire into and report upon the construction of a deep-water harbour at Port Kembla. On what grounds does your company object to the Committee carrying out this resolution? Simply because practically I consider that the question of a harbour for the South Coast was set at rest by the passing of my company's Act of Parliament, and, secondly, that this proposal is one set up in opposition to the other. It was first interfered with by Wollongong, and then Kembla. It materially affects the chances of raising capital to carry out our harbour to have a chance of a State harbour in the immediate vicinity.
3635. But there is nothing in the Act of Parliament empowering the Illawarra Harbour and Land Corporation to prevent any other harbour from being made on the South Coast between Sydney and Lake Illawarra? I admit there is not.
3636. Then your company might be open to the charge of desiring to prevent improvements from being carried out? If private enterprise undertakes to form a harbour, and efforts are made to promote a trade, and the State then threatens to form another harbour adjacent to it, that would interfere very seriously with private enterprise. I am convinced that in passing the Act Parliament intended to give private enterprise a chance to do the work, and not during its infancy to check its life by State opposition.
3637. Have we not given the company an opportunity to carry out the work, seeing that the Act has been passed now for six years? During those six years the Colony has gone through one of the most terrible financial

financial and commercial crises which we have ever had in Australia. We are entitled to some consideration, but we do not get it when we are threatened with a competing harbour, so adjacent to us that it is practically killing our financial powers.

3638. Have you not had consideration extended to you, seeing that you have had an Act in existence for six years, and that your time has been extended? I do not think that in the history of companies throughout Australia you can find a company that has done as much as we here, and our extension powers are not yet in use.

3639. Can you say that your company has not been treated fairly? Yes. I think that Parliament is not giving us sufficient consideration, so long as it is interfering with our operations by bringing forward a conflicting scheme. Before our time is up, I have little hesitation in saying all our operations will be carried out.

3640. Has it not been stated by your engineer that it will take two years to carry out the work? Our operations are nearly treble those described in the Act of Parliament. We could carry out the terms of the Act by an expenditure of £40,000, and do so within six months.

3641. Why do you not expend that money, and show that you intend to do something more? Because our arrangements are made so as to secure a source of profit to us as well as to meet public requirements.

3642. What has been done to make it a useful harbour? Our time is not up.

3643. Have you done anything to make it a useful harbour? We have expended £40,000 in the creation of trade for the coming harbour.

3644. You have made a railway $7\frac{1}{2}$ miles long to a coal-mine? Yes; and spent money on the harbour.

3645. What have you done to the harbour? We have practically nearly finished one of the tie-banks. The expenditure on the harbour has amounted to about £3,000.

3646. Do you think it fair, having delayed the work for six years, that the matter should be delayed for two years longer? The coal-owners have not suffered in any way. They have the same harbour accommodation that they always had.

3647. Do you think it fair that any harbour improvements which ought to be carried out ought to be delayed still longer until this company can see whether or not they can raise funds? It remains for the Committee to decide whether other harbours should be given the chance of securing trade created by us.

3648. The Committee only report? The Committee have pretty well all the facts before them.

3649. Your company objects to the construction of a port at Kempl, because it assumes that if a deep-water harbour is constructed it will interfere with its project? That is the stand it takes.

3650. You said that your company would not be able to carry out the work until it could raise the money to do it;—can you give us any reason to believe that it will be able to raise the money? Certainly no guarantee.

3651. You have been present during the whole of this inquiry? Yes.

3652. You have heard from colliery managers, and Professor David, and the Government Geologist that there is no good workable seam of steam coal to the southward of Mount Kempl? The whole thing does not hinge upon steam coal.

3653. Does not Professor David say that they have tested the coal and found it unsuitable for export? Yes.

3654. Is it not a fact that southern coal is in demand for steam purposes only? Yes.

3655. Did you listen to the evidence given by Mr. MacCabe, Dr. Robertson, and others, endorsed by Government officers, that nearly the whole of the valuable seam of Bulli coal was between Coalcliff on the north, and Mount Kempl on the south? Yes; I know all that before I heard them.

3656. Then how can you make Illawarra the place for the shipment of the coal? For the reason, that assuming that we had carried out the whole system, vessels bringing ore would arrive in Lake Illawarra at the rate of at least 1,000 tons a day, probably a great deal more. If vessels can load at all times, and in all seasons as they can in a land-locked harbour, they would never go to Mount Kempl to get their coal, and Kempl could be easily connected by canal with the northern end of the Lake.

3657. Do you know that steamers which come from Port Pirie with silver and lead ore have other cargoes besides, and they must unload in Sydney? Yes; but I know there is at present no ore trade between the places named.

3658. Do you think that after unloading in Sydney they would go to Lake Illawarra for coal? I know exactly what tenders we have got in connection with the enterprise. We put it on the London market with absolute figures, showing that we could carry stuff from Port Pirie to the Lake at 4s. 6d. a ton, creating trade entirely outside existing currents.

3659. Do you know also that many steamers trading to South Australia take other cargoes besides coal? Yes.

3660. Do you know also that the manager of the proposed smelting works at Lake Illawarra has been in communication with the Railway Commissioners who have undertaken to carry the ore from Sydney by railway? Yes.

3661. Are you a shareholder in this smelting company? Yes.

3662. Have you not heard the evidence of engineers and others to the effect that if the eastern or southern breakwater was erected at Port Kempl there would be comparatively still water there? Yes, and I heard it flatly contradicted by Pilot Mills, who pointed out that a breakwater of the height proposed by Mr. Darley would have the water constantly washing over it in average weather.

3663. Have you seen breakwaters in other parts of the world? I was never out of New South Wales.

3664. Have you heard of the breakwater at Colombo? I have read about it.

3665. There is also the breakwater at Plymouth;—the sea frequently breaks over these breakwaters, and yet they exist? I think that I am correct in saying that within two years of its construction, the breakwater at Colombo cost £900,000, including repairs; and the rise and fall of the tide there is only 2 feet, and the highest wave measures only 10 feet. I would not mind venturing the opinion that you would see waves 40 feet in height at Kempl.

3666. I have heard that the Five Islands affords an excellent breakwater? If you saw the place in a south-easterly gale you would not say so.

3667. Do you think that the Government or Parliament would be justified in withholding the power to make a harbour at Port Kempl until your company are able to carry out the work at Lake Illawarra? My opinion is, that no harbour to develop the coal trade of the south coast would equal the one at Lake Illawarra, where you can have so many miles of still water made available for ships by simply dredging.

3668. You do not propose to give many miles of still water;—are you aware that it is proposed to employ 260 acres in Port Kempl, while you propose to make 25 acres in Lake Illawarra available for ships, the area, if necessary, to be extended to 40 acres;—do you think that would suffice for a largely extended trade? The first proposal is one that provides for the trade, as far as can be seen, of the immediate future.

3669.

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3669. Did you hear Dr. Robertson and others say that they would not send their coal to Lake Illawarra because it is too far away? Yes.
3670. Therefore, if they would not use the harbour made by your company, would you prevent them from being provided with a harbour more convenient for shipping their coal? If they have a trade of 750,000 tons, and by the construction of our harbour we can create a trade of 2,000,000 tons, no harm can be done by allowing us to carry it out.
3671. What would you ship? Coal outwards and ores inwards.
3672. Where would you get it from? If we create a still-water harbour it will come to us.
3673. You stated that your company had already expended £250,000? No; I said one of the companies formed under the operation of my company had spent that amount.
3674. Do you mean the smelting company? Yes.
3675. Seeing that no harbour works can be carried out at Lake Illawarra under two years, and the smelting company are about to commence operations, in what way can they get the ore? The smelting company was formed with the distinct understanding that it would take at least two years before the harbour improvements were completed.
3676. How far is Port Kembla from Lake Illawarra? Not far; the distance of the entrance is approximately 5 miles; but the lake itself is nearer the coal-field than Kembla.
3677. Do you think it would not be feasible, if a good harbour is made at Port Kembla, to unload ore there, and take it down to the smelting works by a railway 5 or 6 miles in length? No. I am sure that the smelting company would prefer to rely upon a still-water harbour, instead of unshipping perhaps 1,000 to 2,000 tons a day in rough weather. It would interfere with the regular flow of trade. It would also mean the construction of a railway extending from Mullet Creek to Kembla, where it would be very difficult to make a railway, and that to reach a port that never could be relied on. This would entail the purchase of our line, which we do not want to sell.
3678. You are aware that your view is opposed to the engineering and other evidence which has been given in this room? I put my evidence against the evidence of certain persons who are giving evidence for a certain purpose. They recommend the construction of a harbour where vessels will not go in bad weather. I have fully discussed the matter with Mr. Howell, and he says that if he had to rely upon Kembla, he would cut out all his traffic for Darling Harbour. He never authorised many of the statements which have been made here with regard to his ores going there.
3679. The smelting company cannot take the ore to their works, except by means of a railway, can they? No.
3680. Then your company have a monopoly of the approach to the smelting works? Exactly; and the company was formed with full knowledge of this fact.
3681. *Mr. Humphrey.* Do you assert that the works proposed by the Illawarra Harbour and Land Corporation are a *bona fide* enterprise, and that they will be completed in terms of your Act of Parliament? I see no doubt of it whatever.
3682. I want you to answer straight out? I assert that they are in every way *bona fide*.
3683. And the works will be carried out? Yes.
3684. Under the Extension Act, a certain railway had to be completed before "the 20th of December last"? Yes.
3685. Has that railway been completed? Yes, and has been running ever since.
3686. Under another provision of the Act you have to lodge £10,000 with the Government before the 20th December, 1897, as a guarantee for the completion of the harbour works proposed? That is so. If the works are not completed before December 23, 1897, my company has to lodge £10,000 with the Treasurer, in order to gain one year more time.
3687. What provision have you made for that deposit;—is the company prepared to lodge the money? Most certainly.
3688. And you say that the work can be completed, as proposed by the Bill, within two years, if you give a depth of 25½ feet in the Lake? Yes.
3689. Have you let contracts to cover the provisions of the Bill? We have, inclusive of work enormously in excess.
3690. *Bona fide* contracts? Yes; and if we do not proceed with them, we shall have to pay a fine of £5,000.
3691. How do you propose to find the means for paying Mr. Amos? Out of the debenture loan, by an increased mortgage of our property. We have only a liability of £34,000, secured by mortgage to Mr. Amos.
3692. Is that in connection with the railway? Yes.
3693. Is that the only debt owing by your company? It is.
3694. And you intend to raise money to carry out the harbour works by issuing debentures upon the company's property? That would be increasing the mortgage from £34,000 to £200,000.
3695. To whom? It would be a debenture mortgage.
3696. That is the way you propose to raise the necessary funds? Yes.
3697. Have you taken any steps, up to the present time, to issue these debentures? We are trying to make the harbour a success by creating a trade for it before we place the debentures on the market.
3698. I want to know whether you have taken the preliminary steps to raise the necessary funds to pay the contractor? Yes, they are very complete. When there is a favourable market we shall take advantage of the trade, of which we have already laid the foundations in connection with our company.
3699. Is the contractor aware of the means by which you intend to pay him? Yes.
3700. And is he prepared to go on with the contract, relying upon the ability of your corporation to find the necessary funds? He is most undoubtedly prepared to go on when called upon.
3701. What property is owned at the present time by the Illawarra Harbour and Land Corporation? The whole of the Lakeland estate—2,410 acres; 263 acres of coal land; 1,280 acres of leased land; the railway siding; and the land purchased for the railway, somewhere about 4½ miles in length, and about 7½ miles of completed railway.
3702. These are the properties owned by the land corporation? Yes.
3703. What is the cost to the company of the property you have described as being owned by them? £150,000 altogether.
3704. Has that amount been paid? With the exception of the debt of £34,000.
3705. Your company has paid the difference between £35,000 and £150,000—the cost of this property? Yes.
3706. That is your position? That is our position.
3707. Upon that basis, and having regard to the present value of the properties that you possess, and the valuable concession obtained under the Act of Parliament, you propose to operate in London with the view of paying for these works? That is the position exactly.

WEDNESDAY, 23 DECEMBER, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.
The Hon. JAMES HOSKINS.
The Hon. CHARLES JAMES ROBERTS, C.M.G.
The Hon. WILLIAM JOSEPH TRICKETT.
The Hon. DANIEL O'CONNOR.
HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.
JOHN LIONEL FEGAN, Esq.
THOMAS HENRY HASSALL, Esq.
GEORGE BLACK, Esq.
FRANCIS AUGUSTUS WRIGHT, Esq.
FRANK FARNELL, Esq.

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

Andrew Armstrong, Esq., Managing Director, Illawarra Harbour and Land Corporation (Limited),
sworn, and further examined:—

3708. *Mr. Trickett.*] In answer to Mr. Humphery, you stated that the Illawarra Harbour and Land Corporation had expended £150,000? Yes. A. Armstrong,
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3709. And that of that £150,000, £35,000 is still owing to Mr. Amos? Due on mortgage to them.

3710. Will you tell us how the £150,000 is made up? The first great item is for estates, £90,000.

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3711. Is that one of the properties adjoining the Lake? Yes, 2,400 acres, with 4½ miles frontage to Lake Illawarra.

3712. Did you pay that in cash? We owe nothing.

3713. You say you have paid £115,000, and you owe £35,000 on mortgage;—have you paid that £115,000 in cash? We have.

3714. That was absolutely paid in cash? Yes. The cash transactions of the company to this date. I put the answer as entirely separating the company from its inflated values.

3715. You paid £90,000 for the two estates? Yes, £65,000 for the Lakeland Estate, and £25,000 for the colliery estate.

3716. Then the other money was expended on what? About £39,000 on a railway, and £3,000 in harbour works, surveys, and incidental expenses.

3717. You have actually paid away in cash £115,000, and you owe £35,000? Yes; our total expenditure is £150,000 on the management of this great company. Its legal costs, outlay in stamp duties, and so on, bring the total up to that amount.

3718. How was that £150,000 raised? I think that would be best answered by the answer I gave yesterday with regard to the two agreements which merged the old syndicate arrangements into a company.

3719. That answer will not suit me;—I want to know where that £150,000 came from? It has been subscribed by the present shareholders of the Illawarra Harbour and Land Corporation.

3720. Voluntarily or by calls, or how? By merging the syndicate arrangements into the company, and taking their shares in the company as paid to £60.

3721. Then it was not cash? It is absolute cash. As I said before, I strip the whole thing of its inflated values, and give absolute cash payments.

3722. Can you say that £150,000 in cash has been paid by the shareholders of the Illawarra Harbour and Land Corporation? Yes.

3723. I suppose it is paid *pro rata* according to their share? Exactly.

3724. That being so, how do you account for it that in your summary of capital and shares filed on the 13th November, 1896, you only put down that £100,000 as having been paid in cash, that a call of £10 per share has been made, and £100,000 has been paid? I think that is quite correct.

3725. You say in the statement which you filed, "We made on the 13th November, 1893, a call of £10 a share, and that £100,000 has been paid, and all the rest is made up by shares issued as made up in cash";—how do you account for that? The last call made adjusted accounts between the promoters' syndicate and company.

3726. That is absurd. There are 10,000 shares, and the document states that a call of £10 per share has been made. If your shareholders have paid claims to the amount of £150,000, I want to know how it is that in the form, which you are required by the Companies Act to file, you have only put down that £100,000 as having been paid? I think I have given you a summary of the actual position, with the total amount paid by my company without any liabilities to any person outside the company, except for the £35,000 mortgage.

3727. Here is the simple statement from information obtained by the Secretary at the company's office that a call of £10 per share has been made, amounting to £100,000, and the total amount of calls unpaid is nil? They have spent £100,000. The difference between the promoters and the syndicate who formed that company amounts to a paid-up value of 10,000 shares holding the estate. A later expenditure has been created by the issue of preference shares entirely outside that altogether.

3728. Then the return which you file is not a correct one? No, because these preference shares are two years after that return. You take the 1893 date. The great bulk of the expenditure was commenced in 1896.

3729. Was it not down in the statement? No, because it was commenced in 1896.

3730. But this was filed on the 13th November, 1896. How many shares have you in the company? 1,000.

3731. In the list of shareholders filed in November, 1896, you are put down as the holder of one share? I think that can be explained by carrying out the suggestion which I made yesterday—that the company's solicitor should give full information in the matter.

3732. The company's solicitor will not put you down for one share if you have 1,000? A company has been formed in London to purchase and guarantee our debentures into which my shares are merged.

3733. You never had more than one share according to the return? I beg your pardon.

3734. On the 20th January, 1896, there were 9,970 shares in the name of Mr. De Wolf, out of the 10,000, and is it not a fact that he transferred the whole of that lot to some company in London? Yes.

3735. You are put down in the statutory return, filed under the Companies Act, as the holder of one share. I want you to explain that; I do not want the solicitor to the company to do it? I do not think there

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- there is anything anomalous in it. It is simply transferring under a power of attorney, to one leading director, to give him power to deal with them in London.
3736. But you have always been the holder of only one share? All others were transferred to him. Probably in the return prior to that my interest is not altered.
3737. Is it a correct or a false return? It is a correct return for that year.
3738. What is the good of saying that when the year before the same state of things prevailed,—Mr. De Wolf had 9,970 shares? It is a matter that can be explained. The shareholders, both individually and as a company, gave full power of attorney to Mr. De Wolf. Those shares are absolutely mine, and were transferred to him to deal with in London.
3739. Who is the chairman of the company in Sydney? Mr. Edmund Barton.
3740. When did you have a meeting last? I think about four or five weeks ago.
3741. Who are the other members of the board? Mr. Arthur Friend and myself. The board, at present, has been reduced from the larger number, in anticipation of certain nominations from London, which are expected daily.
3742. You are down on the return as the holder of one share;—have you one, or more than one? I have one, the rest being transferred to Mr. De Wolf for his operations in London.
3743. How many of the 9,970 shares remain with Mr. De Wolf? I can file a return.
3744. Can you tell me how many shares you have in the company? The number is 1,010 or 1,019, or somewhere thereabouts, subject to action under power of attorney in London.
3745. That you yourself have? Yes, which are with all other shares for financial purposes in London transferred to Mr. De Wolf. We are bound by that transfer. It is a matter of business arrangement.
3746. There is another question which I should like to ask you;—when was the money paid for this land which you spoke of—this £90,000? In various payments between 1888 and 1896.
3747. And that you say has absolutely been paid? Absolutely paid in cash.
3748. Was it paid for any particular estate or vendors? At the time we purchased the estate it had been sold by Mr. Osborne to the Lakeland syndicate, and we bought from that syndicate. We carried out our contract till that syndicate released itself from Mr. Osborne. We bought it and other properties for £90,000, and the estate is now clear from the mortgages.
3749. I understand that all the land you bought at Illawarra in connection with this company has cost £90,000;—is that the total? That is the total purchase money.
3750. And by your agreement between yourself and Mr. J. A. Thompson you agreed to sell to the Illawarra Company the same land for £600,000? Yes.
3751. So that you are making a profit, if it comes off, of £510,000,—in the first instance, did not Mr. Newton and Mr. Frederick W. Orr agree to pay £250,000 cash towards the payment for this land? Yes.
3752. Was that ever paid? It was not.
3753. By subsequent agreement, was not that deposit of £250,000 reduced to £100,000? Yes; by reducing the shares down as so much paid.
3754. Was that ever paid? No; except by reducing down the shares in value.
3755. Then, as regards these agreements, which are filed in the Registrar-General's Office, neither was the £250,000 agreed to in the first instance paid, nor the £100,000 the reduced amount? Not in cash.
3756. Then how have they been paid? By taking the estate at the nominal value of the purchase made by the company, and reducing down the shares to an amount equal.
3757. It has been paid on paper? Yes. The whole estate and concessions paid for are held by the company represented by shares paid to £60 each.
3758. I understood you to say that the land had been paid for in cash? So it has been. The company have paid the amount of the original purchase money. I have been very careful to let my evidence consist of existing facts, wiping out all the kind of business, which was very common in those days, of adding inflated values.
3759. That is the state of things;—you bought this land for £90,000, and this Illawarra Harbour and Land Corporation agreed to sell it for £600,000? Yes.
3760. So, if it comes off, it will be a very nice thing for you? No; these things have been merged into a settlement.
3761. What is the use of talking about merging, when you know as well as I do that any contract of that kind has to be filed in the office, and any alteration of that has to be filed under a heavy penalty, and there is no such alteration? The settlement has been that the company bought it at that price.
3762. I understood you in answer to questions to state that the reasons you applied for your extended Act in December, 1895, was because of certain financial difficulties arising owing to some Melbourne company having failed? Yes.
3763. That being so, you having stated in answer to several questions that that was the reason of your applying the money difficulty, will you listen to this question, and your answer, given before a Select Committee on the 10th October, 1895. The Chairman of that Committee was Mr. Neild:—
- Chairman.*] The object of the Bill is not to palter with financial responsibilities, but to provide against possible contingencies, such as storms or any other casualty? Anything that cannot possibly be predicted. Our arrangements are as complete as any company could make them, and they are within the terms specified in the Bill. Our whole and sole object in asking for an extension of time is that we fear that towards the completion of the work heavy easterly gales might so injure our breakwaters as to prevent a ship drawing 15 feet from coming into the harbour, and, if that happened, our powers under the Bill would be jeopardised, and would be doubtful in law.
- I want you to tell the Committee which is the right answer, what you swore yesterday, or what you swore on the 10th October, 1895? What I swore at that particular time was simply with a full knowledge of the facts that a large and important firm of underwriters had agreed to underwrite our debentures. That agreement is still in existence, and there is nothing whatever contradictory in the two statements, that is to say, we consider that we have plenty of time to carry it out, and we are anxious to place our debentures on the market in a complete and satisfactory manner, not at a price contingent upon some conflicting harbour, or difficulty hanging over our heads. As long as the Kembla inquiry has been pending, our harbour debentures would only be underwritten at a very big price below par. They are practically guaranteed at their market value. Their market value has not reached, and will not till this conflicting difficulty is settled, anything like par, and placing them on the market would have been attended by a terrible discount, something like 20 per cent. Clear away these difficulties, and they would be worth £95, or par £100.

3764. Why did you not tell us that yesterday. In answer to questions you said that there were no financial difficulties at all? I do not think there are any. We can put our debentures on the market now, if we liked to do it at a price which would handicap us severely. We shall do it in time, but we do not want to handicap ourselves with a debt for which we should get nothing.

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3765. I am going to look at these works which you have done at the Illawarra Lake. Will you describe them, so that I can find out what you have done? The only work done to the harbour is a portion of the tie-bank connecting Windang Island with the main land, and the necessary soundings, which come to about £3,000, and 7 miles 75 chains of railway.

3766. You wish the Committee to believe that, although you have had plenty of money, and although you had an Act of Parliament since 1890, you have only put up a tie-bank between Windang Island and the mainland? I do not think that is a fair way of putting it, for this reason; that under our Act of Parliament a new class of trade entirely has been created throughout the district. Nothing that we have done has tended to check the steam coal trade. What we are doing is making provision for a trade four or five times the size of the steam coal trade for which all our preparations are certain, as far as it is possible for me to judge, to be complete. The trade that we are doing will not be ready for ships till about the time that we are ready for them, pending which we have made satisfactory arrangements with the Government to carry our ores from Darling Harbour, and by our railway erected in terms of our Act.

3767. But your own Act of Parliament does not say anything about a new trade;—you obtained your Act for coal trade purposes? There was no occasion for an Act of Parliament to define that. This is the idea which sprang out of the kind of calculations which we made for developing entirely new trade. The crisis, immediately after our Act of Parliament was passed, completely killed the coal trade, and the promoters of the company turned their attention to the carrying out of a much larger idea, in view of the fact that, apparently, useless coal here could be applied to that purpose.

3768. Do you want the Committee to believe that you and the smelting company are working together? Most decidedly.

3769. You are certain? Yes.

3770. You know Mr. Howell? I do.

3771. What is he in connection with the smelting company? He is managing director in Sydney.

3772. Will you listen to this question which was asked him when giving evidence with reference to the proposed railway from Condobolin to Broken Hill:—

Have you any fixed period within which the work will probably be commenced? We have nothing to do with the harbour business.

The opening of the harbour is not one of the objects of your company? No.

You said that the two companies were working together? So we are; but there are separate interests in the same company. His company have taken up interests in my company in London. The interests are the same, although the registered companies are different.

3773. Mr. Henderson, your engineer, gave detailed items, and he estimated that the cost of the Illawarra Harbour works, not the railway, will be £177,059, and you come to this Committee, having had an Enabling Bill since 1890, and tell us that you have spent £2,000;—is not that so? Yes, exclusive of expenditure under the railway provisions of our Act.

3774. Mr. Clarke.] This Illawarra company is entirely a private company? Yes.

3775. And any profits will go to the shareholders? Yes.

3776. Then what objection have you to Port Kembla being made a shipping port for the shipment of coal and other produce? Two harbours adjacent to each other would not pay.

3777. Why has not your company been more expeditious in carrying out the work at Lake Illawarra? We consider that any company that has done as much as we have has done wonders.

3778. Do you not consider that the people at the Illawarra district are as much entitled to have Government money spent there as the Newcastle people were? I would rather not give an opinion on that point.

3779. If this harbour were constructed at Lake Illawarra, would it be as suitable for the shipment of coal from Mount Kembla and Bellambi as Port Kembla? I think it would be far more suitable. I have heard a great deal of evidence adverse to it, but it has not shaken my opinion.

3780. For what reason? That a still-water harbour will attract a kind of trade which an open-sea wharf will never attract. I certainly think that Lake Illawarra is capable of being turned into a harbour very superior to that of Newcastle, because it is similar to Newcastle without having the immense amount of alluvium that is brought down the river at flood-time. At Newcastle they have to dredge out of the harbour 1,400,000 tons of mud per annum, so as to maintain the present area for vessels. We have the opinion of experts that any dredging done at Lake Illawarra would not silt up more than 1 inch in ten years.

3781. Are you of opinion that it would be better for private individuals to have the work carried out at Lake Illawarra by the company, instead of a harbour being made by the Government at Port Kembla? Most certainly I am.

3782. You maintain that you did not depend upon the coal to be shipped at Lake Illawarra? We depend upon creating a trade which we are certain will take away coal. Vessels which bring ores would never go away empty, and a development of the coal trade will follow the erection of a safe, still-water, insurable port.

3783. What do you rely upon? I have given my evidence in consideration of the fact that various firms interested in the coal trade have stated that they would not ship there.

3784. Is not Lake Illawarra a much greater distance from where the great bulk of the coal is raised than Port Kembla? As a matter of fact it is rather nearer, and easier to connect with the State railway.

3785. From the map it appears to be further off? A railway could be made to reach the northern end of the Lake. But it would necessitate a certain amount of dredging, which has not been provided for in our calculations.

3786. Mr. Lee.] Do you appear here to oppose the construction of a harbour at Port Kembla in the interests of the State, or because you are of opinion that if a harbour is constructed there it will infringe upon the rights granted to the Illawarra Harbour and Land Corporation? I believe it would be more advantageous to the State to have the harbour at Lake Illawarra.

3787. Do you think you have a right to oppose this proposal on the part of your company, because it will infringe the rights granted to you in 1890? I appear here to offer the fullest information, so as to enable the

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the Committee to judge whether the ideas, which I believe are fully expressed in our Act of Parliament of 1888, should be maintained in their integrity.

3788. Will you tell the Committee what right your company has under its Act? I suppose it is a matter of opinion. We consider that those rights give us practically the key to the south coast trade.

3789. What does the preamble of your Act say? That we have a right to make a harbour at Lake Illawarra.

3790. Does it confer upon you any rights outside of that? It does not.

3791. Therefore the rights which you spoke of a couple of days ago, in reply to Mr. Roberts, really do not exist? They are rights which are given to us which would be severely damaged by the State doing something else in the immediate vicinity of the Lake. I take it that Parliament never intended to give with one hand something that it would take away with the other.

3792. Did not Parliament give you what you asked for? Yes.

3793. But it gave you no rights outside of that? What rights we have, Parliament gave us, and our object is very similar to that which the Committee are inquiring into.

3794. When Parliament does a certain thing it expresses it in an Act;—Parliament has given you power to make a harbour at Lake Illawarra, but it might also have given the power to someone else to carry out a similar work at the Tom Thumb Lagoon? In giving that right, Parliament practically gave the right to everybody concerned to take advantage of it. It gave the right to persons in the neighbourhood to connect by a canal with the harbour.

3795. Those are the surrounding colliery owners? Yes.

3796. They did not oppose your going for an Act of Parliament? No; They united in seeing that Parliament gave them the right to utilise the scheme.

3797. Your rights were confined exclusively to Lake Illawarra? Yes.

3798. Therefore if the State should think proper to construct a harbour at Port Kembla for the better development of the coal trade, how can you say that your rights would be infringed? It is a right which will encroach upon our rights, the proposed work being so adjacent, and I feel sure that it is beyond the intention of Parliament to do such a thing.

3799. You infer that when the right was granted to make a harbour at Lake Illawarra it covered the right to shipping facilities to the whole of the southern coast? Yes, seeing that the shipping interest united in giving evidence in favour of the Bill, and secured rights for themselves.

3800. You know that the majority of the colliery owners are not in favour of Lake Illawarra at all, therefore how will their rights be jeopardised? The question raises a lot of very conflicting ideas, seeing that every one of those interests supported the Bill. Mr. MacCabe's brother was secretary of the company, and he gave evidence in favour of the Bill directly representing the very same interests that Mr. MacCabe does. Seeing the terrible conflict between the evidence of parties now and that which they gave then, I admit that I do not understand how to deal with it.

3801. You can only be presumed to appear here to defend certain rights. I want to give you an opportunity of showing the Committee that if the Port Kembla works are carried out you will be deprived of the benefits conferred under your Act? I say that Kembla would do a large proportion of the trade, and thus interfere with our scheme.

3802. Your scheme will not work out as profitably as it otherwise would? It will be materially lessened in value.

3803. Keeping in view the fact that most of the large colliery owners have come before the Committee and said that they are not in favour of Lake Illawarra, that it would not answer their purposes, and that the harbour should be at Port Kembla, would you tell the Committee that the estimated profits of the Lake Illawarra scheme are likely to be interfered with? Every one of those interests according to their sworn evidence four years ago would have been only too glad to use a harbour at Lake Illawarra.

3804. It is only right that you can produce evidence that they are in favour of it, that you should do so. All the evidence that we have shows that they are against it? I would refer to the evidence of Mr. MacCabe, brother of the man who gave evidence here the other day. It will be found in the report of the Select Committee dated 5th June, 1889.

3805. That gentleman has not been before us as a witness;—can you pick out anyone who has? No; but it is the same interest.

3806. If your scheme at Lake Illawarra were carried out, the depth of water would be increased from 15 to 25 feet? Yes.

3807. Have you made any calculation as to the amount of tonnage which you expect to receive, the quantity of coal you will ship, and the charges that you will make, and what annual revenue you expect to receive? Yes, we have; but that embraces so many important calculations that if you have no objection to let it stand over until after the holidays, I will put the information in the form of a return.

3808. We can hardly accept it in that form;—I suppose the works would have to produce 6 per cent. to cover interest and maintenance charges? Maintenance for increased trade that would grow, would come to considerably more than 6 per cent.

3809. Could you tell us what charge you contemplated making for shipping coal? I think that any calculations before the harbour is constructed would be premature; but pending the consideration of reductions, we should charge the maximum provided by the Act.

3810. Then that would be for tonnage rates, 1s. per ton? Yes.

3811. Then the next rates would be under your schedule, ballast, 1s. per ton; coal, 10d.; coke, 1s. 8d.; limestone, 2s. a ton; and so on. If you charge 1s. per ton on the tonnage of the ship, and 10d. on the coal, do you think it possible that ships could go into that harbour to take cargo? No; our calculation is that the maximum tonnage rates alone will pay a good return and relieve us of the other charges.

3812. That would be 1s. a ton? Yes.

3813. If the same trade could be carried on effectually from Port Kembla, the hauling and shipping of coal for a total charge of 8d. per ton,—do you not think that your charges would be excessive? No. I do not think it possible to rely upon Port Kembla meeting a regular flow of steamer trade unless you have a still-water harbour, which you could not get there.

3814. The evidence is very strong that if Port Kembla were made a good harbour, shipping could be done there, including the baulage of coal, for 8d. a ton, as against 1s. at Lake Illawarra;—do you not think that business would not be likely to come to your port? No, I do not, because I cannot see that any other

other port can do the kind of trade that we contemplate. I feel that the whole importance of what we are undertaking depends upon the fact that we require a still-water harbour insurable by the general marine offices.

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3815. Your port would be so much better than can be made at Port Kembla that it will attract shipping in spite of the extra charge? Yes.

3816. Will you point out on the map the South Coast Colliery mentioned in your Act? Its name on the map is the Southern Coal-mining Company, Mount Kembla, and it lies immediately behind Port Kembla.

3817. Your Act gives you power to make a railway between that point and the Macquarie Rivulet, but no further? I think the expression in our Act is "The Ocean Colliery."

3818. By the Act you are restricted between those two points? Yes, as to the making of railways.

3819. Then you are practically on the southern limit of the coal-field? According to the evidence we are beyond the southern limit.

3820. That being the case, how could you expect the coal-mines north of the South Coast Colliery to send their coal for shipment to Lake Illawarra, when you would have no advantage or control over any line except those which you have power to make? It is no further away from the mines than Newcastle is.

3821. You are aware that at Newcastle the whole of the haulage and shipping are done by the Railway Commissioners? Yes.

3822. Your case is not analagous. You have private rights, and expect to make profit;—how are you going to attract the coal to Lake Illawarra for shipment? We think that what has been done already will not attract the coal, but will create a local use for coal—for more coal than is sent away; that is to say that we have created a local use and prospective sale for 2,000,000 tons of coal annually.

3823. What do you mean by local use? Smelting operations that will be carried out locally. A still-water harbour will naturally be more suitable at all times for people to adapt themselves to.

3824. The coal required for the smelting works will be brought from the mines at the back of Lake Illawarra? Yes; I take it that the smelting works will want immense quantities of the present class of coal that is used, and other varieties of coal. The industry now starting at Dapto will consume as much coal as the present field now ships.

3825. There is coal enough for any industry that can be established? Yes, and there will be a natural market created for it.

3826. The question of any coal coming by water is very remote? Most certainly coal would never come by water. The State line of railway is immediately under the level of all the coal-mines. They are all workable by adit to the existing State line, and all our connections are made with the State line, in order to be prepared for the trade whether it comes by sea or by railway.

3827. You know that there is a large steamer trade with Port Kembla? Yes.

3828. If they can load under present conditions, do you think it is at all probable that that traffic will go to Lake Illawarra? Most certainly. I have discussed the matter with leading insurance agents, and they are of that opinion.

3829. Notwithstanding that your charges will be more than double? The charges will be made to catch the business. A maximum is placed in the Act to give certain powers.

3830. If they took one of those big steamers into your harbour, it would cost £200 at 1s. a ton? Yes.

3831. Do you think that would be done when they can run into Port Kembla free of that charge? I have no doubt that as soon as a fair interest has been earned on the cost of the work the rates would be reduced to catch more and more traffic.

3832. I want to know what gross charge you are relying upon;—you say that 1s. will cover everything? The whole thing, we anticipate, can be covered by the tonnage charge only.

3833. That will be 1s. a ton, and it will cost £200 to take a large ship into that port? By-laws are in course of preparation dealing with these things, and they will have to be submitted to the Attorney-General.

3834. *Mr. Fegan.*] The first Bill that you had passed allowed a certain time within which to provide for a harbour and the cutting of a channel;—but that Act which was passed in 1890, did not compel the company to make a deposit with the Treasurer? No.

3835. But the Act passed in 1895 stipulated that a certain sum of money should be placed in the hands of the Colonial Treasurer? It did.

3836. What sum was that? £10,000.

3837. What are the conditions under which that money was to be forfeited? I do not remember.

3838. Did it not provide that the money should be forfeited unless the work were carried out within a specified time? That is it.

3839. Is the money in the Treasurer's hands yet? Certainly not.

3840. What is there to compel the company, in the event of work not being completed to pay that money? Nothing at all.

3841. Then what is the use of this provision in the Act that a sum of £10,000 should be deposited by the company with the Colonial Treasurer? I take it that if on the 23rd December, 1897, we have not satisfied the Colonial Treasurer that the conditions prescribed in Schedules 1 and 2 have been complied with, our Act is dead, unless we lodge £10,000.

3842. The two Acts giving you these rights cease to be of any effect? They cease and become void, if we cannot show by December, 1897, that there is a channel capable of taking in ships of 15 feet draught. If it is not completed by that date twelve months we absolutely forfeit the £10,000 which we shall have deposited. If we do not deposit £10,000 on a certain date, in lieu of certain work having been done, the Act lapses. If we do deposit £10,000 we get another year in which to carry out the work. If after the lapse of that year, the work is not carried out, we lose both the Act and the £10,000.

3843. In the interest of the company, you often attended in the House when the Bill was under consideration? I did.

3844. Was not Mr. Howell with you? Yes.

3845. And Mr. Howell took a very great interest in the passing of the Act of 1895? Yes.

3846. What interest had he in that company that he should take such an interest in the passing of the measure? None whatever, except that the shareholders of his company in London are shareholders in mine, their interests are identical, although they are separate companies.

3847. Is not Mr. Howell's time too valuable for him to give a great deal of his time to a matter in which he has no interest? I should think so.

3848.

- A. Armstrong, Esq.
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3848. Is it not a fact that those who were supporting the Bill in the House consulted Mr. Howell time after time? Yes, they did, both in London and here.
3849. Did not Mr. Neild consult him more than once? Yes.
3850. Was not Mr. Howell the person to be consulted as to the provisions of the Bill when it was being passed? That is putting it rather strong. He had only just come from England, and he was interested in seeing that my company were to get a little more time to carry out its works.
3851. How do you mean he had just come out from England? He had only arrived a few days before.
3852. You know that Mr. Howell was consulted in the House about the Bill? Yes.
3853. Was Mr. Howell consulted about every amendment? Yes.
3854. Showing that he must have some interest in it? I do not think he has a direct interest in the company.
3855. Why should he be consulted in reference to the Bill? Only because the interests of the two companies are identical. I do not know that he has not, but he may have acquired certain interests in the company in London without my knowledge.
3856. You do not know whether Mr. Howell has any interest in this company, but you will not swear that he has not? I will not.
3857. In answer to Mr. Clarke you said that you came to oppose the Government scheme at Port Kembla; on account of the Acts referred to giving certain rights to your company? Yes.
3858. You think that the time allowed by your Acts should expire before the Port Kembla scheme is taken in hand? Yes, before Parliament sets up an opposition which is very damaging to our interests.
3859. You admit that there is not room for two schemes, one at Port Kembla and one at Bellambi? The combination of two schemes could not pay interest on the total cost.
3860. You think that after Parliament has gone to the trouble of passing your Act, it is only right to give them the time prescribed in that measure? That is the kind of equity which one expects from Parliament.
3861. That is your chief reason for being here to-day? Yes.
3862. When, in your imagination, do you expect 2,000,000 tons of coal to come into a harbour at Lake Illawarra? We do not expect any to come in.
3863. You have railway communication to the Lake at present? Yes.
3864. Where are you going to export 2,000,000 tons of coal from? The first trade principally will be in refractory ores coming by ships from all the colonies, and those ships would not go away empty.
3865. How many tons a year? At present we contemplate a traffic of 200,000 tons of ore per annum with its fluxes.
3866. Which means how many tons for smelting one ton of ore? I think 3 tons.
3867. Where are your 2,000,000 tons of coal? There would be a great local use of coal, and ships going away would take coal. The coal, ores, and other merchandise would create a traffic of about 2,000,000 tons.
3868. It will be ore, coal, and merchandise? Yes: 30 per cent. of the ore will go back in the form of bullion, and the shipping would create roughly a market for about 2,000,000 tons of coal.
3869. Do you know that with all the shipping facilities which they possess at Newcastle the export of coal has sometimes been less than 3,000,000 tons a year? During the last five years the total did not average 2,250,000 tons a year; it only reached 3,000,000 tons once or twice.
3870. Then how is it possible for you to do a trade to the extent of 2,000,000 tons of coal, seeing that Bellambi and Port Kembla will have their own wharfs? Of course at those places there will always be a certain amount of shipping.
3871. Where will you get your trade? Our idea is, that with facilities for the shipment of coal of the Upper Wollongong type it would give a great impetus to the trade, and that the trade can be encouraged by the means that we are endeavouring to take to become purchasers of ballast or cheap ore from South America. We should be prepared to buy cheap ore at ballast prices. Newcastle has done nothing to bid for a ballast trade. Take our lowest limit, 600,000 tons per annum. Such a trade might be carried on with a still-water harbour, with the coal a trifle under Newcastle prices. Under the old union rates some years ago, there was a fixed price of 2s. a ton in favour of Illawarra coal always, seeing that it was 4s. 3d. in Newcastle, and only 2s. 2d. in Illawarra, for hewing. The coal could always be got at a percentage less than the Newcastle coal, and with a still-water harbour, and with a ballast trade the business must assume very considerable proportions. It would be absolutely impossible to fix our estimate until our preparations have further progressed.
3872. You were here when the great proportion of evidence was given by the other witnesses? Yes.
3873. How much did you pay for the Illawarra land estate? £65,000.
3874. When did you pay for it? It was bought on long terms; the first payment was made in 1888.
3875. Did you fulfil the agreement? Yes.
3876. Were you behind the time? We have been behind several times.
3877. Did you not hear a witness say that it took you a long time to raise £40,000? I think I heard some remark of that kind, but I could not understand its meaning.
3878. The meaning was that the company was so impoverished that they could not meet their payments according to the agreement? I think it was Mr. MacCabe who made some remark of that kind. It was not made in answer to any question, and it seemed to me unauthorised, and exceedingly impertinent.
3879. Can you refute the statement? Yes, most emphatically.
3880. Let us hear your statement? We purchased the estate in 1888 or 1889, upon certain terms which have all been complied with.
3881. Did you give the first price they asked? Yes.
3882. That was £65,000? Yes; for the Lakeland estate.
3883. How long after the time agreed upon did you pay for it? We bought the land from some original purchasers, from first vendors. They had some years payments to make. We kept their portion of the contract, and we left a portion of that £60,000 on mortgage.
3884. What was the reason that you did not pay the money at the time agreed upon? We did.
3885. You said that you were behind at times, now you say that the whole agreement was kept? I think I made that remark referring to a trifling matter which does not affect the title to the land.

THURSDAY, 24 DECEMBER, 1896.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHREY.
 The Hon. JAMES HOSKINS.
 The Hon. CHARLES JAMES ROBERTS, C.M.G.
 The Hon. WILLIAM JOSEPH TRICKETT.
 The Hon. DANIEL O'CONNOR.
 HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.
 JOHN LIONEL FEGAN, Esq.
 THOMAS HENRY HASSALL, Esq.
 GEORGE BLACK, Esq.
 FRANCIS AUGUSTUS WRIGHT, Esq.
 FRANK FARNELL, Esq.

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

Henry Deane, Esq., Engineer-in-Chief, Railway Construction Branch, Department of Public Works, sworn, and further examined:—

3886. *Chairman.*] Since being here you have had an opportunity of looking further into the question of the connection between the southern coast line and Port Kembla? I have had another connection inquired into with the present station at Wollongong.

H. Deane,
Esq.

24 Dec., 1896.

3887. You might tell the Committee the position of the two lines? I have a plan here.

3888. You are going to describe the routes considered as rival routes? Yes. The map shows two lines on which levels have been taken. The coast line is shown starting round by the gaol, passing by the back of the racecourse, and out to Port Kembla; and there is another connecting line which leaves Wollongong station at the southern end, crossing the head of Tom Thumb Lagoon, and joining the other line at the back of the racecourse.

3889. The lines become virtually the same north of the Tom Thumb Lagoon? Yes.

3890. We are going to consider the question of alternative lines, and therefore you will not go further from the north of the Tom Thumb Lagoon? No. The line starting from Wollongong is practically a level line. The line starting from the south end of the Wollongong station has a down grade of 1 in 75, but it is with the load, and that would not matter.

3891. As far as grades are concerned they are equal? Yes; because the grade of 1 in 75 is not against the load. As regards the grade before the traffic comes on to the new line, there is a grade of 1 in 75, as I have already pointed out, rising towards the Wollongong station. I find on further inquiry that there are grades on the Wollongong and port connection, which amount practically to a ruling grade of 1 in 80; so it is not very much better. As regards expense, I find that this being a single line the expense will be about the same, whether you go along the coast round by the gaol or cut across from the station. But if you make a double line the expense will be about £1,300 less starting from the southern end of the station, because you save on the length of the line a certain amount of permanent way. I think these are the principal points.

3892. There is an up grade on the Keira line, which balances the up grade on the main southern line? Very nearly.

3893. Would it be a very difficult thing to cut that out? No; it could be easily cut out. It would be easier to cut that grade out than the one on the main line.

3894. Would there be much difference in cost? I do not think there would be very much difference. I worked out the cost of altering the main line; it would come to about £1,600, and the other line would be a little less.

3895. Whatever line were constructed, the cost of haulage would be the same? I think it would be practically the same.

3896. How do they compare in regard to length? The line via Wollongong station is shorter than the other.

3897. How much shorter? Forty-five chains.

3898. Then what would the difference be between the cost of the two? About £1,300 for a double line.

3899. Which is the more expensive? The longer line is the more expensive. The coast line is more expensive for a double line, but for a single line about the same.

3900. Then we may regard the cost of the two lines as being approximately the same? For all practical purposes.

3901. Is there anything further from an engineering standpoint that you desire to say with reference to a comparison? No; they are both good lines. It has been pointed out to me that the sand is likely to be troublesome at Wollongong; but I have inquired into that, and I do not think it will. I think, as regards the question of recommending one or other of these two lines, the Committee could recommend either of them without any fear.

3902. Is this the state of things: that the line by the coast is 45 chains longer than the other, but the cost of construction is practically the same—that the cost of hauling will be practically the same, *plus*, of course, the extra half mile? Yes.

3903. That line joins the ports, but it is beset with some little danger because of the sand? No, I do not think there is any danger at all; but there may be some trouble as regards maintenance.

3904. There may be some little annoyance because of the sand? There may be a little annoyance.

3905. It has the advantage, however, of joining the two ports? Yes.

3906. The other line passing through the station has the disadvantage of bringing the whole of the coal traffic through the station, whilst the other one would have the disadvantage of bringing it through the town? Yes; I am not sure that there is any disadvantage in bringing the traffic through the station. It might be convenient to have the marking of the trucks under the control of the station clerk.

3907. You say, then, that going to the station may possibly be of some advantage? Yes; it requires very careful consideration. I think that either of them may be looked upon as an unobjectionable scheme.

3908. A little while ago you desired to amend your scheme? I find that the estimate ought to be increased, in consequence of the greater amount of traffic anticipated. It ought to be a strong permanent-way, stronger than that of the present Mount Keira line.

3909.

- H. Deane, Esq.
24 Dec., 1896.
3909. How much do you propose to increase your estimate in providing for extra stability? I think it was put down roughly at about £22,000. I propose to add some junction sidings and extra sidings at the port, as suggested by the Committee; that should go into the estimate. I put the whole estimate down at £30,000 for a double line.
3910. *Mr. Lee.*] That includes everything? Yes, which the previous estimate did not—it was only for a connecting line.
3911. *Chairman.*] You are speaking now of a single line with loops? No; a double line.
3912. Does that deal pretty well with the case from Wollongong? The length of the new line is 4 miles 73 chains along the coast. The length of the other is 3 miles 68 chains. The difference I gave you was the difference in the total length running over the old lines. The difference in construction on the new lines is 35 chains, the difference in the total running being 45 chains.
3913. Have you a tabulated form showing the length from the intersection of the approaches to the coal-mines from the various ports? Yes, I have had that got out. I have a table here showing the distance to the ports from the intersection to the colliery tramway with the main south coast railway (*vide Appendix*). I have also a table here showing the distances from the pit's mouth to the ports (*vide Appendix*).
3914. *Mr. Hoskins.*] What would be the gain or loss to the proprietors of the Bellambi or Mount Keira coal mines in taking their coal to Port Kembla by your deviation, as against the distance they would have to travel under the present state of things? The difference is given in the table. The difference from the Bellambi mine to the port is 1 mile; the distance to Wollongong is 5 miles 16 chains; the distance to Port Kembla *via* Wollongong, 8 miles 62 chains.
3915. My reason for asking you the question is to see whether the proprietors of the coal-mines would be likely to object to having their coal taken so far by the deviations, instead of by the existing route? They would, of course, have the advantage of a safe port—a port which they could always use.
3916. The distance by your deviation would be less? It would be less than going round by the southern colliery.
3917. How much? About 1½ mile.
3918. *Mr. Wright.*] Will it be less than by the present Mount Kembla line? Yes, about 1½ mile less.
3919. *Chairman.*] The reason why you propose to construct another line *via* the Tom Thumb Lagoon is that the line going to Unanderra, then turning south-easterly, is considerably longer? Yes.
3920. How much? It is over a mile and a half by the longest route.
3921. Will you put that in your statement? Yes.

TUESDAY, 12 JANUARY, 1897.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

THE HON. FREDERICK THOMAS HUMPHREY.	}	CHARLES ALFRED LEE, Esq.
THE HON. JAMES HOSKINS.		JOHN LIONEL PEGAN, Esq.
THE HON. CHARLES JAMES ROBERTS, C.M.G.		THOMAS HENRY HASSALL, Esq.
THE HON. DANIEL O'CONNOR.		GEORGE BLACK, Esq.
HENRY CLARKE, Esq.		FRANCIS AUGUSTUS WRIGHT, Esq.

FRANK FARNELL, Esq.

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

William Andrews, Esq. (Messrs. W. W. Billyard, Andrews, and Moseley, Solicitors), sworn, and examined:—

- W. Andrews, Esq.
12 Jan., 1897.
3922. *Chairman.*] You represent the firm of W. W. Billyard, Andrews, and Moseley, solicitors? Yes.
3923. We were informed by Mr. Armstrong that you could give some definite information with regard to an enterprise on the south coast with which he is intimately connected,—have you any information with regard to the formation of the Illawarra Harbour and Land Company? I have no information in connection with the formation of the company except some agreements.
3924. Do you know the history of the company? I do not.
3925. What is the nature of the agreements? The first agreement is an agreement for the sale from Mr. T. A. De Wolf to Mr. Armstrong and Mr. Thompson.
3926. Nothing prior to that? No.
3927. Have you the agreement here? I have. The title deeds of the company are not in my possession; they are in the possession of Mr. Amos, the mortgagee. The document which I have here is a sale from Mr. De Wolf to Messrs. Thompson and Armstrong for £240,000 of what is called Lakeland estate, and then some land, 265 acres, known as the ocean collieries.
3928. And the history of it prior to that you know nothing about? I know that the Lakeland estate was originally sold to a syndicate for £40,000. From that syndicate Mr. Simpson, solicitor, of the firm of Johnson, Minter, and Simpson, was purchaser. They subsequently sold the estate to Mr. De Wolf for £65,000. As to the land on the hills, that I have been informed cost about £25,000.
3929. Did that comprise the whole asset in the sale eventually by Mr. De Wolf to Mr. Armstrong? That and the concessions under the Bill.
3930. Have you any history of the case subsequent to that? I have a copy of an agreement by which Mr. Armstrong and Mr. Thompson sold to Mr. Newton and Mr. Orr as trustees of the proposed company. The consideration of that sale was £700,000.
3931. The same asset there again? The same asset again. Then there is a copy of a subsequent agreement between Mr. Thompson and Mr. Armstrong and Mr. Newton, Mr. Orr, and the company, whereby the consideration money was reduced to £600,000.
3932. Is that the position now? Yes, that is the position now.
3933. And the legal documents sustain those three steps? Yes.

Cecil West Darley, Esq., Engineer-in-Chief for Public Works, sworn, and further examined:—

3934. *Chairman.*] You have had an opportunity of seeing the evidence given by the engineer of the C. W. Darley, Illawarra Lake scheme? I have. Esq.

3935. You have had also an opportunity of further investigating the question of a deposit of suitable stone at Port Kembla? Yes. 12 Jan., 1897.

3936. *Mr. Hoskins.*] A witness who was examined before the Committee, and who was opposed to the proposal to construct a harbour at Port Kembla, stated that the seas at Port Kembla during north-easterly gales are so heavy that the breakwater, if erected there, would be carried away. That witness mentioned the breakwater at Colombo, which, he said, had cost £900,000 to repair. Do you believe anything approaching £900,000 has had to be expended in repairing the breakwater at Colombo? No; nothing like it.

3937. Did it originally cost so much as that? I could not say exactly what the cost was. I should think it was something approaching that.

3938. The witness said that the seas at Port Kembla would wash away any breakwater,—are not the seas at Colombo as big as any seas on the coast of Australia? When the monsoon breaks they will get a heavier sea at Colombo than we get here; but the two works cannot be compared. Perhaps I might explain the main difference between them. The proposal at Port Kembla is to make a breakwater of blocks of stone. The sea in approaching a breakwater of that class is torn up. It is disintegrated. It goes into the interstices of the stone and it has not the power to rise over the breakwater to any destructive extent. At Colombo the breakwater is built like a wall. The sea cannot get into it and it must go over, and the whole wave goes over. I have stood at the end of the Newcastle breakwater, which is, undoubtedly, in a no less exposed position than Port Kembla, when there was a heavy gale, and nothing but spray came over. Occasionally a big sea would give one a sousing; but no such thing as a very heavy body of water ever goes over the Newcastle breakwater.

3939. Still there were stones displaced? They were drawn down. They are tipped to a steep slope and they are drawn down and the head is drawn out. I have seen a large sea approaching the breakwater, apparently higher than my head, and if I had not known what was going to happen I should have run several hundred feet in from the point, but the sea did not go over the breakwater.

3940. Then the end of the southern breakwater at Newcastle during a heavy gale would be more exposed to a heavy sea than the proposed breakwater at Port Kembla? Port Kembla will be no more exposed than Newcastle, though I do not say it will be any less. It will have a considerable amount of shelter from the Islands.

3941. There is a considerable amount of shelter from the Five Islands at Port Kembla which does not exist at Newcastle? Yes. And we have another case of a breakwater in a still more exposed position—the breakwater at Trial Bay, which is right out in the ocean, where there is no shelter whatever.

3942. How far has that been carried out? About 560 feet.

3943. Is that composed of blocks of stone? Blocks of granite.

3944. What is the width of that breakwater at its base? It varies according to depth. We work from the top. The top is 17 feet wide, and it is 18 feet above high water.

3945. I understand that the proposed eastern breakwater at Port Kembla is to be 170 feet wide at the base? It will be at some parts. The width is greater where you have to go deeper. Where the water is 60 feet deep, the width will be considerably more than that.

3946. Has any serious injury resulted to the breakwater at Trial Bay during heavy gales? Not since we have raised it up to its present height. Originally it was only 12 feet above high water. Then the seas used to come over, and they did a considerable amount of harm. I had the works raised to a height of 18 feet above high water, and we have never had a sea over it since. It is a great saving in time, because men can work on a high breakwater when they could not possibly work on a low breakwater.

3947. In the event of the Committee reporting in favour of the construction of the breakwaters at Port Kembla, and Parliament sanctioning the scheme, how soon would the Department be able to commence the work? If it was an ordinary case we could commence very soon. But there are a great many difficulties to be overcome in this particular case. Resumptions have to be made, and there have to be negotiations for the purchase of railways. We should have to extinguish existing rights, and do other things which would cause delay.

3948. How soon could the Department commence the work if those difficulties were removed? They could start at once with the opening up of the quarry.

3949. Mr. Vickery says that every 20 yards of breakwater that is constructed would make a great improvement in the harbour? There is nothing to prevent the work from being commenced within a fortnight of our getting authority to commence.

3950. It has been suggested that there should be only one breakwater;—do you think that one would be sufficient to make tolerably secure anchorage for vessels in rough weather? It would be quite sufficient shelter for ships receiving coal; but if sailing ships are to go there, they must carry ballast, and it will not be an easy matter to land ballast alongside a wharf with the shelter afforded by only one breakwater. There must be a certain amount of sand into the harbour from the north beach. For landing ballast or cargo you must have cranes on the wharf, and if a crane is lifting 4 or 5 tons whilst the ship is jumping a great deal of damage may be done. If that harbour is to be used for landing cargo the northern breakwater must be constructed, and it will be used for discharging, because sailing vessels must come in ballast.

3951. If only one breakwater was constructed steamships could take coal at any time? Yes.

3952. Do you think that the breakwater would sufficiently protect the port from north-easterly gales to enable vessels to lie there? I think that vessels could safely lie there with one breakwater by hauling off to an anchorage. There is not so great weight in a north-easterly gale as there is in a southerly.

3953. The north-easterly gales are the worst they have to contend with? Yes. The port is open directly to the north-east.

3954. On a former occasion you were understood to say that you did not think that two important works for the improvement of harbour accommodation on the southern coast should be going on at the same time, meaning the Lake Illawarra work and the proposed improvements at Port Kembla. Did I interpret your meaning aright? You did. I think there is nothing to justify the construction of two harbours so close together.

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3955. Have you seen the place where they propose to make the harbour at Lake Illawarra? I have been there two or three times.
3956. Have they made much progress with the work? They have only just started a connecting wall.
3957. How long do you think it would take to carry out the proposed works at Lake Illawarra? I do not think they could possibly be done under two years. That would be very smart work. I should say three years under ordinary circumstances.
3958. The works which the so-called company propose to carry out at Lake Illawarra would probably take three years, and certainly two. They would have to be pushed forward with very great energy to carry it out in two years. Three years is a fair estimate.
3959. That is judging by the amount of work they have carried out at present? No. Judging by that it would take them twenty years. You would have to work with considerable energy to complete the undertaking in three years.
3960. How long do you think it would take you if you commenced without delay to carry out the proposed works at Port Kembla. To complete the eastern breakwater I think it would take about six years.
3961. Is that for the completion of the whole of your scheme? No, that is only the eastern breakwater.
3962. Could you in two or three years make such an improvement in the harbour at Port Kembla as to enable vessels to enter the port with greater safety than at present? In two years a considerable amount of shelter would be afforded; very nearly half the work would be done. The first half would be done much more quickly than the other half, because the first half would be in shallow water.
3963. Then in two years you would expect to give largely increased accommodation for shipping at Port Kembla? Certainly.
3964. *Mr. Humphery.*] In reply to a question on the 29th October last you said that if the Lake Illawarra scheme were carried out it would be impossible for any other scheme to pay expenses, and that there would be nothing to justify the Government in opening another harbour. Do you think that this scheme should be started before the time has expired within which the Lake Illawarra scheme might be proceeded with? The Illawarra Harbour and Land Corporation have only two years within which to complete their works.
3965. They state that they have let a contract, and that contract will be proceeded with shortly. With that evidence before the Committee, do you desire to express any opinion as to the time when this proposal to construct a breakwater at Port Kembla should be proceeded with? My own opinion is that it is impossible to carry out the works at Lake Illawarra in two years. I know the rate at which such work can be done, and I say that it is impossible to finish it within two years.
3966. You said that in your opinion a fair time to allow for the completion of the works would be three years? That would require a great amount of energy.
3967. We have been told that the contract has been let, and that the work will be proceeded with very speedily. Unless it is proceeded with, a deposit of £10,000 must be made at the Treasury on the 20th December next. Assuming that the projectors have a *bona fide* intention to go on with the work, and in view of the evidence which you have already given, would it be desirable to proceed with the proposed work at Port Kembla before the time has expired within which the Illawarra works must be carried out? I do not think that it will be necessary to wait much longer. It will be six months before this project can come before Parliament, and we know that if the work is not started by then it cannot be done. According to the Act the work must be completed by the 20th December, 1898. It was originally 1897, but they got an extension of one year. On the 20th December, 1897, if the works are not completed they must deposit £10,000, and they get one year's grace.
3968. Until the expiration of that time would it be wise to proceed with the proposed works at Port Kembla? They must complete the work or forfeit their £10,000. In another six months we should know definitely what they are going to do. They will then have only eighteen months within which to finish the work, and we know that it would be impossible for them to do it in that time.
3969. In view of that, do you advise that it should be made a condition in connection with any recommendation which this Committee should make that the works should be delayed until a certain date so as to ascertain whether there is any probability of the Illawarra scheme being carried out? I would advise the Committee to make it a condition that unless the works at the Illawarra Harbour are being very vigorously proceeded with on the 1st July next and have been for some time before, that the Act should be looked upon as lost and that Parliament is free to take any action it may think proper.
3970. Why do you fix the 1st July? Because that would only leave eighteen months.
3971. Until the time has expired within which the deposit must be made it would be impossible to know whether the company intends to proceed with its works? I think it is a legal question. The question is perhaps whether the deposit of the £10,000 will allow them to complete the works when they like. What I say is that the works must be completed by December, 1898, and that if they are not the Act is null and void and that the company lose everything that they had done. I say it is impossible to complete the work in two years and, so far as the Government is concerned, it could safely commence the works at Port Kembla to-morrow.
3972. Except in view of the dilemma created by your evidence of the 29th October, in which you say that it is undesirable to have two harbours so close together? I have repeated that this afternoon.
3973. You are still of opinion that if the Illawarra scheme is carried out it will be undesirable to proceed with the proposed harbour at Port Kembla? It certainly could not be made a financial success.
3974. Have you read the figures of the engineer of the company as to the probable cost of carrying out the works at Lake Illawarra? Yes.
3975. Are you prepared to express any opinion as to the possibility of the works being completed so as to allow the entrance of vessels with a draught of 25 feet at the cost mentioned? I do not think so.
3976. What period would be necessary to carry out a scheme to make a harbour which would admit vessels of 25 feet draught assuming the work to be vigorously proceeded with? I said the work could be done in three years, but I know that the Government would not do it in three years. I wish to give the company the full benefit of the doubt but the work could not be done in three years.
3977. Regarding this as a Government work what period would you allow for completion? Six or seven years.
3978. And from the same point of view what provision in your opinion would be necessary to cover the cost? My estimate is £288,570.

3979. For that expenditure you are of opinion that you could provide a good harbour with a safe entrance at Lake Illawarra? That would open a 25-ft. entrance. C. W. Darley, Esq.
3980. Your estimate for Port Kembla, including the northern breakwater, would amount to about the same sum? £250,000. 12 Jan., 1897.
3981. But the total cost of the work at Port Kembla would be about £410,000? That is for wharfs, cranes, lighthouse, pilot station, &c.
3982. Would the £258,000 for Lake Illawarra cover works of a description similar to those contemplated at Port Kembla? I have put down nothing for a lighthouse at Lake Illawarra, and I have taken the company's estimates for jetties, drift fences, shoots, gear, cranes, and so on. I have simply altered the quantity according to what my own experience shows me the quantities should be, and I have put in my own price.
3983. Would the £258,000 be by way of comparison with £140,000 or with £270,000, the cost of two breakwaters? I could knock off £14,000 to make a comparison between the breakwaters of the two schemes.
3984. That is, that the expenditure at Port Kembla would be £430,000 as against £280,000 at Lake Illawarra? Taking similar works at the two places, the cost at Lake Illawarra would be about £273,000 as against £280,000 at Port Kembla.
3985. If you compare the two ports as affording facilities for loading and discharging, would the comparison be favourable to Port Kembla? Undoubtedly.
3986. Will you state in what respect the harbour at Port Kembla would present advantages over Lake Illawarra? There would be no dredging at Port Kembla, and there would be very little cost of maintenance. To maintain a proper depth in Lake Illawarra they will have to be dredging for many years to come.
3987. Therefore the cost of maintenance would be very much greater at Lake Illawarra than at Port Kembla? Very much greater.
3988. Would that mean a heavier charge upon the shipping at Lake Illawarra than at Port Kembla? I think so.
3989. Would the cost be heavier to the colliery proprietors and to the shipowners to transact their business at Port Kembla than to transact it at Lake Illawarra? I think Lake Illawarra would necessarily involve the heaviest charges upon the shipping.
3990. That would be to cover the interest and the cost of annual maintenance? Yes.
3991. Therefore, assuming that the two ports afford equal facilities, the more economical for shipowners would be Port Kembla? Undoubtedly.
3992. Is that your opinion? That is my opinion.
3993. *Mr. Lee.*] If this Illawarra Harbour scheme were carried out according to the terms of the Act, do you think it would afford proper facilities for carrying on the coal trade of the southern coast? It could be made suitable with sufficient expenditure. It would want a large amount of dredging to deepen the channel. It is possible to make it a good harbour.
3994. But there would have to be a large expenditure? In my opinion it would involve a larger expenditure than Port Kembla.
3995. A much larger expenditure to provide accommodation for the class of ships that are required to conduct the trade for the south coast; but the Act only requires them to make a channel a depth of 16 feet? The Act only requires a depth of 16 feet, but that would be of very little use.
3996. Do you think it reasonable to expect that the harbour of Lake Illawarra will ever be so improved as to permit the free ingress of the large ships that will be used in the trade? I do not think it will. It is quite possible with a large expenditure to make Lake Illawarra a suitable harbour for ships of 25 feet draught.
3997. Would not that expenditure be largely in excess of the amount stated by the company's engineer? It would undoubtedly be largely in excess of the estimate.
3998. Would it not be more than double? I think so. So as to be fair I have taken the estimates out in five different ways. I do not think that Lake Illawarra could ever be called as good a harbour as Port Kembla. I do not think that shipmasters would like taking it so well. There will be a distance of something like 2 miles to go across Lake Illawarra from the entrance to the shipping wharf, and when a ship is towing during a southerly or northerly wind she would very likely be rubbing on the sand all the way; she would be blown to one side of the channel. That is certainly an objectionable feature unless the channel is made very much wider than they contemplate. To tow a ship 2 miles along a channel of 100 feet in width with a strong wind broadside on would be a serious thing.
3999. If the breakwaters were made, would there not be a difficulty in keeping the entrance free? The breakwaters must be maintained.
4000. Would there be a sufficient scour to keep the outer portion free from sand? There might be some trouble outside through a bar of sand forming from the concentrated current into the ocean. There will be a considerable rush with each tide, and where the water discharges into the ocean the current is lost, silt is precipitated and it forms a bar which causes considerable trouble.
4001. I think, when you were asked (Question 48) on a former occasion, you said it would not be justifiable to make two harbours so close together on the south coast. Did you not intend to convey the idea that if the Illawarra Company were to construct a harbour of sufficient size for the coal trade there would be no occasion for the Government to make a harbour at Port Kembla? That is what I have always stated. There would be no justification for the Government to make a harbour if the company would make one.
4002. It was in October when you made that statement. Are you of opinion that the company is taking steps to carry out the proposed works in such a way as to allow shipping to be carried on there? The company has done nothing since.
4003. Are you of opinion that, so far as the coal trade is concerned, if they want to secure it they will have to deepen the harbour to at least 25 feet? They will want to dredge to a depth of 27 or 28 feet. Ships will not enter a harbour where they will be rubbing on the bottom.
4004. Are you prepared to assure the Committee that, unless the Illawarra Company construct a harbour with a mean depth of 27 feet, they will not be able to carry on the coal trade of the southern coast as it ought to be carried out? Not as it ought to be carried on.
4005. You are perfectly satisfied that the conditions for carrying on shipping in large bottoms exist about Port Kembla? Yes. 4006.

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4006. A question as to the site has arisen since you gave evidence on a former occasion. We have been told by one witness that Bellambi would be a more suitable position for a harbour than Port Kembla. Do you think it possible that with the same expenditure Bellambi Bay could be converted into as safe a harbour as Port Kembla? No; I have already given evidence that in my opinion Port Kembla would be the safest harbour.

4007. You have no reason to alter your opinion on that point? None whatever.

4008. *Mr. Wright.*] We have had a good deal of evidence from shipmasters in reference to the breakwater, and we have been told that if the end was bent more towards the coast it would afford more shelter? I studied that very much in preparing the designs, and you must consider that breakwater as a portion of the whole. It will not do to construct the harbour in such a way as to render it impossible to make the northern breakwater in the future. The northern breakwater must be constructed. It will not do to push the entrance further down towards the beach than I have put it. Shipmasters do not like to take their vessels close to the beach to get into the harbour. They prefer to keep off the land.

4009. Do you think it is in the best position now? Yes.

4010. What is the distance from the point of the breakwater to the beach? 3,000 feet.

4011. That is close enough to put it? If you are near the shore and the ship became unmanageable she would be on shore in no time.

4012. There is another aspect of the question that is mentioned, and it was that by making the breakwater with a bigger bow it would give greater resistance to the sea? That would not affect it at all.

4013. There is nothing to be gained by it? On the contrary, it will increase the risk by pushing the vessels down near the beach.

4014. What is the size of the breakwater at its base in the deepest part? You have to calculate from the top. It is 20 feet wide at the top and the batter is about $1\frac{1}{2}$ to 1 on the three faces at the sea end. At that point it would be about 214 feet wide at the base.

4015. Roughly speaking, it will be from 116 to 200 feet at the extreme length? Yes.

4016. You think that is sufficient to resist the impact of the sea? Quite sufficient.

4017. The great force of the blow is 10 feet below the surface? No, just below the water mark.

4018. You think that from 16 to 20 feet is wide enough at the top? Yes; at the outer end we always widen it.

4019. You know Mr. Amos? I do.

4020. Have you noticed the evidence of Mr. Henderson, the engineer? Yes.

4021. Have you looked over the quantities which he gives for the work? I think the quantities are under-estimated.

4022. I suppose there is no question about the prices being correct? We must accept them.

4023. They are considerably less than your own prices for Port Kembla? Seeing that the stone is on the spot the work could be done for those prices; but I can see a difficulty in construction. Unless you can get the stone across from the southern side, before you open the entrance, it will have to be punted across, or a bridge will have to be made to take it across. There is nothing in the estimate for that.

4024. A witness has sworn that Amos has entered into this contract? Yes; but I know that the work could not be done for those quantities. He would simply go on at schedule prices.

4025. Your estimate for material for Port Kembla breakwater is 5s. per cubic yard, is it not? I put down 5s., but subsequently reduced it on account of finding the stone close at hand.

4026. So that instead of understating you have slightly overstated the charge? There are contingencies to be allowed for. It can be done for the price I named.

4027. It might be done for less? It might be.

4028. Can you tell us how much you think these quantities are under-estimated for the northern and southern breakwaters at Lake Illawarra? In the case of the northern breakwater the company estimate for 139,000 tons of stone. To construct that in a substantial manner I think it would require 261,000 tons of stone. The company's estimate for the southern breakwater is 153,000 tons of stone. I make it 248,000 tons of stone.

4029. Have you taken into consideration the fact that they get a large measure of protection from Windang Island? Yes.

4030. And that therefore their works need not be so strong as they would have to be if they were not protected from the ocean? It is not protected from the east.

4031. Do not the two points afford considerable protection from the south-east and north-east gales? There is no protection from the easterly gales.

4032. Easterly gales are not very common? They are very destructive when they do come.

4033. You do not think that those points give very much protection? A certain protection in light weather.

4034. Looking at it from a marine engineer's standpoint would anyone propose to construct a breakwater at Lake Illawarra of lighter and less bulky material than would have to be used at Port Kembla? No.

4035. You think that material of equal stability would be required in both cases? Yes.

4036. Therefore, you think that the works proposed at Illawarra will not be strong enough for the purpose intended? They may be strong enough. I do not know how the quantities are taken out. You must allow for the scour, and you must get to the bottom of that scour.

WEDNESDAY, 13 JANUARY, 1897.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.
 The Hon. JAMES HOSKINS.
 The Hon. CHARLES JAMES ROBERTS, C.M.G.
 The Hon. DANIEL O'CONNOR.
 HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.
 JOHN LIONEL FEGAN, Esq.
 THOMAS HENRY HASSALL, Esq.
 GEORGE BLACK, Esq.
 FRANCIS AUGUSTUS WRIGHT, Esq.

FRANK FARNELL, Esq.

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

John Evans, Esq., Mining Engineer, Bulli, sworn, and examined:—

4037. *Chairman.*] What are you? A mining engineer.4038. *Mr. Humphery.*] Are you at present connected with any colliery on the south coast? Only as mining engineer.

4039. In connection with what colliery? The Bulli mine.

4040. Is that mine owned by Mr. Adams? Yes.

4041. You have expressed a desire to give evidence in connection with the proposal now before the Committee? Yes.

4042. Have you prepared a statement? I have some evidence which I desire to give. In the first place, I do not think it is necessary for me to bring under your notice the necessity for a harbour on the south coast. In my capacity as a mining manager, and having a full knowledge of the coal measures in the district, I think it incumbent upon me to offer evidence that might help you to come to a conclusion as to where to put that harbour to the best advantage of all concerned. I should like to say a few words with reference to the existing collieries. You are aware that a seam of coal already being worked in the Illawarra district is No. 1 top seam of the coal measures which lie between Mount Kembla on the south and Clifton on the north. At Mount Kembla the coal is about 600 feet above the sea; at Clifton it is at the sea level. There is no other seam which has been proved to be of marketable quality but the one that I have mentioned. Several attempts have been made to develop the lower measures, but they have not been found to be of much value. That territory now comprises some eight or nine collieries, some of which have been in existence for periods of something like thirty years, and working as they do upon the outcrop of the coal seams their workings have extended very considerably into the mountains, some of them about 2 miles. Some of them have exhausted the coal over large areas, hundreds of acres. Some of the mines are in a chronic state of consumption; others are actually in the throes of death; and some are already dead. Therefore, a harbour anywhere between Port Kembla on the south and Clifton on the north, would, in my opinion, not be required. It would not be a desirable thing to place a harbour at the northern end of that particular coal-seam. Between West Bellambi and South Clifton there is a distance of about 7 miles, and the whole of the coal there is of a very questionable character as regards quality; it is inferior coal.

4043. I suppose you mean from South Clifton to the north? No, from South Clifton to Bulli. That is a distance of about 7 miles. It has cost about £250,000 to prove it, and it is of no use with the exception of the Bulli Colliery. There is very little hope of any development in that quarter.

4044. *Chairman.*] Is that from the Woonona mine to South Clifton? Yes.

4045. *Mr. Humphery.*] You omitted Clifton from your statement? Clifton is north of South Clifton. The Woonona mine is due west of Bellambi Bay, and south of the Bulli railway station, midway between the railway station and Bellambi Point. The whole of that territory from South Clifton down to Woonona, exclusive of South Clifton but inclusive of Woonona, is useless.

4046. What is it north of South Clifton? You get there a seam of coal about 6 feet thick. That extends as far as Stanwell Park. Bores which have been put down at Stanwell Park prove the existence of burnt coal there.

4047. Who are the owners of the property? I think the North Illawarra Coal Company.

4048. How many miles of good coal are north of Coalcliff? Three miles north of Clifton. I think the first bore got us into coal. I suppose about 3½ miles north of Clifton is where the coal was burnt.

4049. Are you satisfied from your knowledge that marketable coal can be obtained north of Coalcliff? Yes, to within 3 or 4 miles.

4050. *Chairman.*] Do you mean that immediately north of Clifton there are 4 miles of coal running parallel with the coast? Yes.

4051. *Mr. Humphery.*] Between Coalcliff and Stanwell Park? Yes, there is a good coal-field there. A bore put down at Otford, further north, was a failure; about Helensburgh I do not want to say anything.

4052. That mine is worked by a shaft, and nearly all the collieries south of Stanwell Park are worked by adits? Yes. Taking into consideration that this vast territory of coal land has been proved a failure, and that the mines there are dismantled and broken up, a very large deduction has to be made from the quantity of coal available from the southern coal-field.

4053. You are not prepared to say that the country south of the Metropolitan coal mine has been explored and proved unfavourable? One bore has been put down, and that was unfavourable.

4054. How does it occur that the Metropolitan mine is now being worked towards Stanwell Park? It does not come to Otford.

4055. What is the distance of Otford from the Metropolitan Company's shaft? I suppose from 1½ to 2 miles.

4056. Are you prepared to say that the Metropolitan Company's seam does not extend any distance? The seam is there.

4057. Your evidence seems to show that the seam is not a marketable coal? There was a bore put down at Otford and it was a failure.

4058. What depth was it? About 1,100 feet.

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4059.

- J. Evans, Esq. 4059. Was it supposed to have reached the Metropolitan Company's seam? Yes. At least the first seam they got to they stopped.
- 13 Jan., 1897. 4060. Then you infer that the Metropolitan Company's seam does not extend $1\frac{1}{2}$ mile southward? It is not good in the direction of the Otford bore.
4061. But it may extend towards the west? Yes.
4062. Your evidence would show that the coal ceases at the Metropolitan Company's mine? I do not mean to say that. All I would say is that the bore at Otford found the seam in a burnt state. What kind of coal there is to the right or the left of the bore it is impossible for anybody to say. The coal does extend to it, but it suffers at that point from the intrusion of volcanic rock into it. The Otford bore was $1\frac{1}{2}$ mile due south of Helensburgh.
4063. You do not wish it to be inferred that the Metropolitan Company's seam does not extend either south-west or west? No. I do not express an opinion as to what may be to the left of that bore. From my practical observation of those mines I think it would be a fair thing to assume that they cannot continue to work the outcrop of coal in the present way for any very considerable length of time.
4064. Will you say what collieries you refer to? I mean the existing mines at Mount Kembla, Mount Keira, and Mount Pleasant. Two of them are very old mines. Corrimal is a comparatively new one, and South Bulli is a comparatively new one.
4065. You might distinguish those which, in your opinion, will not work for a considerable period from the others? The mines which I do not think will work for a very considerable period, judging from the evidence which we have at present, are the South Clifton, and the mines between South Clifton and Bulli. The longevity of the Bulli mine is questionable, and I put it amongst the doubtful ones. The Woonona mine is practically exhausted. The South Bulli mine will maintain its vitality for a long time to come. Mount Pleasant, Mount Keira, and Mount Kembla have large areas of coal to the west, but they are old mines and they have gone in a considerable distance. If you give these mines about 3 miles to work that is as much as ever they can do. I mean the mines which I have mentioned as good mines, Mount Kembla, Mount Keira, Mount Pleasant, Corrimal, South Bulli, South Clifton, and North Clifton.
4066. Perhaps you had better fix the probable period? That depends upon the output. With reference to the extent of the workings by shaft at present the summit of all that mountain is part of the Sydney water reserve, and no works are allowed to be carried out on the surface; so if the development of the field is to extend westerly some arrangement will have to be made to allow the sinking of shafts and the making of railways on that water reserve. Those mines will come to an end, and the lapse of another quarter of a century will make them very costly mines indeed to work, unless some provision is made to sink shafts on the west, towards Appin. Experience shows that you cannot long continue to work those mines on the present system. The same thing has occurred in England and everywhere else where coal outcrops have been worked; flourishing townships have sprung up, but the workings have afterwards been abandoned.
4067. Do you mean the sinking of shafts for ventilating on the water reserve or to win the coal? To win the coal.
4068. Therefore, the south coast jetties at present in use would be useless in connection with the shafts which you say would have to be sunk on the water reserve? The cost of keeping the mines in repair when you have got 3 miles in would be too great. The selling price of coal would have to be greater than it is now to enable you to do it.
4069. You think that the mines would cease to contribute a return for the proposed works when a distance of 3 miles has been reached? That is if you have to draw the coal in the present way through the tunnels. I do not say that the supply of coal would be exhausted; perhaps arrangements could be made to get certain haulage to bring the coal over the mountain. It would be too expensive to work it 3 miles in, and compete in the markets of the world.
4070. You do not contemplate the coal being brought from the surface down to Kembla or Bellambi? No; but it could be done.
4071. What is the altitude? At Bulli, 1,100 feet to the top of the mountain, and further south it is 2,000 feet. I bring this before you to prove that there is a very considerable amount of coal between these respective properties that I have told you of, South Bulli and Clifton, but no development can be expected from South Kembla. Kembla is the scene of great trouble. There is no top seam or any other that is of very much good. The mine has been abandoned by the Southern Coal Company.
4072. You leave that out of consideration? Yes. As you go down south the land is all Crown land. It is Crown land for miles.
4073. The coal lands south and west from Mount Kembla are Crown lands? Yes, as far as Jamberoo at any rate.
4074. How long will it take to exhaust those particular mines to which you have referred, at their present rate of working? That depends upon the quantity of coal that is worked. If you and I possessed a million of money and wanted to get a seam in the Illawarra district we could not get it. There is no room there for new developments. All the properties are held between Clifton and Kembla except one gap between Kembla and Keira, a property lately bought by the Mount Kembla Company, and formerly belonging to the Great Wollongong Company. Any estimate that may be made as to the probable quantity of coal must be very problematical. Roughly speaking, I should say there are available in the collieries within 3 miles about 100,000,000 tons of coal. South of Mount Kembla, very little has been done by the Government or by private individuals to prove the existence of any workable coal. In fact, up to within the last six months I do not think that one place was driven more than 20 yards from the outcrop. That vast coal-field south of Kembla has been lying unexplored. No serious attempt has been made to do anything. A few capitalists and one or two farmers have put in a hole here and there, and some Government official would come and see the outcrop and probably condemn the whole field as being no good. Since then people have seriously taken into consideration that there does really exist coal of commercial value south of Kembla. I have studied the matter for many years, and I am convinced that there is. I know it has been said by Government officials that there is not good coal south of Kembla, but from my observations and from reports which I have read on those coal-measures I have come to the conclusion that there is something there which will warrant us in building our hopes upon that coal-field, and that we may rely upon its resources. The top seam, that already worked in the existing collieries, does not exist to any considerable distance beyond Mount Kembla. A few miles south of Kembla the seam rapidly thins out and ceases to exist.

4075. So far you concur in the view expressed by Professor David and other witnesses? As far as the top seam is concerned. J. Evans, Esq.

4076. Would you say upon what you base the opinion as to workable coal being found there? Some years ago when I was manager of the Mount Kembla mine before I ever dreamt of the construction of a harbour, I made an examination of the southern coal measures and at that time I sent for analysis a fair sample of a seam known as the fifth seam, in the Macquarie Valley. 13 Jan., 1897.

4077. At the head of the Macquarie Rivulet? Yes.

4078. How many miles distant is it from the coast? I suppose not more than 10 miles as the crow flies.

4079. Would it be south-west of Lake Illawarra? Yes. In the year 1889, I sent some of this coal to the Government for analysis, and they furnished me with a return, in which they stated that the fourth seam was a coal containing 10·85 per cent. of ash; 59·5 of fixed carbon; 26·08 of volatile hydrocarbons; 3·82 of hygroscopic moisture. That analysis was made in the Department of Mines.

4080. Who was the owner at the time you made the test? I do not know.

4081. Were you employed by anyone to examine the seam? I was asked to go and visit the place.

4082. By whom? I went by myself.

4083. You were not employed to make the inspection? No.

4084. Who was the owner of the land upon which you found the coal which you say gave these excellent results? I think a man named Brownlee.

4085. Will you describe the seam to which you refer? I can only say that the coal was taken from the outcrop of a very thick seam. I sent samples of No. 5 seam to the Department and I got the following analysis:—

Hygroscopic moisture	1·60
Volatile hydrocarbons... ..	21·75
Fixed carbon	63·98
Ash	12·66

In the year 1895, that was six years after, I was asked by the parties who visited the property and who intended to go in for a coal-mining scheme, to make a further report upon that property and in consequence of what I advised, the owner developed this seam. I procured samples of the coal in 1895.

4086. Did you examine the seam in 1895? Yes.

4087. What was the thickness of it? The whole thickness at the time of my examination was not proved, but what I advised as being the workable portion was the upper portion of the seam which was 5 ft. 10 in. in thickness with 2 in. of band, then 4 in. of coal, then $\frac{1}{2}$ in. of band and then coal the thickness of which was never proved.

4088. You say that that is workable coal? Yes. The analysis of that sample gave somewhat better results than the analysis made in 1889. It gave these results:—Ash 11·45 as against 12·67 in 1889, about 1 per cent. less in ash and 1 per cent. better in fixed carbon. On the 23rd November last I obtained samples of coal from the opening into the third seam due west of Lake Illawarra.

4089. *Chairman.*] Is that at the head of Dapto Creek? Yes; exactly due west of Dapto and about 3 miles distant. In November last samples of this coal were sent up to the Department of Mines for analysis by myself and also samples of coke made from coal obtained from that seam. On the 23rd November I got the result of the analysis from Mr. Pittman, which showed that the coal contained 9·25 of ash. Another sample of the upper portion of the seam contained 8·10 of ash.

4090. *Mr. Humphery.*] What was the thickness of the seam from which you took the sample? 6 ft. 2 in.

4091. Workable coal? There were two bands in it.

4092. Of what thickness? One is $1\frac{1}{2}$ inch and the other is $\frac{1}{2}$ an inch. The coke manufactured from that coal gave by analysis 14·55 of ash. The coal was got from the outcrop of the seam. What I should like to point out is this. That, according to the analysis, that coal is equal to the best Illawarra coal, and the coke is equal to the best coke manufactured there at the present time. True, the seam is not so clean. I admit that. It contains two bands, whereas the coal in the existing collieries has no bands. But it is an exceptional thing for coal to be without bands. In England, if they were to disregard coal which contained bands, the coal trade of England would be reduced by 50 per cent. There is hardly a colliery at Newcastle that works coal without bands. Some of them have a number of different qualities coming out of the same mine, and they have to separate those different qualities before they can get a market. It does not matter about the bands if the quality of the coal is good. I should be very glad to show anyone where the coal was taken from. To my knowledge there exists south of Kembla for a distance of about 16 miles workable coal not less than 10 feet thick in two seams, that is at least from 5 to 6 feet of this third seam and an equal thickness of the fifth seam or Brownlee's seam. These measures rather improve in quality as you go down south. It has been said that there is no workable coal there, but I find on reference to a book which I have here on the mineral products of New South Wales, dated 1887, by Mr. Mackenzie, the late Examiner of Coal-Fields, a very exhaustive report upon the coal lands of Jamberoo, a few miles south of the Macquarie Rivulet. In his report Mr. Mackenzie enumerates the number of seams of first-class coal, and estimates the quantity at some millions of tons. I should like to bring it under the notice of the Committee that Mr. Mackenzie has expressed the opinion in an official report that there is good coal down there. These things are really to be seen, and I have seen some of them. I can vouch for the truth of the report, and I am of the same opinion as Mr. Mackenzie that there are workable fields of coal in that district. If Mr. Mackenzie's statements are not true his report is about the most wicked tissue of falsehoods ever published by a Government. South of Kembla, and down to Jamberoo, there are 16 miles of undeveloped coal territory taking that as only possessing 10 feet of workable coal, which can be seen by anyone who desires to see it (that is 10 feet of workable coal lying south of Kembla for 16 miles) on the same basis of calculation as I used in regard to the northern collieries that would yield some 250,000,000 tons at the very least.

4093. Within a distance of 3 miles of the outcrop? Yes. I do not want to clash with anybody's opinion. I want to show that we are perfectly safe, as far as the capabilities of the district are concerned, in granting a harbour for the south coast. It would, in my opinion, be an advantage to have the harbour centrally situated, both as regards existing collieries and the future development of the resources of that district.

4094. Will you look at the plan showing the site of the proposed south coast harbour, and then express your opinion on the Government proposal? I have no interest in any scheme; but I think that Lake Illawarra

J. Evans, Esq. Illawarra is about the most central position for a harbour. It is central for existing mines, and central for the development of future mines further south. I am aware that there is some sort of a scheme to make a harbour at the Lake, and that certain persons have got power under an Act of Parliament to make a harbour there. I presume that owing to the non-accomplishment of that work an agitation has arisen to get a harbour at Bellambi. I dismiss that idea from my mind, because Bellambi is too far north, and in the district surrounding it there is no room for development. Therefore, I confine my attention to the question as to whether the harbour should be at Port Kembla or at Lake Illawarra. I am satisfied in my own mind, and I have had considerable experience in the loading of vessels in rough weather, and I have seen the heavy seas on that coast for the last ten years when I was manager of the Kembla mine; and I honestly say that if the money could be obtained to make a harbour, I believe that Lake Illawarra would be the best harbour and the most economical in the long run.

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4095. You had better consider the proposal before the Committee, and express your opinion upon that, assuming that the Lake Illawarra enterprise should fail? Well, I do not say it is not possible to make a harbour at Port Kembla. I believe it is possible to make a good harbour there; but it is out of the question to talk about making a harbour there with a single breakwater. It is very questionable whether anybody can estimate what it will cost to make that breakwater. You will observe that that breakwater, unlike breakwaters generally, is to be side on to the heavy seas. I have no data to show exactly the wave force at that particular point; but we know that in other countries instances have been known of masses of stone of 130 tons weight being shifted 20 yards and lifted to a height of 10 feet by wave force. What the wave force is there I am not able to say. All I know is that the waves there are very great at times, and this breakwater is to be side on to the seas. At the Lake a breakwater would also have to be made before the entrance could be effective; but it would have the advantage of being end on to the sea, which makes a lot of difference. I am quite convinced that money will make a harbour, and a good one, at Port Kembla, and I know of no place on the coast which has better physical features such as those islands, which protect Kembla more or less. No other place possesses better features for the construction of an artificial harbour. I think it is superior to Wollongong; but it remains for other authorities to say whether it is possible to construct an artificial harbour side on to the sea that will stand the force of the waves. It may stand the force of the waves, but it is very questionable. I have observed that at Wollongong 20 ton blocks of concrete were very small things indeed to the sea, which in an easterly gale threw them about as if they were pebbles. Whether a stone breakwater will stand at Port Kembla is doubtful. My own opinion is that it will not.

4096. Assuming the proposed work to be carried out by the Government will Port Kembla, in your opinion, afford all the facilities which would be afforded by the Lake Illawarra scheme? Yes, that is to say if the scheme is carried out in its entirety. But to put up one breakwater only would offer no inducements to shipping. It has been said that it would offer great inducements, but from my experience of loading vessels there I do not think so. I should say that there are thirty days in any year during which you cannot load under ordinary circumstances. The weather for thirty days is such as to prevent you from loading a big vessel.

4097. The object of these works is to afford facilities for sailing vessels—not steamers? Yes. You could put up one breakwater to break the force of the gale so that you will only lose ten days in the year instead of thirty, because one breakwater would not stop the easterly gales. You would be constructing a breakwater to enable them to utilise twenty more days in the year than you could without it. But I do not think it is possible to construct a single breakwater there that will render it safe for sailing vessels to lie at anchor.

4098. In your opinion in order to have a safe harbour for sailing vessels as well as for steamers it is necessary that the whole scheme should be completed, and that the northern as well as the eastern breakwater should be carried out immediately? Absolutely necessary. Suppose that a maritime strike came upon you! When the last strike took place we had vessels in Sydney harbour waiting three or four months for coal. Supposing that those vessels were at Port Kembla, would you allow the sailing vessels to lie there in that open roadstead. I do not think there is any place in the world offering such an extensive area of sea where vessels could lie for months with impunity protected by a single breakwater.

4099. Then your view is that the harbour is absolutely necessary for the development of the southern coal trade? Yes.

4100. And the proposed harbour at Port Kembla would be in every way suitable if both breakwaters were made? Yes.

4101. And in your opinion Lake Illawarra would be equally suitable if the scheme were carried out to accommodate vessels of equal tonnage to those going into Port Kembla? Yes. I wish you to bear in mind that in my opinion a harbour at Lake Illawarra would be a better harbour in every sense of the word than the artificial harbour proposed to be made at Port Kembla. Supposing that the breakwaters were washed away at Lake Illawarra, no damage could be done, assuming that there was the requisite depth of water in the Lake; but if by chance a terrific storm, such as we saw at Bulli and Bellambi when the jetties there were washed away, should knock down the breakwater at Port Kembla, everyone knows what the result would be to the shipping. I say, from an engineering point of view, that the lake could be made into a good harbour. It is only a question of money, and I believe that that scheme would be a more economical one and a safer one in the long run than the Port Kembla scheme. And I say this, that if there is any possible show of the work being done by private enterprise I believe in giving encouragement to private enterprise. If you believe that the Illawarra Harbour Company are sincere, and that there is a probability of their carrying out this work, it will be really cruel for the Government to carry out this opposition scheme. We do not want two harbours. We want one only, and the best that can be constructed. I think that the Lake Illawarra would be the most suitable place for a harbour. At the same time I do not wish to say anything against the Port Kembla scheme. I believe that at Port Kembla a magnificent harbour can be formed, if it can be made strong enough to resist the waves.

4102. *Mr. Clarke.*] You have stated that if only the eastern breakwater is made at Port Kembla it would not be a safe port for a large number of ships? I did not put it exactly in that way. I say that a large number of ships can enter, but it would not be a harbour such as the owners of sailing vessels would care, in case of a strike, to allow their vessels to lie in.

4103. Would it be better to have the two breakwaters? Most decidedly; that would make an enclosed harbour.

4104. If that were carried out, would it make a harbour equal to the proposed harbour at Lake Illawarra? *J. Evans, Esq.*
Certainly, as long as the breakwaters do not give way. There is no chance of the banks of the lake giving way. *13 Jan., 1897.*
4105. Might not the breakwaters at Lake Illawarra be carried away? Most decidedly, but the result in one case would be quite different from the result in the other. If the breakwater were carried away at Port Kembla, your vessels would be in the open sea. At Lake Illawarra, if the breakwaters were carried away, the vessels would still be in smooth water.
4106. You say that in case of a breakwater giving way at Port Kembla it will be dangerous for the shipping;—would it be any more dangerous than it is now to the large vessels that go there? We want a harbour where sailing vessels can come in and lie. Most of the export trade is done by sailing vessels.
4107. Then the danger in case of the breakwater giving way at Port Kembla would only apply to sailing vessels? Yes.
4108. Would steamers be in a much worse position than they are at present? They would be in a better position.
4109. Steamers go in and out there? They do.
4110. I suppose not at all times? They can go in at all times, except in very rough weather indeed.
4111. Do you think that Lake Illawarra or Port Kembla would be the more central place for the various mines? As far as position goes and as regards haulage when you have the coal in the railway trucks a mile or two is of no importance. One place is about as near as the other to the collieries.
4112. What is your opinion as regards the construction of a breakwater at Bellambi? For the same reasons that I have stated with regard to Port Kembla—a single breakwater would be of no use at Bellambi. There would be no inducement to foreign shipping if you made a single breakwater. I look upon it as a State aid to existing collieries immediately connected with the place.
4113. Then you leave Bellambi out of the question? Yes. A good harbour could be made at Bellambi, but it would necessitate two breakwaters.
4114. Is it probable that coal from the north of Clifton—say, from the Metropolitan Mine—would be shipped at Bellambi? No; I think the coal from the Metropolitan Mine would go to Sydney.
4115. Is the Metropolitan Mine in a central position between Lake Illawarra and Sydney? Yes; being only 27 miles from Sydney, the coal of the Metropolitan Mine would most probably go to Sydney.
4116. I suppose that Wollongong is out of the question? Yes. I think that a far better harbour could be made at Port Kembla than at Wollongong.
4117. Are you of opinion that any of the coal now shipped from various ports south of Clifton would still be sent to Sydney? Yes, no doubt of it.
4118. Could you form any opinion as to the probable quantity? The collieries could not produce more than about 1,500,000 tons to-morrow if they did their best, and I daresay that one-half of that would be sent to Sydney unless it can be shown that the Orient liners, the German liners, and the other big mail steamers could be better supplied down there than at Sydney. No doubt the bulk of the coal used for steaming purposes would have to be sent to Sydney, because the vessels at Sydney can take in cargo and take in coal at the same time.
4119. If there was a good harbour, would they not come to Port Kembla and take their bunkerc coal from there? I do not think it at all likely.
4120. You think it better for these large boats to be supplied by the present means? I think so. I think that the supply of the mail steamers would be carried on the same way as it is now if we had ten harbours on the coast.
4121. Would a quarter of the coal now being raised come to Sydney? I think that half of the coal would come to Sydney.
4122. I think we have it in evidence that a quarter of the coal raised would still come to Sydney? Of course it is a matter of opinion. I think that if vessels can take cargo on board at Sydney and can take in coal at the same time it is more economical for them to do that.
4123. Then a great deal of coal would still be shipped to Sydney, and the balance would be taken away by vessels going to different parts of the world? Yes.
4124. You have stated, and it is contrary to the opinions given by others, that there are payable coal-fields in existence south of Port Kembla? Yes.
4125. Is it good coal? I gave you the analysis which shows that it is equal to any other coal got in that district. I am satisfied that the future developments of the coal trade in the Illawarra district will take place in the south.
4126. *Mr. Lee.*] Have you had much experience in shipping coal? For the last ten years I have been manager of the Bulli and Mount Kembla mines.
4127. And you have had experience of the loading of sailing vessels and steamers? Yes. Invariably when a sailing vessel is loading there is a tug alongside.
4128. I suppose you know something about the development of the coal trade of Newcastle? Yes.
4129. Are you of opinion that it would be wise on the part of the State to construct a harbour, no matter where on the southern coast, for the probable development of the coal trade? I think so, because although Newcastle and the south coast districts do clash, still, generally speaking, there is a difference in the quality of the two kinds of coal. One is essentially a steam coal and the other a house and gas coal.
4130. Therefore you are of opinion that there is a demand in other countries for both classes of coal? Yes.
4131. Is not a large quantity of the Newcastle coal carried in sailing vessels? A very large quantity.
4132. Is it necessary to make such provision on the southern coast as to enable these collieries to compete on the same lines as Newcastle? I think so.
4133. You are aware that the tendency is to carry coal in very large bottoms? Yes. The Bulli Company used to send about 60,000 tons of coal a year to San Francisco. Nearly all of it went in sailing vessels.
4134. You have no doubt that if the southern coal trade is to be properly developed it must be placed in communication with every part of the world by sailing vessels? That is my opinion.
4135. You have already stated that there was no justification for the construction of a harbour between Kembla on the south and Bulli on the north;—where would you construct the harbour? If I were a private capitalist and had the money I would construct one at Lake Illawarra.
4136. But not south of it? No.

- J. Evans, Esq. 4137. Then if it becomes a question of the Government constructing a harbour you think Port Kembla is the best? Of the two schemes, Bellambi and Port Kembla, I think Port Kembla is decidedly the better.
- 13 Jan., 1897. 4138. If the Government undertook to construct a harbour, you think that Port Kembla is decidedly the best place for it? Yes, of those two sites; but Lake Illawarra is preferable to either.
4139. You are very strong in your opinion that sailing vessels would not be able to lie safely at Kembla in the event of only the eastern breakwater being constructed? Yes.
4140. Are you aware that your opinion is at variance with the opinion of a number of shipping masters who have traded there for very many years? That may be.
4141. Have you seen the shipping of coal at Port Kembla? I have; and I have seen vessels there dragging their anchors in great danger.
4142. Steamers? Yes.
4143. In the event of a breakwater being constructed, do you not think there will be room for sailing vessels to lie there in security? No; I do not think so. There would not be sufficient protection.
4144. Notwithstanding the fact that shipmasters who have traded there for years—one of whom has traded there for twenty years—and have taken vessels in in all states of the weather, and have gone in there for anchorage when they could not lie at Bellambi, you still hold that if the breakwater were made vessels could not lie there? I do. You can get men to say anything that pleases them or that pleases somebody else. What I have stated is based upon my own experience and observation. I say that I do not know of any place existing under similar conditions in any part of the world where vessels are allowed to lie. If any shipmaster can tell me where there is such a place upon a coast exposed to the fury of such gales as we have there I shall be glad to hear of it.
4145. Are you aware that your evidence is at variance with that of the engineers? Quite possibly. I have known engineers to say funny things in my time.
4146. Can you give us any reason why we should accept your evidence in preference to that of all these men who have had so much more experience than you? These men have not had experience at this place. They are all speaking from theory. The seas are heavy. We have fearful easterly gales and there is a strong current. I know that for nine months of the year a current sets from the north to the south sweeping with great velocity round those points.
4147. Are you aware that that current does not set into Port Kembla at all? No, I am not aware of that. I think it does. There is another feature in connection with the harbour scheme. Both the engineers and everybody else will find that somebody has blundered somewhere. I know from my experience of Port Kembla that the current shifts immense bodies of sand there and steamers have to dodge those shifting sand banks.
4148. Have you known these to occur at Port Kembla? Yes; and at Bulli and Bellambi. You can see the seas breaking on the sand banks.
4149. You are not confusing the reef of rock at Port Kembla? No.
4150. Are you aware that soundings have been taken at Port Kembla for several years in succession and these occurrences have never been noticed? I am giving you my own observations.
4151. Could you fix the date when any of these things have occurred? I think that if Mr. Artis were to give evidence he could tell you something about it. He has been thirty years in charge of jetties and his duties bring him in contact with the sea.
4152. With reference to the loading of sailing vessels, do you not think the practice likely to be that outward bound ships would discharge at Sydney then go to Port Kembla to take in coal? That would be the practice of sailing vessels cargoed from foreign ports to Sydney.
4153. There must always be a large amount of traffic conducted in coastal collieries for transshipment to ocean-going steamers? Yes; and no doubt big sailing vessels would take in a stiffening of coal at Sydney before going down the coast, supplied by the tug boat from the harbour of destination.
4154. It may be that vessels coming with ore from New Caledonia would run in and fill up with coal? Yes.
4155. All they want is protection to enable them to coal with safety? Yes.
4156. You think the eastern breakwater by itself will not afford that protection? I think it would not.
4157. Do you think that in the interest of the country it will be wise for the Government to refrain from constructing a harbour until it is clearly determined whether the Illawarra Harbour and Land Corporation will construct their proposed harbour? If there is any chance of private enterprise making the harbour by all means let them do it.
4158. Do you know what class of harbour they would have to make to carry on the trade? They would have to make a class of harbour on the lines of that which has been agitated for. It will have to be a deep-water safe harbour with all modern appliances for loading vessels.
4159. What depth of water do you expect they will have to dredge in Lake Illawarra? Thirty feet at the very least.
4160. Would not that involve an enormous expenditure? Not when once the channel was made. It would not be necessary to dredge the whole of the lake. A portion of the area might be dredged and the rest done afterwards.
4161. It must be a process of a great many years? No doubt it will occupy some time.
4162. Having in view the construction of a harbour to conduct the coal trade in big bottoms, which everybody says is necessary, if we are to compete in the open markets successfully? I think from an engineering point of view it is quite easy to make a harbour at Lake Illawarra. It is simply a question of money, and if the harbour was made in a piecemeal way, making room at first for a small number of vessels, ultimately a harbour could be constructed which would provide accommodation for the whole of the British fleet. I think it would be a remunerative undertaking. If money could be got to do the work I have not the slightest doubt that the Lake Illawarra scheme would prove a very acceptable one.
4163. It is an undertaking involving a very large expenditure, one considerably in excess of the contemplated expenditure at Port Kembla? If the Lake Illawarra syndicate cannot make a harbour then you will have to consider whether it will be better to make a harbour at Lake Illawarra or at Port Kembla.
4164. Do you think the Corporation could make a harbour by the end of 1898? No.
4165. *Mr. Fegan.*] You said that your company exported 60,000 tons to San Francisco last year by sailing vessels? No, they formerly did.
4166. How was it shipped? It was taken to Sydney in small steamers.
4167. Therefore no sailing vessels came to the jetty? No.

4168. Another point in your evidence was that in thirty days during the year vessels could not load at Port Kembla? I should say about that. J. Evans, Esq.
4169. Then where are the terrific storms and the great waves? When you build a breakwater you have to build it on the chance of its having to combat the biggest storm ever known there. Twenty-five years ago the Bulli jetty was washed away with forty waggons. About four years ago it was again washed away. We have these violent visitations only occasionally. 13 Jan., 1897.
4170. Has any damage been done down there which would make you believe that the breakwater would not stand? At Wollongong the blocks are tossed about in every shape and form.
4171. But still they are there? They are still there.
4172. Will you tell us what company you reported for in reference to the coal measures down there? I have only reported once upon a property there, and it was one in which I understood Mr. Robert Sands to be interested.
4173. You were employed as an expert—could we have a copy of that report? Yes; I will forward a copy.
4174. Have you had much agitation for a harbour for the southern coal trade? For some years it has been evident that a harbour was required. Hence, the inaugurating of the Wollongong Harbour Trust, which proved a failure.
4175. During the time that you were manager of the Mount Kembla and Bulli Colliery you have not seen very much necessity for greater facilities than you have now for shipping? I have felt, from a business point of view, the terrible drawback to the development and working of mines of having to pay 3s. 6d. a ton for carriage, and then to ship and tranship coal by means of baskets. I have felt the necessity for some accommodation to enable vessels to take the coal direct from the mines to different parts of the world. The cost of transshipping coal alone is a very serious item.
4176. The cost, you say, is 3s. 6d. a ton? At that time it was.
4177. What is it now? I suppose the freights are 2s. 6d. or 3s. a ton.
4178. So the freight has not gone down quite so much as the workman's wages? I do not think it has.
4179. The great contention has been that the southern coal could not compete with the foreign market because the wages were too high; but was it not the freights which had not gone down in comparison with the wages? I do not think they have gone down as low, but still if coal were carried for nothing it is detrimental to have the transshipment.
4180. Every mile of carriage on the railway means greater depreciation? It does; but it is the worst on vessels. The men drop the coal in; then it gets trampled on.
4181. There is a great depreciation in the value of the coal even when it is carried on the railways? Yes.
4182. Therefore, the construction of a harbour at Lake Illawarra means a greater distance for the conveyance of the coal than if the harbour were constructed at Port Kembla? It is 3 or 4 miles further, but that is nothing.
4183. You say that in the southern portion of the district there are 250,000,000 tons of coal, and that in the other part of the district there are 100,000,000 tons of coal, but they are only working the 100,000,000 tons at present? That is so.
4184. Therefore, under these conditions, Port Kembla would be the most central position? Port Kembla and the lake are equally central.
4185. I am speaking about the existing collieries;—Port Kembla is the centre? Yes; it is rather nearer.
4186. If a harbour were constructed in Lake Illawarra would not the owners of the jetties at Port Kembla and Bellambi still use their jetties for the shipment of coal? To some extent no doubt they would.
4187. Do you think the Mount Kembla Company would not keep on shipping? If you make a harbour at Mount Kembla I presume that you have to take over the jetties.
4188. I am not speaking of that. In the event of the Illawarra Harbour and Land Corporation completing the proposed works would that make the Mount Kembla Company and the Southern Coal Company go to the lake to ship their coal? Any colliery that would ship coal at the Kembla harbour would ship coal at the lake most decidedly, if facilities were provided. People are not going to refuse to ship at the lake because it is a lake. They will ship the coal wherever the harbour is.
4189. The Mount Kembla Company has a jetty at Port Kembla? Yes.
4190. In the event of the construction of a harbour, do you think it would give greater facilities to this company than they have at the present time to ship at the lake? Yes.
4191. What would be the facilities? At present, if a 5,000-ton ship wanted coal for San Francisco that coal would have to be brought to Sydney, and put in the vessel here, but if there was a harbour at the lake the vessel would go there, and any southern coal company would load her there.
4192. What is the distance from the Southern Coal Company's mine to the lake? The Southern Coal Company's colliery is about the smallest on the coast. It is at Corrimal, near Bulli.
4193. What is the distance from the colliery to the lake? I suppose it would be 10 or 12 miles.
4194. What would be the difference in the carriage and the transshipment as compared with taking it to their own jetty? I presume it would be slightly more unless there was a zone system introduced, as they have at Newcastle.
4195. Then it would be about the same cost as shipping from their own jetty? The economy is in the saving of transshipping and the transit to Sydney.
4196. It would only be in the case of sailing vessels that there would be the extra saving? Steamers can go and load with comparative safety at Port Kembla now.

THURSDAY, 14 JANUARY, 1897.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.	CHARLES ALFRED LEE, Esq.
The Hon. JAMES HOSKINS.	JOHN LIONEL FEGAN, Esq.
The Hon. CHARLES JAMES ROBERTS, C.M.G.	THOMAS HENRY HASSALL, Esq.
The Hon. DANIEL O'CONNOR.	GEORGE BLACK, Esq.
HENRY CLABKE, Esq.	FRANCIS AUGUSTUS WRIGHT, Esq.

FRANK FARNELL, Esq.

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

John Evans, Esq., Mining Engineer, Bulli, sworn, and further examined:—

- J. Evans, Esq. 4197. *Mr. Fegan.*] Do you know anything about the formation of the Illawarra Harbour and Land Corporation? I do not.
- 14 Jan., 1897. 4198. You are not a shareholder in it? No.
4199. You only reported for this gentleman in reference to the coal measures south of Mount Kembla? Not for that gentleman.
4200. For Mr. Sands? Yes, but he is not interested in that company.
4201. Where did you get that specimen of coal that you produced yesterday,—how far from Mount Kembla? It was taken from a measure due west of Dapto from the outcrop of the coal.
4202. Is there any bore down there? No. That coal was taken from the outcrop of the third seam.
4203. Are there any bands there? Yes, two bands in 6 feet of coal.
4204. What is the thickness of the bands? The aggregate thickness is 2 inches.
4205. Have you ever been connected with any collieries in the Newcastle district? Yes, I have managed the Stockton mine.
4206. Are there any bands there? No. There was a band I think in the lower seam, but the upper seam was free from bands.
4207. Have you ever worked in the old country? Yes, in South Wales. I was assistant manager of Harris' Navigation, and I have been employed in the Rhondda Valley.
4208. Under what Act did you receive a certificate as a mining engineer? The Act of 1872.
4209. You have held that certificate for how many years? Fifteen years.
4210. When you were examined you had to have a certain knowledge of geology and metallurgy? Yes. I was two years at the Bristol School of Mines, and I am a Fellow of the Geological Society of London.
4211. Have you had any conversation with Mr. Armstrong in reference to the port? None whatever.
4212. You do not know anything about the Illawarra Lake scheme? No.
4213. The proposal is to have a channel 15 feet deep,—do you think that will be sufficient? I do not.
4214. You know that in 1890 an Act was passed empowering the Corporation to do certain things? Yes.
4215. Do you know how much money has been spent on those works at Lake Illawarra? No. From what I hear I cannot say that there has been any money spent.
4216. If there was a prospect of the corporation taking advantage of their Act, do you think they would have been so long in making alterations there? I do not know what impediments may have been put in the way. Through somebody's instrumentality very large sums of money had been spent on smelting works which were part of the original scheme.
4217. No; the original scheme was to construct wharfs and to dredge a channel, but not to construct any buildings? I do not mean to say that the smelting works were included in the Act, but it was a scheme essential to the development of the harbour.
4218. You have not read the Bill? No.
4219. If you were told that a certain corporation was formed in 1890 to construct wharfs and dredge a channel, and all this time having elapsed without anything having been done, would you think the corporation was in earnest? No doubt something tangible ought to have been done. I suppose there has been some difficulty in obtaining capital.
4220. Without obtaining the money they cannot go on? No.
4221. Do you think it is right that the people of the Illawarra district should have to wait still longer for the construction of a harbour? No doubt as long as this second harbour is spoken of as likely to be constructed by no less an authority than the Government it is not likely that capitalists will be inclined to find the money.
4222. Do you not think then that something should be done to give the south coast a safe harbour? A harbour is absolutely necessary.
4223. You think it is not fair to the coal trade of the southern district that the public should have to wait until we see whether the lake scheme is a failure or not? If you are satisfied that the lake scheme is a failure, I should recommend you to provide any other harbour which you may think proper.
4224. You say that 15 feet in depth will not be sufficient for the channel? I do not think it will.
4225. Yesterday you said it would be necessary to have a channel 30 feet deep? To enable vessels with absolute safety to go in and out the channel ought to be from 28 to 30 feet deep.
4226. Do you know that small boats in the trade are becoming things of the past? Yes.
4227. Would it not mean the expenditure of a much larger sum of money to construct a channel 30 feet deep than to make one 15 feet deep? No doubt.
4228. And if they cannot get money enough to construct a channel 15 feet deep would it not be impossible for them to raise money enough to make a channel 30 feet deep? That is logical.
4229. Is it not almost an impossibility for that harbour to be constructed under the circumstances? I believe that if the money can be obtained it will be a success.
4230. Do you not think that if it is likely that they can get the money it would have been got before this agitation arose for a harbour at Port Kembla? That I do not know.
4231. Would they not be more likely to get it before there was any talk of a second harbour being made by the Government? I should think so. The fact of a large sum of money being spent there by the Smelting

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Smelting Company of Australia would be an inducement to capitalists to advance money to construct a harbour in the Lake. That company has been instrumental in bringing a very large amount of capital into the district. I think that is a consideration which should weigh.

4232. Do you think it is possible for them to construct a harbour with a channel 30 feet deep in the next two years? I do not think it is. They would have to get an extension of time.

4233. Do you think it is possible for them to get an extension after appealing to Parliament twice? If you are satisfied that there is a strong syndicate with a million of money who are going to spend their money I should think it desirable to let them do it.

4234. How much of the coal do you think will find its way to Illawarra Lake in the event of that scheme being carried out? At present there is a somewhat bitter feeling existing as to the rival harbours, but the same coal that would go to Port Kembla, if there were a good harbour there, would go to Lake Illawarra, if there were an equally good harbour at the Lake.

4235. The extra distance would be no consideration? Really no consideration.

4236. Is it not a fact that from the brittle nature of your coal an extra 4 or 5 miles carriage would mean considerable depreciation? No. The depreciation in a mile or two is inappreciable.

4237. But colliery managers kick up a row about an extra half-mile in shunting? Yes, when using skips, but with proper railway wagons on springs there is a difference.

4238. Then how far would a train have to go before that depreciation could be considered? A very large quantity of coal is sent from South Wales to London to be shipped a distance of 177 miles.

4239. Is there not a great difference between the coal of the south coast and the coal of South Wales? Some of the coal here is much harder than the Welsh coal.

4240. And some much softer? I do not know of any that would excel the Mount Keira coal for hardness.

4241. Is it not a fact that the Welsh coal is exceedingly hard? No; except the Anthracite coal which is exceedingly hard.

4242. Is it not a fact that at the greater portion of the mines in South Wales the system of working forces the men to get very large coal? Yes. They are working long wall at a great depth.

4243. I am talking of the filling; there being no sides to the skips it forces the men to fill much larger coal? Yes.

4244. That being so the conditions existing in the collieries of the South Coast are entirely different? They are.

4245. Therefore, the comparison between South Wales and the coal mines of this Colony is of no account? The skips in the old country are not all of the kind you mention. At Harris' Navigation they use closed skips.

4246. There are about three mines that use them in the whole principality? As a rule they use open skips.

4247. Do you not think that if the coal has to be carried an extra 5 or 6 miles it will mean considerable loss to the coal owners? I do not think so. I admit that there is a theoretical loss. But it is so trivial that it ought not to be considered. The bulk of the South Wales coal is shipped at Cardiff, and so dissatisfied were the companies there, because the facilities for loading were not such that they would like to keep up the trade, that the colliery owners themselves (they did not ask the Government to do it) went down to Barry and made a very large harbour. They did not mind carrying their coal a little further.

4248. If they did not get greater convenience do you think they would have constructed that harbour? No.

4249. Would you tell the Committee what distance you consider coal should be carried before it depreciates? No doubt it depreciates every mile that it is carried; but it has been proved by experience that coal does not depreciate in the same proportion all the time. Supposing it breaks up to the amount of 1 per cent. in 10 miles, it will not break up to the amount of 10 per cent. in 100 miles. Once it is broken the small coal acts as a bed, and it saves the round coal from being broken.

4250. Do you think any harm will be done by waiting until 1898 to ascertain the success or failure of the Illawarra scheme? I do not see that you need wait. Taking into consideration that Parliament has granted these powers if you are satisfied that the company cannot carry out the work then proceed with yours.

4251. Would there be any harm in waiting until 1898 to see whether or not this scheme will be carried out? You would lose two years of valuable time.

4252. Then what would you suggest? I would suggest that before this work was undertaken at Port Kembla you should obtain some positive guarantee that the proposed works at Lake Illawarra will be proceeded with at once.

4253. If you cannot get it? Then go on with your own works. There ought to be some means of discovering the position of the company.

4254. You think that two years would be too great a loss of time? Yes.

4255. And that something better ought to be provided at Port Kembla for the trade and to give a harbour of refuge? Yes.

4256. And under these conditions you would support that proposal? I would.

4257. *Mr. Hassall.*] Have you any idea what sized vessels they propose to bring into the Illawarra harbour if it is constructed? They could not have any idea of bringing very large vessels into a harbour with a depth of only 14 feet. I suppose that that would be the minimum not the maximum depth.

4258. Have you any idea of the proposed width of the channel? No.

4259. With a narrow channel would not the vessels be bumping against the side every few yards? You can get a very large vessel through a narrow channel, in the Suez Canal for instance.

4260. You are aware that it is desired to have a harbour constructed into which large ocean-going vessels could go to load coal? That is the desire.

4261. It would be impossible to bring large ocean-going vessels through a channel of the size of that which the Illawarra Company propose to make? Yes, I think so; but I am not sure that I know the intended width.

4262. And if they attempt to make provision for the larger vessels it will probably cost a couple of hundred per cent. more than they propose to spend? It will cost more than twice as much to make a channel 30 feet deep instead of 15 feet.

4263. So that the estimate which they have submitted is ridiculously wrong? Everything must be on a larger scale than was originally designed.

4264.

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4264. I suppose you are aware that they would have to leave a certain amount of water on each side of the vessel, and that the channel would have to be a good depth? Yes.
4265. Do you know whether any arrangement has been entered into between the Smelting company and the Illawarra company with regard to using that port if it is completed? I do not.
4266. They are two separate companies? I believe they are.
4267. The probability is that if a harbour were constructed at Port Kembla, the Smelting company would use that? Undoubtedly; if a harbour is not made at the Lake, they will have to use it.
4268. Do you think there is any possibility of the collieries using Lake Illawarra for the shipment of coal if a harbour is made there? Most certainly.
4269. With the appliances which they have on the coast, do you think they would use the harbour at Lake Illawarra? If that argument holds good with regard to Lake Illawarra, it holds good with regard to Port Kembla. Is it likely that the South Bulli Colliery will send coal to Port Kembla when they have their own jetty,—and the North Bulli and the Clifton companies have jetties.
4270. When the wind is favourable they would use them? Yes.
4271. The probability is that if a harbour were constructed at Port Kembla, to save harbour dues and shipping charges, the collieries would continue to use their own jetties? No doubt they would. They can ship coal for consumption in Sydney for 3d. or 4d. a ton at their own jetties. Why should they pay 10d. a ton to take the coal down to Port Kembla. There would be that in railway charges to begin with; then 6d. a ton wharfage and port dues; making 1s. 4d. a ton, altogether, as against 4d. if they ship the coal at their own jetties.
4272. It resolves itself into this, that they would only use the harbour at Port Kembla when they were prevented from using their own jetties? That is it.
4273. The only increase in the shipments which could be safely relied upon at Port Kembla would be the shipment over sea in large vessels? Yes; and that is why I think that more than one-half of the output of the collieries would be shipped from the harbour.
4274. Is it not probable that if the harbour is constructed at the expense of the State, the people at Bellambi and Bulli might say they also have a right to a harbour? The general feeling is that each ought to have a harbour at his own colliery; but that does not do. They might bring the zone system into operation, and a colliery being an extra 2 or 3 miles distant would not make any difference.
4275. Does it not seem reasonable to expect that if a harbour is constructed the rates will be so arranged as to make no difference? It will be necessary to do that.
4276. Do you think that a harbour on the south coast is necessary? I think so.
4277. And you are in favour of which? I believe in giving every encouragement to private enterprise, and I am convinced that in the main a better harbour could be made at Lake Illawarra than at Port Kembla. I gave my reasons for saying that yesterday. Port Kembla is essentially an artificial one from beginning to end.
4278. And so the other will be? Not so much so. At Port Kembla the breakwaters will be side on to the sea. They will be very costly and the range of big vessels is something terrific on wharfs. We have experienced that even in Wollongong Harbour. The range is so bad there that some time ago they had to sink a vessel to prevent her from becoming a complete wreck in the harbour.
4279. How are you to make vessels fast in this single breakwater harbour? If you have short jetties on to rubble breakwaters, I do not see anything very permanent in that. It is not going to be an easy job to lay down plant to hold big vessels.
4280. Your evidence practically resolves itself into this,—that if the Illawarra Company can carry out their proposed work that will be the most suitable harbour? I think so.
4281. Failing that, you are quite willing for the Government to step in and make a harbour at Port Kembla? Yes.
4282. *Mr. Roberts.*] Are you, directly or indirectly, interested in any way in the Illawarra Harbour and Land Corporation? In no way whatever.
4283. Have you ever been employed professionally by that company? No.
4284. I understand you to prefer the Lake Illawarra scheme to the one that has been submitted for providing a harbour at Port Kembla? Yes.
4285. When you formed that opinion did you contemplate that the depth of the water in Lake Illawarra would be 30 feet? Yes. The first day that I set eyes upon Lake Illawarra, a little over ten years ago, whilst taking a survey of the country from the top of Mount Kembla, I made the remark that if that sheet of water was in any other part of the world it would have been made into a harbour. I have always thought that there would be no difficulty in making that a good harbour.
4286. Would you consider it a good harbour if the depth of the water was anything less than 30 feet? Not for the requirements of the present trade.
4287. Have you ever heard that there is any likelihood of 30 feet of water being obtained there? Some borings, I believe, have been put down, and I am told that the bottom of the lake is mud, and that there will be no difficulty in dredging.
4288. When you say there will be no difficulty in dredging it, what depth have you got in your mind? Even suppose it was stone, it could be deepened.
4289. Are you not aware that, according to the Act of Parliament, the minimum depth is to be 15 feet? Yes.
4290. Would that be of any use for the requirements of the south coast? Only for small vessels, and we can load them at the present jetties.
4291. You are of opinion that nothing less than 30 feet would suffice? We want a harbour to put us on an equality with Newcastle. We want a harbour into which we can take any vessel that comes to Australia for coal. I suppose that the biggest vessels that come here would draw about 27 feet.
4292. Have you made any calculations as to the cost of such a work as you think should be carried out at Lake Illawarra? I have not.
4293. Do you regard the construction of the proposed eastern breakwater as altogether inadequate or almost useless for providing a safe harbour for sailing vessels and large steamers? I am quite sure that there is not a gentleman who has given evidence in reference to the eastern breakwater who does not know that it will be absolutely necessary to have the other breakwater. I do not think we should ever see the accommodation which is necessary to give us an insurable port where you can have large sailing vessels—and the tendency is now to build large sailing vessels—unless we have a double breakwater.

4294. Are you referring to the outward traffic, or have you in contemplation the import trade? Both the import and the export trade.

4295. Do you not think that the eastern breakwater would give sufficient protection for the export trade? I do not think so. A large vessel could not lie at anchor without a tug alongside of it. There is no doubt that the eastern breakwater will afford a measure of protection, but we have not loaded big sailing vessels down there yet.

4296. Would not sailing vessels be able to come under the lee of that breakwater and remain in perfect safety? They could not lie there.

4297. Are you aware that Port Kembla is regarded as having remarkably good holding ground? Yes.

4298. Seeing the shelter that will be given, will not vessels be attracted there? No doubt they would, but it will not be a harbour in the fullest sense of the word. I should like to see a harbour in which vessels could lie and await their turn. During the strike we have had vessels waiting in Sydney for months. I do not know of any similar port in the world with a single breakwater in an open sea.

4299. It will protect the port from the east and the south-east winds, but the north-east wind is not considered tempestuous? No; as a rule it does not bring up a very heavy sea.

4300. Except as regards the north-east wind, would not that breakwater afford every protection from stormy weather? I do not think it would afford enough. With a single breakwater there would be a frightful range there. There will be an everlasting whirlpool in that place. It is my opinion that the very construction of the breakwater will make a current in that place.

4301. Do you say that Lake Illawarra, taking Tallawera Point, occupies a more central position for the shipment of coal than Port Kembla? Not for the existing collieries. For the existing collieries Port Kembla is somewhat nearer, but you do not make a harbour for any particular collieries. If you make a harbour it will have to do for the next century, and taking the extent of the coal-field with the immense quantity of Crown lands down to the south, and the fact that the northern portion of the field is in a rapid state of consumption, with only four good collieries near to Port Kembla, I think that the lake will be more central as regards the coal-field as a whole.

4302. Do you disagree with the opinion given by Professor David that the good coal of the Bulli coal mine, west of a line running from Coal Cliff southwards, is limited on the south by Mount Kembla? That is the top seam. Does he refer only to the top seam.

4303. No, to them all? Then I most decidedly do not agree with him.

4304. Do you regard the coal south of Mount Kembla as suitable for smelting purposes? There are seams there very suitable for manufacturing coke. They do not smelt with coal. There are seams south of Mount Kembla quite as good for manufacturing coke as any to the north. Some of the coal to the north of Mount Kembla is no good for coke at all. Mount Kembla coal will not coke.

4305. What is the quality of the coal at Dapto Creek? The lower seams there improve down towards Jamberoo.

4306. *Mr. Black.*] I understood from your evidence yesterday that owing to the way in which the coal has been got in the Illawarra district a harbour on the south coast would not be of such great benefit to the colliery owners as we anticipate? I did not intend to convey that idea.

4307. It was my impression that you thought underground haulage was so expensive that it will be better to sink shafts and bring the coal to the surface at a greater distance from the coast than they now do? Some of those mines have been in operation for a quarter of a century, and they are getting a long way into the mountain, consequently the longevity of these mines is limited. There is a day coming when it will be too costly to produce that coal, and then they will not be able to compete with new collieries. Then these collieries will have to stand idle.

4308. You conveyed the impression that underground haulage was much more expensive than overground haulage? Certainly.

4309. And that if they continue to work they would have to sink shafts instead of bringing the coal through the tunnels? Yes. If the seams north of Kembla are to be worked when it becomes too expensive to work the mines through the adits, the working must be done by sinking shafts on the top of the mountains, and the coal will have to be brought down by some means to the harbour.

4309½. In some cases it will be almost as expensive to convey the coal from the shafts to the seaboard as to convey it to Sydney? Yes; it would involve the expense of a railway over the mountains.

4310. Under such circumstances as these the construction of a harbour would not be of very great assistance? If you constructed a harbour at Bellambi or north of the existing field, you would be dealing with an exhausted coal field. But by making a harbour to the southward you are affording convenience for existing collieries, and offering facilities for the development of Crown property which is at present lying idle.

4311. The presumption is that that property contains coal? Yes. If that magnificent coal territory was in Melbourne or West Australia they would ascertain before they spent any money on a harbour whether there is payable coal in it. It would be very easy to prove the existence of coal south of Mount Kembla by putting down a series of diamond drill bores on the top of the mountain. That would demonstrate the whole matter, and put it beyond a shadow of a doubt. I do not think it right that the impression should get abroad that that immense coal field belonging to the Crown is of no value.

4312. Do you not think it would be inadvisable for the State to spend large sums of money in the construction of a harbour until it is proved that on the Crown lands there exist large quantities of unexploited coal? If we have nothing to depend upon for a return upon the capital invested but the coal in the existing mines you had better not make a harbour at all.

4313. Then I may conclude from your evidence that the expenditure of a sum variously estimated at from £250,000 to £500,000 in making a harbour on the south coast may be looked upon as nothing but a State bonus to half a dozen collieries, most of which are now worked out? Yes, that is if you are satisfied that there is no coal except in the existing collieries, but I think there is. I do not think you would be warranted in making a harbour for half a dozen collieries.

4314. You said in reply to Mr. Hassall that in the event of the failure of the company to construct a harbour at Lake Illawarra, you see no objection to the construction by the Government of a harbour at Port Kembla? Yes; but I am satisfied that we have 250,000,000 tons of coal south of Kembla. I am satisfied that the bulk of the coal for the next century is to come from the south of Kembla.

4315. Would it not be better for the Government to have some better assurance than your mere statement? Certainly.

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Esq.

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- J. Evans, Esq.
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4316. I understood you to say that a harbour at Port Kembla would be incomplete with only one breakwater? Yes.
4317. And that even with two breakwaters it could never offer the security of a land-locked harbour? Well, it would not be absolutely secure, because there is always a danger in very heavy seas of a breakwater carrying away.
4318. I suppose you are aware that Sir John Coode said years ago that the position of the southern coal trade did not justify the expenditure of a large amount of money in making a harbour? Yes.
4319. Do you think there has been any improvement in the trade since then? Yes; there is an increased demand for the coal, and the output last year was greater than ever before.
4320. Was not that due to the fact that the Newcastle mines were not working? Not altogether.
4321. Is it not true that there has been a decrease in the quantity of coal to be worked through its being continually extracted? Certainly. Every ton you take away makes a ton less to come.
4322. If before that harbour at Port Kembla can be made it will necessitate the construction of two breakwaters, and as you think it necessary that the Government should purchase the jetties already in existence, entailing the resumption of some portions of water frontage—if all that expenditure be gone through, which according to the estimate will mean a cost of about half a million of money, what annual return on that expenditure do you think will be a fair one to the State? I do not suppose you could borrow the money under $3\frac{1}{2}$ per cent., and it would be fair to get something over and above that, say, 5 per cent.
4323. We will assume that the total output of the southern district is about 600,000 tons, and 500,000 tons of that goes by vessel—a gentleman who gave evidence here told us that he would be willing to pay 6d. per ton harbour dues;—that would mean a return to the State of £6,250 a year;—do you think that that would be a fair return on an expenditure of half a million? No, certainly not.
4324. Mr. Vickery said he thought the State was not entitled to more than 3d. a ton—that would give a return of £3,125;—do you think the country would be justified in spending such a large sum to get such a paltry return? I do not.
4325. If a million tons of coal were shipped from Port Kembla, which is very improbable, that would mean a return at 6d. a ton of £25,000? That would be 5 per cent. on half a million.
4326. Even then that would only recoup the Government for the expenditure;—there would still be a loss entailed from the cost of annual maintenance and supervision? You could add another £10,000 or £15,000, to that which you would obtain from royalties for coal from land which is now lying idle. Even from the existing collieries you would derive royalties, because they will soon have to work in Crown lands.
4327. But the more you work those mines the sooner they will be worked out? Yes.
4328. Then that would mean a diminution of the return in a few years unless new mines were discovered? Yes.
4329. Do you not think, unless it be proved to the satisfaction of the Committee that there is a great area of coal land existing in the southern district which has not yet been worked, the construction of a harbour at Port Kembla, Bellambi, or any other place at the public cost which would mean the expenditure of half a million of public money in the interest of one or more collieries, would be such a gross misuse of public money as could only be characterised as a job? I am perfectly clear upon that. If you have not sufficient evidence to convince you that there is coal in the district other than that in the existing collieries, I do not think that you will be warranted in constructing a harbour of that magnitude. It is evident that it would cost half a million of money to make the proposed harbour; perhaps a great deal more. There was not much show at Wollongong of an expenditure of half a million. You would require a million tons of coal at 6d. a ton to be shipped from the existing collieries to make that harbour pay interest on the cost of construction. If you are satisfied that there is no other coal than that in the existing collieries I do not see how it is going to be a remunerative undertaking. If you are not satisfied that there is coal to the south of Mount Kembla you would not be justified in spending this large amount of money. The Government should take steps to prove the Crown land in that district, and this could be done by putting down three or four bores. Four bores put down to a depth of 1,000 feet each would demonstrate beyond a doubt as to the continuity of the coal seams southward. They could be put down away back, where there is not the intrusion of volcanic rock which we have bordering the sea.
4330. If you were a Member of the Committee your recommendation to the Government would be that they should do nothing in regard to harbour construction until the existence of unexplored coal-fields on the southern coast is clearly proved? Yes.
4331. *Chairman.*] Professor David and Mr. Pittman informed the Committee that without taking into consideration the country to the south of Kembla it was reasonable to estimate that 350,000,000 tons of coal would be won north of Kembla;—what do you think of that statement? I think they are entirely wrong.
4332. Do you believe that is an over-estimate? It is an over-estimate.
4333. How do you come to the conclusion that their calculation is wrong? I stated yesterday that between South Clifton and Woonona a quarter of a million has been spent to prove the existence of coal, and the quantity contained in the remaining area is dependent upon the distance that they go back westward. Perhaps Professor David calculates that it is possible for the mines to be worked for a distance of 5 or 6 miles back.
4334. He says 5 miles? It cannot be done properly. Three miles is the outside limit.
4335. *Mr. Hoskins.*] Are they not working more than 3 miles under the sea in Cumberland and Durham? No.
4336. *Chairman.*] If they have worked 5 miles in other parts of the world could they not do it here? It is different here. These seams are dipping. What I wish to point out is that a colliery which is working 5 miles into the mountains cannot produce coal at the same price as a freshly opened colliery, and must become unremunerative.
4337. Can collieries in other parts of the world win coal at a distance of 5 miles underground? It is done in one or two exceptional cases.
4338. It is a question of cost? Yes.
4339. Do you believe that 5 miles west is too far to go? I believe it is too far to go, and no doubt the difference between Professor David's estimate and mine is as to the distance to be worked.
4340. You informed the Committee that you calculate that south of Kembla there will be 250,000,000 tons of coal available? Yes.

4341. What is the basis of that calculation? There are two seams of coal there of an aggregate thickness of something over 10 feet, and it has been proved by analysis to be of a marketable quality, and it will make good coke.

4342. Since the mines commenced further exploration has exposed faults that were not expected? Yes. We had to abandon the Bulli colliery in consequence of the discoveries that were made.

4343. Supposing your estimate as to the quantity of coal south of Kemplab is correct, and Professor David and Mr. Pittman are wrong, what evidence have you as to the continuity of the coal to the south? The only evidence that I have is from examinations which I have made extending over many years. I and others who are fully acquainted with that field have made investigations. There has been absolutely nothing done either by Government or by private enterprise to prove the existence of anything down south. I think it is a most unwise policy to condemn hundreds of square miles of territory because coal taken from a particular outcrop which has been exposed to the action of the weather was found to be inferior.

4344. You regard it as theoretical, and to some extent as problematical? Yes, and to a large extent practical, because it can be demonstrated. I will give you the basis of my calculation. The country that I traversed contained about 10 feet of workable coal in two seams. I have examined the outcrop in various places for a distance of about 16 miles, and I find that the coal is fairly continuous. In some places the seam shows bands, but I estimate that there is from 10 to 12 feet of workable coal, the ash in which will not exceed on the average from 9½ to 12 per cent. for a distance of 16 miles. That will yield about 10,000 tons per acre.

4345. Is that the Bulli seam? No.

4346. Then how are you justified in comparing a seam to the south of which you have had no experience with the Bulli seam to the north of which we have had experience? If you are satisfied as to the continuity of the seam, then by specific gravity you can always tell the quantity per acre.

4347. You have investigated the outcrop? Yes.

4348. Is the lake centrally situated for the existing mines? Not so centrally situated for the existing collieries as Port Kembla.

4349. Any coal coming from Austinner, Bulli, Coalcliff, and Corinnal would have to pass Bellambi? Yes.

4350. Therefore any coal north of Bellambi will be handicapped the distance from Bellambi to Lake Illawarra? Yes.

4351. And the same applies to Wollongong and Kemplab? Yes.

4352. Therefore the lake is not centrally situated for the present trade? No, unless further canal construction were effected from the northern end of the lake.

4353. As regards the future trade, it depends upon the outcrops turning out as you anticipate? Yes.

4354. Where was your analysis made? At the Department of Mines on the 23rd November, 1893.

4355. *Mr. Black.*] I suppose you attach some importance to the statements of Professor David? Most decidedly, but I have evidence of the continuity of the coal south of Kemplab.

4356. Professor David was asked several questions, which I will read with his answers.—

3193. *Mr. Humphrey.*] Am I correct in coming to the conclusion that you look upon the coal south of Port Kembla as practically valueless? I do.

3194. Is there any possibility in your mind of any coal being discovered there of a quality suitable for export? I think the chances now are so remote as to be practically negligible.

3195. There is no sign of the Bulli seam south of that point? There is a very thin seam on Mr. Biggar's land, which was taken to be an equivalent to the Bulli seam, but it is only 2½ feet thick. It is between Wongawilli and the Lake Illawarra company's ground land.

3196. Can you give any idea whether the seams of which you have given a description here to-day correspond with lower seams further north to seams underlying the Bulli seams? Yes, they do. The present ones can be correlated with the same seams further north. Further south the seams come together very much, so as to make the process of differentiation a very difficult one.

3197. *Mr. Roberts.*] How far south did you make your explorations; did you go as far as Jervis Bay? Yes, I went as far as the head of Clyde River a few years ago, and also examined further north the Cambewarra Ranges. I was reporting then on the question of putting down a bore on the Wandra-Wandian Creek.

3198. I refer more particularly to your recent visit;—how far south did you go? Broger's Creek was the farthest point south.

3199. What is the furthest point south that workable coal has been found at? As far as I am aware no workable coal has been found south of Mount Kembla. Even under Mount Kembla itself the coal is inferior. The inferiority has already set in there.

3200. Are the Committee to understand that the further you go south it gradually dies out? Yes.

3201. When you say that the coal is not suitable for export, are you speaking from a commercial point of view? Yes.

3202. That it would not be used by any shipping company? It would not be used by any shipping company because the percentage of ash is so far in excess of that of the coal which is now being used for economic purposes.

If that evidence is borne out by fact, and I do not say that it is, do you consider that there would be any justification for the Government to construct a harbour at Port Kembla? No.

4357. *Mr. Wright.*] I think you said that the coal which you first had analysed was taken from the outcrop? Yes. Brownlee's coal in 1889.

4358. Subsequently there was some work done there, was there not? Yes; there has been a tunnel opened on the place.

4359. Where was the second sample taken from? From the face of the coal.

4360. How far was it in? Not more than 100 feet. That was in 1895.

4361. Did it continue the same? It showed 1 per cent. better in ash.

Mr. Thomas Downie, Wharfinger at Port Kembla for the Southern Coal Company, sworn, and examined:—

4362. *Chairman.*] What are you? Wharfinger for the Southern Coal Company at Port Kembla.

4363. How long have you been there? About six years. I have been at Port Kembla since 1882 as wharfinger for the Port Kembla Company and the Southern Coal Company.

4364. *Mr. Clarke.*] Can you tell the Committee how many vessels loaded at Port Kembla in the year 1896? I cannot supply that information.

4365. Can you supply information as to the companies you represent? Yes. For 1893 there were 173 foreign vessels loaded at the Southern Coal Company's wharf; 1894, 113; in 1895 there were 110; for 1896 I have not got the complete returns. The ships would be larger for 1896 than in previous years.

- Mr. T. Downie.
14 Jan., 1897.
4366. Is the trade increasing or decreasing? Since the construction of the Southern Company's wharf and getting deeper water the tendency has been to increase the tonnage of the vessels loading there. In fact we take any cargo vessels afloat.
4367. Has your trade been foreign or intercolonial? Most of our trade would be intercolonial. We have loaded ships from Singapore, Bombay, Madras, Fiji, and other places.
4368. Can you give the number of tons shipped from the Southern Coal Company's wharf? In 1896 the number of tons was 131,377.
4369. Do you consider it a safe port? In its present condition it is not anything like a safe port.
4370. Do vessels when loading have to leave and go to sea without their loading being completed? Yes; on several occasions vessels have had to go from the wharf and lie to an anchor. In some instances they have had to go to Sydney for shelter.
4371. Can you give the number of days in a year when vessels cannot load there? We might say from 25 to 30 days in a year.
4372. What is the greatest depth of water at your jetty? Thirty-three feet at low water.
4373. Then I presume it is possible to load almost any vessel there? We can load larger vessels than can enter any other port except Sydney. We can load vessels that cannot enter the harbour at Newcastle.
4374. Vessels up to 5,000 or 6,000 tons? The largest ship we have had there is the *Indrani*. She had 6,500 tons of cargo, and we bunkered her with 1,200 tons of coal.
4375. Would it improve the port if the proposed eastern breakwater was made? That would be a great improvement; but my own idea is that the breakwater as proposed would be a little too much towards the sea. It would be far better to keep it a little further in shore. It would then cover the 2½-fathom patch.
4376. If the breakwater was constructed as shown on the plan would the harbour be safer for vessels? Yes; but it will cause a hidden danger in the harbour. The breakwater should be brought over the crown of the patch. It would be a good protection against south-easterly weather.
4377. Do sailing vessels load at Port Kembla at the present time? Only small coasting vessels. The only foreign vessel loaded at the company's wharf was the *Olga*.
4378. Is it safe for sailing vessels there? Not unless there is a steamer in attendance.
4379. If the breakwater were constructed do you think it would be safe for vessels to load there? A vessel could lie there with perfect safety with the eastern breakwater.
4380. Do you ever unload sailing vessels there? No; the port is not adapted for an import trade.
4381. Do the vessels come in ballast? The steamers have water ballast, which they pump out as we load.
4382. At present it is not possible for sailing vessels to land ballast? No; if a sailing vessel was coming from Sydney they would put stiffening into her at Sydney.
4383. During your time at Port Kembla, have any vessels been lost there in going in or coming out? No accident of any description has occurred at Kembla.
4384. Do you consider that if a breakwater was constructed it would be much safer not only for steamers but also for sailing vessels? Yes. If we had the eastern breakwater sailing vessels could come and load with safety, and it would be of great assistance to steamers.
4385. Are you aware that a great deal of sea-borne coal goes by sailing vessels? Yes. That is the reason why we are agitating to get a harbour on the south coast. We want to get those large sailing vessels there.
4386. Do you think in the public interest the breakwater ought to be constructed? Certainly.
4387. You want to have all the facilities for loading vessels that they have at Newcastle? Yes. That is the idea. The district and the whole country would be gainers by the breakwater being constructed.
4388. You see a second breakwater provided for on the plan; would that be really necessary? No. The northern breakwater will not be necessary. With the eastern breakwater, a vessel could make the harbour and bring up in good holding ground. The harbour is protected from the north-west by the mountains.
4389. Are you acquainted with Lake Illawarra? Yes. I am fairly well acquainted with it.
4390. In the event of a harbour being made by the Illawarra company for vessels drawing from 25 to 30 feet would it be as good a harbour as Port Kembla? I say that the Lake Illawarra scheme is impracticable. It is impossible to carry it through. The channel they propose to make is to be either 100 or 150 feet wide. That is not a sufficient width to allow vessels of the larger class to enter. When entering light the wind would catch them and they would sway to one side because they would not have sufficient speed to steer by.
4391. Would it be liable to silt up during an easterly gale? In 1879 one of the Spier's vessels was lost there. She was a schooner of 90 tons burden. I have stood on the beach and touched the top when the whole of the hull and the mast has been covered with sand.
4392. It would take a large amount of money to form a harbour there? It will take far more money to make a harbour there to dredge the Lake and construct retaining walls than it would take to construct one breakwater at Port Kembla.
4393. You are of opinion that the entrance would be too narrow to enable ships to get in with safety? Yes; and if the depth is to be 15 feet it will be quite useless.
4394. They propose to deepen it to 25 feet? At the Southern Coal Company's wharf we have loaded vessels drawing 26 ft. 6 in. To get a vessel of that size up the channel in Lake Illawarra you would require from 3 to 4 feet under her.
4395. *Mr. Hassall.*] Would not a westerly trend be more satisfactory in the eastern breakwater than its present direction, as shown on the map? In my opinion it ought to be brought more in shore.
4396. *Mr. Roberts.*] Does it not appear to you that if a breakwater was constructed as suggested by Mr. Hassall the harbour would be somewhat contracted? It would be reduced somewhat in size, but we should have plenty of room.
4397. But the space for ships coming in would be limited? There would be plenty of room for entering. Vessels could get under weigh comfortably there.
4398. The breakwater is three-quarters of a mile from the shore. Do you think that that distance would bear contraction? Yes. It should be contracted sufficiently to bring the breakwater in over the patch. By building on that patch you remove all danger.
4399. In your opinion, the northern breakwater will not be necessary? At present, the eastern breakwater will be sufficient.
- 4400.

4400. Do you not think it would be wiser to construct the eastern breakwater in such a way that if a northern breakwater would be necessary hereafter it can be constructed without having the harbour space limited? You can build the eastern breakwater, and afterwards come in with your northern breakwater. The eastern breakwater could be brought in, say, by one point of the compass—that would mean a reduction in the area of the harbour by from 5 to 7 acres.

Mr.
T. Downie.
14 Jan., 1897.

4401. Would it lead to the existence of calmer water? It would. There would be no fear of seas heading round into the harbour. They would go past the breakwater, and shoot right into the bay.

4402. I think you will admit that the making of the port by sailing ships would be rendered more difficult if a north-westerly trend were given to the eastern breakwater? Not necessarily. A vessel would be able to sail three or four times her own length in the bay.

4403. Is it not a fact that most shipmasters have a great objection to getting too near the shore? There is plenty of water there for them to come in.

4404. Would there not be a large break of the sea some distance from the shore? No. The water carries its depth well in shore.

4405. How far from the shore do the rollers set in? That depends upon the strength of the "send."

4406. How near the shore could a ship of 2,000 tons safely venture in sailing in? Within a quarter of a mile with safety.

4407. Are you of opinion that if a clear space of half a mile were left within the breakwater and the shore that would be sufficient? It would be ample. Three-quarters of a mile is shown on the plan, and that is ample room for vessels to work in.

4408. Are the Committee to understand that that three-quarters of a mile can be contracted to half a mile? No; one width of the breakwater, as shown there, will land it on the shallow patch.

4409. Do you think that if the point of the breakwater were brought in 220 yards, there would still be sufficient room to manipulate sailing vessels? Certainly.

Mr. George Sinclair, Wharfinger at Port Kembla for the Mount Kembla Coal Company, sworn, and examined:—

4410. *Chairman.*] What are you? Wharfinger for the Mount Kembla Coal Company at Port Kembla.

4411. How long have you been there? Nearly ten years.

4412. You have a full knowledge of the bay? Yes.

4413. You have heard Mr. Downie's evidence? Yes.

4414. Do you agree with him? Yes. I agree with everything he said, more especially as to bringing the breakwater more towards the shore, so as to carry it over the top of the patch and to make the seas strike it at right angles.

4415. Is there any part of Mr. Downie's evidence that you desire to emphasise or to correct? No; I do not think he said anything that I could correct.

4416. Is there anything that you think it necessary to say? I believe that everything he said was right.

4417. Do you believe that if the proposed eastern breakwater were erected vessels would lie in comparatively smooth water? Yes.

4418. Do many storms come from the north-east? The wind from the north-east makes a choppy sea, but it does not interfere with loading operations.

4419. If the eastern breakwater were constructed would Port Kembla be a suitable port? It would be a suitable port for loading coal.

4420. But you think that if the point of the breakwater were brought in 220 yards that would give you ample room to manipulate sailing vessels? There would be ample room for sailing vessels to come in and bring up.

4421. And the curve on the breakwater, as suggested, would be partial protection against north-east gales? Yes.

4422. And, therefore, more advantageous to the shipping lying in the port? Yes.

Mr.
G. Sinclair.
14 Jan., 1897.

FRIDAY, 15 JANUARY, 1897.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.

The Hon. JAMES HOSKINS.

The Hon. CHARLES JAMES ROBERTS, C.M.G.

The Hon. DANIEL O'CONNOR.

HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.

JOHN LIONEL FEGAN, Esq.

THOMAS HENRY HASSALL, Esq.

GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

FRANK FARNELL, Esq.

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

Robert Amos, Esq., Contractor, sworn, and examined:—

4423. *Chairman.*] What are you? A public works contractor.

4424. *Mr. Lee.*] Have you contracted with the Illawarra Harbour and Land Corporation for the construction of harbour works at Illawarra? I have.

4425. Would you tell the Committee what is the nature of the work you have to do under that contract? In the first instance, the construction of certain sections of railway which have been partly constructed and are complete; thereafter the excavation of a channel, the construction of breakwaters and training-walls, the construction of jetties, and other general work for harbour purposes.

4426. What is the length of the proposed channel? About a mile and a quarter.

4427. And the depth? Twenty-five feet 6 inches below mean water. That is my contract.

4428. What is to be the width of the channel? 100 feet at the base, with a slope of 2 to 1.

R. Amos, Esq.
15 Jan., 1897.

4429.

- R. Amos, Esq. 4429. *Chairman.*] What is the depth of water? The water in the Lake averages about 12 feet.
4430. *Mr. Lee.*] In addition to the channel have you contracted to excavate the basin inside? Yes.
- 15 Jan., 1897. 4431. What area? Approximately from 25 to 30 acres.
4432. To what depth? The same depth.
4433. Have you any objection to state the amount of your contract? The gross amount of the contract is £200,000. I am being paid by schedule rates, the total amount of the work being estimated at £200,000.
4434. Within what time have you to complete the work? Up to the 23rd December, 1898. The time originally fixed was the 23rd December, 1897, but there was a year's extension.
4435. You are aware that the privileges granted to the company expire in 1898? Yes.
4436. And the object is to have the work completed before those privileges expire? Yes. It will be well to understand that the Act only provides for a depth of water of 15 feet, and not 28 feet, as now proposed to be provided.
4437. Do you contemplate that you will have all this work completed within the contract time? I question very much if I can with a depth of water of 28 feet.
4438. When did you enter into the contract? I began negotiations in June, 1893, and the contract was signed on the 16th August, 1895.
4439. Have you done any work under the contract? Yes, to the amount of £25,000 or £30,000.
4440. What portion? The railway portion.
4441. You have not started the harbour yet? No; except a small portion of the tie-bank, to the amount of about £800.
4442. Do I understand that you do not see your way clear to have the whole of the work completed by December, 1898? So far as the specification under the Act goes I could—that is, providing for a depth of water of 15 feet.
4443. But you have entered into a contract far in excess of that? I have entered into a contract for a depth of 25 ft. 6 in. mean tide.
4444. Do you contemplate being able to finish that contract by the end of December, 1898? It depends altogether upon when I get instructions to proceed. Give me instructions to-morrow, and assure me of my money, and I think I can.
4445. At the present moment you do not know when you are going to start? I do not.
4446. If you have entered into a contract with the corporation is it not obligatory on your part to proceed with the work? If they find me the money or security.
4447. Then the work will depend entirely upon whether the money is available? Yes, that is about it.
4448. If the money is not forthcoming the work will not be done—that is the long and short of it? Yes.
4449. If you had the whole of the money available to-morrow would you be able to complete the contract and provide a depth of water of 25 ft. 6 in. by the end of 1898? Yes, certainly.
4450. Do you think you would be able to dredge it alone within that time, to say nothing of other works? The other works would go on simultaneously with the dredging.
4451. Would you be able to pick out the mud from that area you have described within the period mentioned? Yes. If you give me more money I will do it in half the time. It is all a question of money.
4452. It is not always a question of money in works of the kind,—it is a question of the number of men you can put on? It is not a question of men at all—it is a question of machinery; I do not suppose you would want thirty men altogether on each shift of the dredge which I propose to work continuously by two or more shifts, with the electric light. I may tell you that I have made every arrangement in San Francisco for the shipment of the necessary machinery. All the appliances are in readiness, provided I am satisfied that the money is forthcoming.
4453. In other words, you are ready to carry out your portion of the contract when the corporation are ready to carry out theirs? If they find the money I will do the work, and do it within the time.
4454. Do you contemplate that you will have to proceed with your contract? I hope I will have to proceed with the contract.
4455. Do you think you will have to carry it out? I hope I shall. I have already told you it is entirely a question of money—the floating of debentures, or something of that sort, I suppose. These are matters outside of my scope. I am a contractor.
4456. You have nothing to do with raising money? Nothing whatever.
4457. Supposing it were found that the channel and the basin would have to be excavated to a depth of 27 feet, how much longer would it take you to do the work? Not very much longer.
4458. Supposing the depth had to be extended to 30 feet? Give me six months more and it would all be done. If you wanted a depth of 30 feet you would have to give a greater base. Very likely you would have to make the base 120 or 130 feet.
4459. But that would very largely increase the cost? It would involve a certain amount of increased cost unquestionably.
4460. I suppose the railway portion of your contract has been carried out and provided for satisfactorily? I have not got the money, but I have the security, which is satisfactory to me.
4461. At all events, that portion of the work has been carried out? Yes.
4462. I suppose you would not care to express an opinion as to whether, if the work were carried out, the harbour would meet all requirements? If I expressed an opinion at all it would certainly be in the affirmative. I think it is a splendid scheme. It only wants to be carried out.
4463. You think if it were carried out it would meet the requirements of the southern coast? It would.
4464. The object of our enquiry is to ascertain: first, whether a port is necessary on the southern coast; and secondly, where is the best place for such a port to enable the coal trade to be carried out satisfactorily? I think in the first place that a port is very necessary; and in the second place, I do not think there is a better or more sheltered place than Lake Hawarra.
4465. I understand there is a question about Port Kembla,—do you know of any ocean breakwater that has yet been constructed that has been any good? There are four or five in New Zealand; they are all in financial difficulties, and none of them are much good as a harbour.
4466. Are you prepared to give any instance of a coastal breakwater that has not stood the action of the sea? Take the breakwaters at Oamaru, Timaru, New Plymouth, and Napier—is either of these a success as a harbour.
4467. You say that neither of these has been a success? I do not think so. They are all in financial difficulties, notwithstanding large grants from the Government.

4468. Leaving the financial aspect out altogether, have they not stood the practical test? The breakwater at Timaru has carried away; they wrecked a ship.
4469. But of what was that constructed? Blocks of artificial stone made of gravel and cement.
4470. What was the depth of water? I could not tell you.
4471. Do you know of any other case? No. The breakwater at Port Lyttleton has stood very well, but that was a natural harbour simply improved by the breakwater, the same as Newcastle.
4472. If the proposed breakwater at Port Kembla were carried out you have no reason to suppose it could not stand? No. I would be very pleased to be the contractor to carry it out.
4473. You think that it is quite possible that if properly constructed it would stand the ordinary seas? Properly constructed. With plenty of money to back you up you can make a good harbour.
4474. To admit otherwise would be to admit that the proposed breakwater at the entrance to Lake Illawarra would not stand? It does not follow at all. In the case of Port Kembla the sea will come sideways on to the breakwater, but at Lake Illawarra it will come end on.
4475. A southerly wind would act upon the proposed direction of the Illawarra breakwater? In a southerly wind Windang Island is a natural breakwater of itself.
4476. You have said that about £30,000 worth of work has been done out of your contract of £200,000; by what is that £30,000 represented? By the railway which has been constructed.
4477. You have already sworn that you have not done any portion of the harbour works under your contract? No; I explained that I had done work in connection with the tie bank to the amount of £700 or £800.
4478. *Mr. Humphery.*] With the appliances you intend using how much longer will it take you to dredge to a depth of 28 feet than to a depth of 15 feet, as provided by the company's Act? Approximately I should say eight or ten months.
4479. Do you think within the terms of your contract you would be able to dredge a depth of 15 feet by December, 1898? Easily. I have only to send a telegram to San Francisco to get the machinery.
4480. And within eight months of that date you would be able to complete the dredging to a depth of 28 feet? Eight months from December, 1898.
4481. To admit of the entrance of vessels drawing 25 feet of water? Yes. Dealing with marine matters you cannot estimate with the same correctness as you can in dealing with land matters.
4482. Does your contract include the widening of the lake to admit of the navigation of vessels of 25 feet draught? Yes; in fact of 28 feet draught.
4483. What would be the width of the opening? 450 feet.
4484. And for the whole of that width you will have a depth of 28 feet? Yes; 25 feet 6 inches at mean tide, and 28 feet at high tide.
4485. *Mr. Wright.*] How long is it since you were prepared to go on with your dredging operations? I suppose I have had the plans and particulars from San Francisco for twelve months. I am not prepared to go on with the work now. It would take at least eight months to get the machinery here.
4486. The cause of the delay, I suppose, is the want of money? You have struck it.
4487. How long has that caused the delay? I have been negotiating since 1893, and in 1895 we entered into the contract.
4488. So that for nearly two years you have been waiting for the wherewithal? Yes.
4489. Have you any idea when it is likely to come forward? I am not up in financial matters. I am a contractor.
4490. You do not care about giving an opinion on the question? No. I do not think the present inquiry is doing any good in the direction of helping to raise the money. It is delaying operations at the present time.
4491. I suppose the company at the present time have not the money? They have not. At least I should say so—they did not give me any.
4492. Do you think it is likely you will ever get authority to go on with the work with the money at the back of it? I have got the money at the back of what I have done, so I am not going to decry the company who have so far stood by me.
4493. So far the company has met its obligations? Yes. I have security over the whole of their property for the work I have done and £5,000 which I advanced to the company. It is solvent at the present time, so far as I know.
4494. Is there any likelihood of their being able to find the additional money required to enable you to complete your work? If this Committee report in favour of a harbour being constructed by the Government I do not think there is. If the Port Kembla scheme is to be carried out by the Government I should fancy that the man would be mad who would put his money into the Illawarra scheme.
4495. You think that the Port Kembla proposal then is seriously damaging the other one? Very seriously damaging the prospects of the other one.
4496. If the Port Kembla scheme is approved by the Committee there is no chance of the other scheme being carried out? No. I should not like to put money into it.
4497. If on the other hand the Port Kembla scheme is rejected by the Committee you think that there is a reasonable chance of the other scheme being a success? I should think so. If I had money I should put it into the scheme.
4498. I suppose you are going to do the dredging work by means of sand-pumps? Yes.
4499. *Mr. Hassall.*] Have you taken soundings at the entrance? I have.
4500. At the depth of 28 feet below mean water mark did you find sand or mud? We forced the rods down to a depth of 21 feet through sand without meeting any rock.
4501. When did you commence operations in connection with this work? In September or October, 1895. I completed the work so as to comply with the Act which provided that the railway should be completed by the 20th December, 1895.
4502. The railway is completed from a point inside Illawarra Harbour to the smelting works, or to the coal mines? The Government railway. The branch to the smelting works is a separate contract altogether.
4503. With regard to the operations commenced by you at the entrance to Lake Illawarra, did you do much work there? Very little. Under a previous contract work was done to the amount of £1,500 or £2,000.
4504. Did you take over the work the previous contractor left uncompleted? Yes, and carried it out until I was stopped. I did some £850 worth of work.

R. Amos, Esq.
15 Jan., 1897.

- R. Amos, Esq. 4505. I presume you have inspected Windang Island? Yes.
- 16 Jan., 1897. 4506. Of what does the material there, which has been put into the breakwater, consist? It is very good stone.
4507. There is a good deal of waste material on Windang Island? Yes.
4508. Material that is soft, and which when exposed to the water breaks up? Some of it is of that description, but as you get into it the material is much stronger. It is more affected by the wind than by the water. Under water it is strong and hard, but the stone which is exposed to the air seem friable to some extent.
4509. Breaks up and crumbles away? I do not think it crumbles away, but it is much more friable than the stone which is under the water. It is very hard and solid under the water.
4510. Do you think there is sufficient material on Windang Island to carry out the whole of the work in connection with the entrance to the harbour? According to my estimate there is.
4511. You are depending upon Windang Island to supply that material? To some extent. I have made provision for other supplies in the event of that not being sufficient.
4512. No work is being carried on at present? No.
4513. Whether or not the work goes on any further depends upon the question of raising funds? Exactly.
4514. *Mr. Wright.*] From your knowledge of large works and your experience as a contractor, do you seriously believe it is possible to make Lake Illawarra a perfectly good harbour at a moderate expenditure? I do.
4515. That is viewing all the circumstances of the case? Yes. My late firm have spent about three millions of Government money on public works, and I ought to know something about these matters.
4516. Do you think it could be made a perfectly good harbour at a cost of (say) half a million? Certainly. Of course it depends upon the accommodation you require for your shipping.
4517. You would put your money into such a scheme if the Port Kembla proposal were not sanctioned? Yes. If the Port Kembla scheme is to go on, with the Government at its back, of course I would not.
4518. *Mr. Humphrey.*] How did you ascertain that there would be a difference of 5 feet between high and low water? I took the figures given by the Department. Personally I do not think there is a rise and fall of 5 feet in the Lake.

Cecil West Darley, Esq., Engineer-in-Chief for Public Works, sworn, and further examined:—

- C. W. Darley, Esq. 4519. *Mr. Roberts.*] Would you mind mentioning to the Committee the breakwaters in Australia that you have constructed, or with which you have been connected professionally? Those at Newcastle, Lake Macquarie, Moruya, Trial Bay, and the Clarence and Richmond Rivers.
- 16 Jan., 1897. 4520. Have you been concerned in the construction of any breakwaters in any other part of the world? Not directly, except at Swansea, in South Wales.
4521. In all the cases mentioned have the works been a success? So far they have been a success. A great many of them, of course, are not yet completed.
4522. Do you know anything of the breakwaters in New Zealand—those for instance at Oamaru and Timaru? I have seen them.
4523. The Committee have been informed that they were carried away in heavy weather;—are you aware of the fact, and if so could you tell the Committee the reason? The breakwaters at Oamaru and Timaru suffered some minor injury, but were not seriously damaged. At Napier the breakwater has been very seriously injured. But these breakwaters in New Zealand are constructed on an entirely different principle from that proposed in this case. They are formed of great blocks of concrete which present a straight side to the sea. When a heavy sea approaches a breakwater constructed in that form there is no alternative but for the sea to roll over. It is not broken in any way, but rolls *en masse* over the straight wall with very destructive effect. It is also well known that the sea has great power in lifting large flat blocks of concrete. The flat surface is acted upon by the approaching wave with a hydraulic force which causes the block to slide. In this way blocks of concrete weighing as much as 450 tons have been floated—that is the only term by which I can express it, because it is distinctly a floating action by hydraulic force. This occurred in the harbour of Wick in the North of Scotland. The same wave that moved that block of concrete would not, perhaps, move a 20-ton block if it were angular and irregular. Experience shows that where you make a breakwater of rough work the wave becomes, as it were, torn up, and heavy seas are not so damaging in their effect. Then again, the breakwaters at Oamaru, Timaru, Napier, and other places in New Zealand are very low. They are only made about 8 feet above high-water mark. There is certainly a parapet to the sea face, but most of them are very low, and the water strikes them with terrific force.
4524. From your long experience I suppose you have no hesitation in saying that the breakwater you contemplate constructing, if this scheme be recommended by the Committee and sanctioned by Parliament, will be a success? I have no hesitation in saying so. Where good stone is obtainable I always prefer the random blocks to square concrete.
4525. Referring to the plan of the eastern breakwater, a witness examined yesterday, and I think others who gave evidence before, stated that if the breakwater trended somewhat in a north-westerly direction, it would not only take in some shallow water, but would also afford better protection from the easterly gales. On the other hand, it was stated that if the breakwater was constructed as shown on the plan, there would be some very shallow water immediately inside the breakwater? It is all deep water inside there now.
4526. I think that a witness stated yesterday that the water was very shallow towards the end? It depends upon what you call shallow. If you call 46 feet shallow it is shallow. There is no shallow water whatever about the entrance. It is all over 48 feet. Just close under the eastern breakwater there is a depth of 43 feet.
4527. You do not think you could improve that? No; I do not think it would be safe to take the breakwater further to the west.
4528. It would contract the area of the harbour? Yes; it would send ships closer down to the beach.
4529. The witness alluded to referred to a ridge of rocks just inside the proposed breakwater which he thought it would be as well to put the breakwater upon;—are you aware of the existence of any such rocks? No.
4530. Would any saving of money be effected if both breakwaters were tendered for at once—the northern breakwater and the eastern breakwater? It would be very slight.
4531. Not worth consideration? Hardly worth consideration. There would be a little saving of course.

A contractor who was cutting his work fine would distribute his plant over a larger quantity of stone. But I do not think the saving would be sufficient to justify your committing yourself to the two works at once. 4532. *Mr. Hoskins.*] Do you know the width of the Suez Canal? I think it is about 250 odd feet; but they are continually dredging, and I could not say what is now the exact width. C. W. Darley, Esq. 15 Jan., 1897.

4533. Is there much batter in the banks there? Yes.

4534. No sailing vessels are taken through the Suez Canal? I have never heard of it, except perhaps yachts.

4535. Is it your opinion that if a channel were cut through Lake Illawarra 100 feet wide, that would be sufficient width for the class of sailing vessels that now go to Newcastle to get coal, averaging about 300 feet in length and 45 feet beam; do you think that would be sufficient width in the case of such vessels which would have to be towed in by tug boats? I do not think it would. The width would have to be very largely increased to make it safe for large ships. Before the master of a large ship would allow his boat to be taken through he would want a wider channel.

4536. And in the case of sailing vessels taken through the channel by means of tugs, the channel would have to be wider than in the case of the Suez Canal, where the vessels are propelled by steam? In the Suez Canal the circumstances are more favourable than at Lake Illawarra, because the canal for nearly the whole of its length is through a pretty deep cutting. First of all there is little wind there, and when it does blow it does not strike the hull of the ship, but only the rigging, and the steamers passing through the canal have very little rigging. But on Lake Illawarra there would be nothing above water level, so that the whole of the ship's hull would be exposed to the strong north-north-east and southerly winds, and I am afraid they would find it very difficult indeed to keep a ship under control during its course along the 2½ miles of water.

4537. Do you really think that the trade could be carried on by sailing vessels being towed to and fro in a channel only 100 feet? I feel sure if the work is carried out the company will find it necessary to widen the channel a great deal over 100 feet.

4538. I suppose you are acquainted with the nature of the bottom of Lake Illawarra which has been described as consisting not of sand but of mud;—if sailing vessels were taken up a channel 100 feet wide, even with a good batter, the bottom consisting of mud, would not the action of the tug in towing the vessel, cause an erosion of the banks, continually lessening the depth in the middle of the channel? There is no doubt that the motion of the tug-boat would cause the flattening of the slopes, and therefore the shallowing of the channel. For that reason the channel would need to be very much wider in the first instance. When there is motion in the water there is always a tendency to flatten the slopes.

4539. I suppose you are aware that in the Suez Canal they dredge very frequently along the whole length of the channel in order to maintain the depth of the water;—would there not be a greater necessity for keeping dredges on this proposed channel, only 100 feet wide, the bottom consisting of mud, partly liquid, looking at the action of a steamer in towing vessels up the channel? I think the continual dredging would be a very costly item. The amount of dredging to be done and the maintenance would be very costly.

4540. You are of opinion that the channel, to make it practicable for the traffic of sailing vessels, should be more than 100 feet wide? That is my opinion.

4541. And do you think the banks of the proposed channel would stand unless a retaining wall were built alongside them to keep them in position—looking at the fact of their being composed of mud and of the action of the water on the mud? Not necessarily a retaining wall, but good flat slopes.

4542. It has been stated here to day, and by a contractor, that to carry out the works proposed at Lake Illawarra—to make a channel 25 ft. 6 in. deep for vessels drawing 25 feet of water—would necessitate having a channel 27 feet deep;—do you think that amount of dredging and the dredging also of the basin with an area of 25 acres—do you think that the work could be completed by the end of 1898? It would be impossible.

4543. How long do you think it would take to complete such a work so that the harbour could be continually used without the necessity of dredging, and the consequent stoppage of trade so as to make it useful, and to your satisfaction, and to the satisfaction of every reasonable man? In answering that question I should like to explain that when I last gave my evidence I had not gone very closely into the question of the time it would take to do the work looking at all the surroundings. I said that if carried on with great energy the breakwater and the entrance at Lake Illawarra might possibly be constructed in three years. I have since looked into the question in the light of the different surrounding circumstances. If you had an unlimited quarry, an unlimited quantity of stone coming forward, no doubt my estimate would be borne out. But there are other things beside the mere force of men which have to be considered. There is the possibility of getting rid of a certain quantity of stone, with certain tips in a certain time and there are conditions in this respect which I find would make it impossible to carry out the work in the time mentioned. These breakwaters, as the company's engineer pointed out, are kept very narrow, so that it is not possible to get two tips over the head at the same time, and it would not be possible to get the quantity of material over the tip heads in two years. My experience is that the roads could not be extended and made up quickly enough. I think any contractor will admit that 400 tons of stone a day, in large blocks, is a good output from any quarry. It is not a good quarry at Windang Island, and I doubt whether the contractor could put down 400 tons of stone a day. That would be equal to 10,000 tons a month, and a total of 608,000 tons would mean five years work. That is allowing nothing for loss of time and for bad weather, but assuming that the men work from day to day right through the year of 300 working days. The quantity of 608,000 tons just mentioned, is according to the amended Departmental design which provides for a breakwater a little higher and a little wider. But taking the company's own design of a low and narrow breakwater the quantity of stone is 465,000 tons. At the rate of 10,000 tons a month, that would represent three years and ten and a half months' work. That is not allowing for any loss of time or accident or stoppage of any kind. I believe that is the very quickest time in which the work could be done. Mr. Amos, who is in the room, I think, can bear me out in saying that when he had the contract at Lake Macquarie he had a very fine quarry to work, a much higher and wider quarry than that to be obtained at Windang Island, and the largest output ever made on that work was 400 tons a day, that was his record output; and I am assuming that all through this work he will maintain his record of 400 tons a day, with an inferior quarry, and at that rate the work would take four years.

4544. Do I understand you to say that the face of the rock which could be got at Windang Island would not be a large one or a very satisfactory one? No, because it is not a high quarry. It will not be very high, it will be a long and somewhat straggling face. 4545.

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4545. Do you know whether there is good stone there? The stone, I thought, looked very well when I saw it, or a lot of it, but I did not get a geologist's opinion about its durability.
4546. You would not undertake to say that it would be a stone that would be inclined to crumble by the action of the water and the weather? I would not like to say that on my own authority. I have heard that stated on good authority.
4547. From your knowledge of the cost of public works, would you give me your opinion as to the estimated cost to carry out to full completion and in a satisfactory manner a channel as well as a dock for the use of vessels drawing (say) 25 feet of water? I should say, allowing for the increased dredging and all, it would cost about £280,000.
4548. The whole work? Yes. That estimate is based on Mr. Amos' contract prices, as supplied to me by the engineer of the company.
4549. *Mr. Humphrey.*] Where did you get the figures for the calculation you have just made as to the period which would be required to complete the work according to Mr. Amos' contract—the 450,000 yards? I took out the quantities from the company's description and design.
4550. The quantities were not supplied by Mr. Amos? No.
4551. Looking at the figures given in Mr. Amos' contract, a copy of which is before you, will you say whether those figures would induce you to modify the evidence you have given as to the period necessary for the completion of the contract? No; I have taken out the quantities carefully.
4552. You are satisfied that not less than four years will be necessary to complete the breakwater? Yes. I may mention that the quantity, according to the contract, will largely exceed the quantity I have stated. According to the contract the estimated quantity would be 718,000 tons.
4553. So that accepting the quantity as appearing in the contract, instead of four years, about seven years would be necessary to complete the work, allowing an output of 400 tons of stone per day? Six years.
4554. On the same basis, what in your opinion, is the shortest period within which the northern and the eastern breakwaters at Port Kembla could be completed? The eastern breakwater could be constructed in five years.
4555. And the northern breakwater? That could be going on at the same time. The two could be worked together.
4556. Then both breakwaters could be completed within five years? Yes.
4557. You have no reason to modify the opinion you have already expressed that Port Kembla would not be altogether a suitable harbour for sailers until both breakwaters were completed? It would not be altogether a suitable harbour for sailing ships without the two breakwaters; but with the construction of the eastern breakwater it would be a sheltered harbour for shipping coal.
4558. You are speaking now of steamers? Yes. But for sailing ships it would not be a desirable harbour until the northern breakwater was also constructed.
4559. Until the completion of the northern breakwater, or until a large portion of the work is done? A large portion of the work, at any rate.
4560. How many years do you think may be fairly allowed for the completion of such portion of the work as would be absolutely necessary to render Port Kembla a safe harbour for sailers as well as steamers? I think after three years sailing ships could go there in fine weather.
4561. And you are of opinion, in regard to Lake Illawarra, that at least five years would be necessary to make the Lake suitable for similar purposes? Before ships could get in it, would take five years. It does not depend merely on the length of time required to construct the breakwaters, but also upon the amount of dredging to be done. According to my own estimate and that of the engineer, the quantity of dredging required would be 5,576,000 tons.
4562. If we have been told that the whole of the work could be done within two years, you do not agree with the witness who has expressed his ability to complete it within that time? No; I do not.
4563. *Mr. Wright.*] Do I understand you to say that 50 tons per hour is the maximum quantity of stone you can get over the tip head? Yes.
4564. That seems a very small quantity? It is not like tipping muck. Sometimes a big stone will block you for an hour. Then you have to carry out ballast, and pack up the rails.
4565. You are satisfied that is about the average maximum? You could not get 400 tons a day over one tip. It would be impossible.
4566. *Chairman.*] You believe it may be possible to construct the breakwaters within five years. After the completion of those breakwaters, what time is it reasonable to suppose will elapse before the scour has made the water at the entrance 28 feet deep? When once you had dredged the inside close to the entrance, so as to let the tide ebb and flow, the scour would be going on concurrently with the construction of the work. You could not wait until the breakwater was finished to get the entrance through.
4567. You believe that at the end of five years, immediately on the completion of the works, there would be a depth of 28 feet of water between the breakwaters? I should think there would be between the breakwaters. I do not say there would be that depth on the bar outside; but there would be, I think, between the breakwaters.
4568. What will become of the sand that is scoured out from between the breakwaters? It will be thrown out to sea. A certain amount of it would form a bar outside, no doubt. There is always that risk.
4569. Can you explain to the Committee how great rivers such as the Hunter, the Clarence, and the Richmond,—take the Hunter, for instance,—how is it that when that river cannot clear itself, but becomes blocked with sand before it gets beyond Nobbys,—Lake Illawarra, which is like a saucer, depending only on the ebb and flow of the tide, is going to carry the sand sufficiently far out to prevent the formation of a bar which will block the entrance? The velocity necessary to carry a sufficient quantity of water to get a tidal range of only about 10 inches in the Lake would be sufficient to maintain a depth of at least 28 feet between the breakwaters, and possibly deeper in places. The sand will be thrown out, and no doubt at times there will be a great tendency for a bar to form round the entrance outside. That has been the experience at the entrance to the Gippsland Lakes. While at times there is a depth of 50 feet between the breakwaters, at the same time there may be only a depth of 17 feet a short distance outside.
4570. Is there anything special in the surroundings at Lake Illawarra to cause you to believe that the same state of things would not wait upon works at the entrance to that lake as we have in existence in
the

the Gippsland Lakes? I think there is a very great risk of the same thing happening. It is very likely. C. W. Darley, Esq.
 4571. So that if they carry out the work there will be a great probability of a bar forming eastward from the entrance? A very great risk. That could only be kept down by putting a dredge upon the bar. 15 Jan., 1897.

4572. Which is a difficult matter, is it not? It would not be very difficult with a suction dredge.

4573. Do you think a bar would form there? I do.

4574. And the question of removing it might be a greater or lesser annual expense? It might flatten down at times, but at other times it would gather up again.

4575. How wide is the entrance to be at Lake Illawarra under the company's scheme? 450 feet, I think.

4576. How wide has Sir John Coode suggested that the entrance to the northern rivers should be,—the Richmond and the Clarence, for instance? The Richmond about a thousand feet; for Lake Macquarie he only proposed 250 feet.

4577. And how wide is the entrance to the Clarence? About 1,200 feet.

4578. And Newcastle approximately between 1,000 and 1,200 feet? At Newcastle you cannot call the entrance effective at much less than 800 feet.

4579. And here we have an entrance of 450 feet? Yes.

4580. About half the width of the entrance of the ports just mentioned? Yes.

4581. And therefore inferior to that extent? It is not for the sake of the port that they have such a large entrance to the Clarence and the Richmond but simply to let out the floods.

4582. You think then that 400 feet is a big enough entrance to a port? No, I do not say so.

4583. You said that the entrance to Lake Macquarie was 250 feet wide? I think it is 240 feet.

4584. Why did Sir John Coode make it so narrow? I could not say.

4585. Is the basin in Lake Macquarie larger than that in Lake Illawarra? Yes, rather larger.

4586. Is the body of water in Lake Macquarie larger than that in Lake Illawarra? Yes.

4587. Have you any exact calculation as to the water that would go into Lake Illawarra in an ordinary tide? I think I communicated to the Committee the result of some enquiries I made.

4588. You were doubtful about it? You cannot fix anything definite. There are so many unknown quantities that it is difficult to give a definite answer to a question of the kind.

4589. If there is not enough water flowing in and out of the Lake between the retaining walls or the breakwater, the result will be what we know—a sand flat across the mouth;—it is only the scour that keeps the passage open? The scour keeps it open and the breakwaters will prevent the sea from shutting up the sand mouth again. That is the object of the breakwaters; they will prevent the action of the sea from shutting up the entrance.

4590. There were some works carried out at Lake Macquarie, were they not? They were commenced to some extent, and then stopped.

4591. You regard the opening of Lake Illawarra as a simple engineering feat? It is simple; the thing can be done.

4592. It can be done for £300,000? I think so.

4593. It can be done for £300,000, and within from four to seven years? From five to seven years.

4594. Would there be a possibility or a probability of a bar forming in front of the entrance to Lake Illawarra when the work was completed? A probability.

4595. How is it proposed to get across the entrance to Lake Illawarra while the process of scouring is going on, in order to get the material from Windang Island on to the northern breakwater? If I were the contractor I would construct a viaduct or a bridge across.

4596. A viaduct would not be affected by the scour? No. You could drive the piles down pretty well and carry the bridge across.

4597. If you were advising the Government in regard to carrying out a scheme, would you advise them to carry out the Lake Illawarra scheme or the Port Kembla scheme? The Port Kembla scheme.

4598. Will you give your reasons, briefly, comparing the two places? I think Port Kembla is a harbour that would require very little maintenance. It is a harbour that can always be safely taken in all weathers by sailing ships or steamers, if it is made a close harbour. There will be very little cost of maintenance after the first construction. In the case of Illawarra there would be a constant expense for dredging and maintenance.

4599. Brushing aside the question of where the money comes from for the development of the south coast, are you of opinion that the place at which to spend the money most wisely is Port Kembla? That is my opinion.

4600. If the eastern breakwater alone were constructed at Port Kembla would it be sufficient for the coal trade in steamers? Yes; it would give shelter for the coal trade carried on by steamers.

4601. Could sailing vessels, with a tug in attendance, safely load coal behind the eastern breakwater? If sailing vessels go there you must give them accommodation to discharge their ballast.

4602. Leaving the question of discharging ballast out of consideration, would it then be safe? I am quite satisfied that no master of a ship would like to take his vessel in there.

4603. Not a large sailing ship? No; without more shelter than one breakwater.

4604. Is there anything else you think the Committee ought to know? When I came into the room I heard Mr. Amos, speaking of the proposed Illawarra channel, mentioning a depth of 25 ft. 6 in. below mean tide level. I would point out that a depth of 25 ft. 6 in. below mean tide level would only represent a depth of water on the bar of 22 ft. 6 in. at low tide.

4605. *Mr. Lee.*] It is provided that the depth should be 25 ft. 6 in. below the mean tide level? That is a line that is common to all states of the tide—halfway between high and low water; and that is really the normal level at present of Lake Illawarra or any lake that has only a limited amount of communication with the sea. It practically stands at mean tide level. When you get 25 ft. 6 in. below mean tide level that is all the contractor is asked to do. That really means that the company should only have 22 ft. 6 in. through the entrance at low water. If the contractor gave that depth he would be complying with the contract. I will explain to the Committee (*by diagram*) that if the rise and fall caused by the opening of the Lake were 1 ft., that would be 6 in. above and 6 in. below the present mean tide level. It would be joined with the high tide outside by a tidal slope which would leave the entrance at the bar at 22 ft. 6 in., the water having fallen at that point 3 ft. below mean tide level at low water.

WEDNESDAY, 27 JANUARY, 1897.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.	CHARLES ALFRED LEE, Esq.
The Hon. JAMES HOSKINS.	JOHN LIONEL FEGAN, Esq.
The Hon. CHARLES JAMES ROBERTS, C.M.G.	THOMAS HENRY HASSALL, Esq.
The Hon. WILLIAM JOSEPH TRICKETT.	GEORGE BLACK, Esq.
The Hon. DANIEL O'CONNOR.	FRANCIS AUGUSTUS WRIGHT, Esq.
HENRY CLARKE, Esq.	FRANK FARNELL, Esq.

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

Henry Chamberlaine Russell, Esq., C.M.G., Government Astronomer, sworn, and examined:—

H. C.
Russell, Esq.,
C.M.G.

27 Jan., 1897.

4606. *Chairman.*] It has been suggested that the Committee should avail themselves of any information you can furnish with regard to the force of waves on the eastern coast of New South Wales;— have you a statement with regard to that? Yes. I have no measures of my own; I have not had the opportunity of making them. But Mr. R. Price Williams, the eminent engineer, called at the Observatory some few years ago specially to give me the result of his observations between here and New Zealand, stating at the time that he thought the information might be useful. The result of his measures was that in a heavy storm between New Zealand and Sydney his aneroid indicated a rise and fall of the steamer of from 50 to 54 feet. Of course the steamer would not rise quite so high as the waves, because on the top of the wave it would sink deeper into the water than it would in the hollow of the wave. Another statement that comes to me, not so directly, but which I believe is reliable, is that Captain Parker, of the ship "Hermione," off the coast of Queensland, gives the height of waves from his observation as from 60 to 65 feet. The late Sir John Robertson told me when he was living at Watson's Bay that in a heavy storm a great quantity of water had been thrown over the Gap, coming in at the back of his property there. With the assistance of Pilot Clear, I had the rocks measured the other day, and the perpendicular rocks at the Gap measured 72 feet high. These are the only facts I have in regard to the coast.

4607. *Mr. Wright.*] Would the water Sir John spoke of be a body of water or only the spray? He said that large quantities of water came into the yard and washed away his back fence, and I saw myself that a great quantity of water had gone in there, when I afterwards visited the spot. But the pilot there seems to think that nothing but the spray and the tops of the waves come over. Of course, if it were blowing very hard the wind might carry large quantities of water over. There are some definite measures of waves on the coast of Spain. In a very heavy gale on the coast of Spain a competent observer went on shore and was able to determine exactly the height of the waves looking at them across the bay as they passed a perpendicular wall of rock running along the coast, and he found that the waves rose 21 feet above mean sea-level. Assuming that the trough of the waves is about the same, it would make its height something like 42 feet. Another fact was that there was a lighthouse at the entrance to the bay rising 133 feet above the mean level of the sea, and that the waves were running up to the very top of it, and over it, and throwing the spray 20 feet higher. It is recorded of the Eddystone Lighthouse that in a heavy storm the solid part of a wave has gone right over the top of it, and that on one occasion during a heavy storm a large fog bell hanging up outside the lantern was torn away and carried off by a wave, showing that at that height—100 feet above mean sea-level—the waves were possessed of very great force.

4608. *Chairman.*] Do you regard the waves on the northern coast of Queensland and the waves between the eastern seaboard of New South Wales and New Zealand as giving a fair indication of the waves to be expected at such a port as Kembla? Yes, in very heavy gales.

4609. Have you any information with regard to the height of the waves at Colombo? No; I have not.

4610. Are the waves on the eastern coast of New South Wales heavier than in other parts of the world where breakwaters are erected? That I could not say. I know that shipmasters consider the seas in a gale here as heavy as they get them anywhere else.

4611. Are they heavier? I have never heard that statement made.

4612. In your opinion the gales would be as heavy on the east coast of Australia as elsewhere? Yes.

4613. But you have no information that causes you to believe they would be heavier? No.

4614. *Mr. Wright.*] Can you give the Committee any information about the force of the impact of a big wave? I am afraid I cannot remember the figures exactly. I read a statement about some experiments made by Stevenson, and the pressure to the square foot was somewhat startling.

4615. Could you obtain the information for us? Yes.

Mr. William Smith Thompson, Dapto, sworn, and examined:—

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4616. *Chairman.*] You are a resident of Dapto? Yes.

4617. How long have you resided there? Over forty years.

4618. You have a good knowledge of Lake Illawarra? Yes.

4619. You desire to inform the Committee with regard to the natural protection at the mouth of Lake Illawarra? Yes. In order to substantiate my statement, that I believe that the entrance of Lake Illawarra is well protected, I would direct attention to the map, which shows that any sea coming from the south will be broken in the first instance by Bass Point, and in the next place that Red Point and the islands give protection on the north. I would also point out that on Windang Island there is a large quantity of good soil. If heavy seas broke on Windang Island that soil would not be present. I desire further to make a comparison between Windang Island and Shellharbour with regard to the force of the seas, and to state that in Shellharbour there are fig-trees and fir-trees growing close down to the beach, whereas in Wollongong, right up in Market-square, the effect of the wind can be seen upon the trees, which show a bend from the south-east. In my opinion the mouth of Lake Macquarie, if the breakwaters were constructed, would never fill up. The reason that it fills up at present is that so small a quantity of water comes down Mullet Creek and Macquarie Rivulet that sufficient water does not come into the Lake

Lake to keep the entrance open. Near Bevil Island, which is just west from where the breakwaters would be, there is even now 17 feet or 18 feet of water. I desire to direct the attention of the Committee to the fact that any coal lying south of Kemplia is not on private property, as has been stated. Most of the farms are bounded by the face of the mountain; they do not go over the mountain, and therefore in most cases a few chains would bring the workings out of private land on to Crown lands. With reference to the coal lying west of Lake Illawarra, I am not sufficiently expert to express a definite opinion; but I know that Mr. Biggar sunk several drives in three various seams, and I know the workings carried out by him, and also some work done by Mr. Larkin some thirty years ago. I have seen this coal tested locally by residents, who were of opinion that it was a useful commercial article.

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Mr. Evan Robert Evans, farmer, Dapto, sworn, and examined:—

4620. *Chairman.*] What are you? A farmer, resident at Dapto.

4621. You have a good knowledge of the Dapto district and of Lake Illawarra? I resided there over fifty-five years. I desire to state to the Committee that I believe Lake Illawarra is the most suitable place to make a port anywhere in the Illawarra district. I have spent a considerable amount of time on the lake, and I know that any alterations in deepening or cutting a channel would not be interfered with by rock. I have no objection to Port Kemplia, but I think that a very strong breakwater would be required to make it safe. The lake is quite different; it has the point of Shellharbour and then Windang Island, and a breakwater from Windang Island to the shore—that is where the rough weather comes in—would make the lake safe. When once it was dredged out there would be a safe harbour where vessels could lie with safety. On the other hand, Port Kemplia is more open and more exposed to the weather. Then we know that there is a large quantity of coal in the vicinity of the mountains. The top of the mountains consists of stone, timber, and coal. Some person gave evidence to the effect that there was no good coal south of Port Kemplia, but I saw the report of a test made in Sydney of coal in reference to which Mr. John Evans gave evidence; and other coal has been tested though no mine has been opened of any magnitude to carry on operations. I would like to point out that Lake Illawarra as a harbour would suit Kiama, Shellharbour, and those other places as well as the northern end of the district. There is any amount of coal at the Macquarie, west of Albion Park. In fact a mine has been working for years supplying the factories at Albion Park. Coal has been taken out, but it has not been sent to Sydney because there are no means of transit. This coal could be shifted to Lake Illawarra. Then, again, there is any amount of coal on the Jamberoo Mountains, and that also could be shipped at Lake Illawarra.

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4622. *Mr. Wright.*] Have you anything to say against Port Kemplia? It would take a great deal more money to make a safe harbour at Port Kemplia than it would at Lake Illawarra.

4623. *Chairman.*] In regard to Port Kemplia, you believe that the seas would be too heavy to permit of a breakwater standing, and that when the eastern breakwater was erected the water would not be still but there would be a range in it? Yes. I have some knowledge of Shellharbour, and have had business relations in connection with the steamer trading there and been a director of the company. It has been no unusual thing for boats to be able to lie at Shellharbour when they could not approach the Port of Wollongong or Kiama. I mention this to sustain the position I took up in the earlier part of my evidence as to the protection afforded to Lake Illawarra by Bass Point.

Mr. John Reed, Dapto, sworn, and examined:—

4624. *Chairman.*] I believe you are a resident of Dapto? I have resided there for the last twenty-two years.

4625. Have you a full knowledge of Lake Illawarra? I have a very good knowledge of it; I have been many times on the lake.

4626. You have heard the evidence given by Mr. Evans and Mr. Thompson? Yes.

4627. Do you agree with that evidence? I do.

4628. You believe it to be correct? Yes.

4629. Do you desire to add anything to it? No. We are not like dogs in the manger. We do not want to interfere with the Kemplia harbour scheme, but we want to try to push on Lake Illawarra, because we believe that the gentlemen who are promoting the harbour works there will carry them out; and I believe we shall have a harbour there many years before they get one at Port Kemplia. With regard to the coal, I have burnt coal from most of the collieries there. Coal which I have obtained merely from the outcrop I have proved to be as good as the coal I would buy from South Clifton. I know of many mines south of Kemplia where the coal is quite as good as any in the district.

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Mr. William John Wiseman, Wollongong, sworn, and examined:—

4630. *Chairman.*] You are a resident of Wollongong? I have lived there for thirty-five years.

4631. What is the evidence you desire to place before the Committee? I notice from the reports in the papers that a great deal of objection has been raised to the construction of a harbour at Port Kemplia, on the ground that it would interfere with vested interests at Wollongong. Having a large interest in that place, both personally and as trustee for others, I wish to say that, as far as I am concerned, it will not at all interfere with the interests of Wollongong to have a harbour at Port Kemplia. I have also had an intimation from about fifty residents of Wollongong, principally storekeepers and owners of land, that they do not object to the construction of a harbour at Port Kemplia. Port Kemplia is no further from Wollongong than about 3 miles, and a harbour at Port Kemplia would no more interfere with the interests of Wollongong than does the railway terminus or Circular Quay interfere with the business part of Sydney. Port Kemplia will be connected with the railway system and with the defence works, and the port of Wollongong, being connected with the Port of Kemplia, there will be almost, as it were, one harbour, and I cannot see how the interests of Wollongong would be interfered with. I know that several wrecks took place at Bellambi. I was at Bulli when the jetty was put up, and shortly afterwards several wrecks occurred there. At Wollongong also there have been many wrecks. At Shellharbour there have been wrecks and also at Kiama. I suppose there has been as much coal shipped at Port Kemplia as either at Wollongong, Bellambi, or Bulli, and yet there has never been a wreck or any loss of life

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life at Port Kembla. Before a jetty was erected at Port Kembla, and before it was made a port, I have seen vessels lying at anchor there in rough sea when they could not get into Wollongong. When the ball has been raised keeping vessels out of Wollongong and other ports, they have been riding safely in Port Kembla, and there have been no wrecks there during the whole of the time. I have noticed from reading in the papers reports of the evidence taken by the Committee, that several gentlemen have been raising objections to Kembla. I cannot understand this at all, seeing that if those interested in Lake Illawarra really meant anything at all they ought to have commenced their harbour six years ago. That is the time, I think, when they had their Bill passed. I think that the efforts of the Lake Illawarra company are not likely to be crowned with success, looking at their proceedings in the past. I notice that Mr. Atkinson, an alderman of Central Illawarra, stated in his evidence that he was employed by a surveyor when an iron rod or borer was put down to a depth of something like 30 feet from the surface of the water, or to a depth of about 20 feet into the silt, the average depth of water being about 10 feet. He said that this rod was placed down near the entrance and inside the lake. I do not see that he said anything about its being placed half a mile inwards from the entrance.

4632. Can you make a definite statement as regards the bottom of the lake? My belief is that 6 feet from the surface you will find the bed-rock—that is just inside the sandbank, half a mile inwards to the lake. I have been there several times getting oysters, and I feel positive there is rock there.

4633. Can you give us the reasons for believing that rock is to be found some half dozen feet under the surface within half a mile from the sandbank inwards? I have been told it several times, and I think it could be proved. I do not think that Lake Illawarra would be a better and safer harbour than Port Kembla. In order to make it clear to the Committee how heavy the seas are that run at Wollongong, I may state that I witnessed the wreck of a vessel whose anchors failed to hold, and she was thrown on the rocks; loss of life occurred on that occasion. A port of refuge should be made at once. Since the wreck of sailing vessels at Bellambi and Bulli sailing ships have not been able to load at the jetties because it is so unsafe. The coal trade is now done principally by steamers and they have to keep up steam while loading, in case of a storm. I remember the Bulli jetty being carried away with forty waggons on it. The waggons alone represented a loss of something like £2,000, and in addition to that the whole of the jetty was swept away. The same thing has occurred at Bellambi several times, but in Port Kembla the jetty has very seldom been swept away. At Bulli on one occasion there were two steamers half-loaded when a storm came up and they had to go out to sea. One of them was never heard of again, and the other was found at Broken Bay. I make these statements to show that we require a port of refuge at once. We have nothing of the kind on the coast right away from Jervis Bay to Sydney. The Members of the Committee who have been down there must have seen that it is highly dangerous to load coal at these jetties without proper protection. Then with regard to the financial aspect of the question, I am of the opinion that a harbour ought to pay well. During the short time that the Wollongong Harbour Trust was in existence we received between £2,000 and £3,000 in harbour dues. For two years we received £3,000 a year, and then the revenue dwindled down to £2,500. At present the Corrimal Company pays £3,000 a year to the Railway Commissioners for the carriage of coal to Port Kembla and Wollongong. I am certain that if a harbour were made at Port Kembla for the shipment of coal the revenue would be quadrupled in a very short time. Vessels anchored there would be quite safe, and this would be recognised by the insurance companies. I do not say that I do not believe in the Lake Illawarra scheme. I believe the lake people ought to go on with their scheme. I believe they will have plenty of trade, and they have the smelting-works there. I do not think we should throw any obstacle in the way of the lake scheme. I took objection to it in the first instance, on the ground that the Government were going absolutely to hand the whole thing over to the company. That was the only opposition that was given to the lake scheme at any time. I do not think anyone is opposed to the lake scheme or to the company at the lake, but let them go on and do their work, if they really mean to do it.

4634. *Mr. Wright.*] You said just now that the Government were drawing £3,000 a year from harbour dues for conveying coal to Kembla and Wollongong;—are you positive of that? I was a member of the Wollongong Harbour Trust for five years, and heard the balance-sheets read.

4635. Does that sum represent harbour dues or railway freight and harbour dues combined? It comprises revenue from harbour dues and the pilot service and railway freight from Corrimal, total £6,000.

4636. You spoke just now of severe storms having wrecked the jetties at Bellambi and Bulli;—do you think these storms would have any serious effect on a strong breakwater at Kembla? I do not think they would.

4637. What effect did they have on the Wollongong work? I think if the Wollongong Harbour Trust Commissioners had had sufficient means to purchase proper plant, and had been able to call for a good contract, they could have put a breakwater there that would have stood any gale.

4638. If it has been stated to the Committee that at Wollongong blocks of concrete 20 tons weight have been rolled about the beach like pebbles, do you think that is a fact? Not a single one has rolled 10 yards away from the mound it was put on. Unless it has been placed there by the engineer, you will not find a single block 10 yards away from where it was first laid down.

4639. I understand you to say that the concrete blocks placed on the proposed breakwater at Wollongong have stood all the seas that have dashed against them? On one occasion just the end moved out, that was all; but the blocks were placed there in an unfinished state. The part that was finished did not move, and the repairs that have been done only recently were connected with a part of the work that was unfinished. The blocks are thrown in, and there is a sea-wall without any protection—no apron, or whatever it is called.

4640. Is not that wall protected somewhat by a reef of rocks? No; it is right in the open sea.

4641. And very strong gales have produced no detrimental effect on that work? No; not that I can see.

4642. And you judge from that that a stone breakwater at Port Kembla would stand? Port Kembla is more protected, and a stone breakwater there would be bound to stand very much better than at Wollongong. There is another thing I should like to say. The engineer for the lake harbour scheme took the contract to erect jetties at Kembla and Bellambi. He was an Associate Member of the Institute of Engineers, and in his evidence before a Parliamentary Committee he stated that after watching the loading at Kembla he was satisfied that during the year only five days were lost from north-easterly weather.

4643. *Mr. Hassall.*] With regard to the Lake Illawarra scheme, I understand you to say you have no desire to see any obstacles thrown in the way of the work being carried on? No desire at all.

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4644. Do you not think that the construction of a harbour at Port Kembla would be the biggest obstacle you could throw in the way of the Illawarra scheme? I do not think so.

4645. In the face of another harbour being constructed immediately alongside of it, do you think that people in England will be likely to invest their money in such an enterprise at Illawarra? If I remember correctly, about twelve or eighteen months ago a cablegram came from England saying they had got all their money, and they were prepared to spend their money then. Well, where is the money, and why do they not go on with the work?

4646. Do you think there is room for two harbours so close together? It would take about 12 miles to get round.

4647. But how far are the two places apart? That does not make any difference—you would have to go right round to where they ship the coal.

4648. I suppose you are aware that there is no agreement entered into between the smelting company at Lake Illawarra, who have built their works on the shores of the lake, and the Illawarra Harbour and Land Corporation in regard to their using that place as a port? I do not know.

4649. Does it not stand to reason that if a port were constructed at Port Kembla and the smelting company desired to get their stuff to the smelting works, they would make arrangements with the Government to run a line of railway to their works? No. They would be very poor business people to do so seeing that within about 2 miles or about a mile and a half there is a shipping place, and surely they would never go right round to Kembla, a distance of something like 12 miles. I do not think that is going to block them, because we heard to-day from the Dapto people about the coal lying in the Jamberoo Mountains and in that direction. We have sufficient there to keep two or three harbours going. Look at the large quantity of coal that is shipped at Newcastle? As far as I can see, the lake company are not going on with the harbour; otherwise, why have they not gone on with it before. It is only humbug; anyone can see it.

4650. You say you have no desire to throw obstacles in the way if there is any possibility of the work at Illawarra being carried out;—would not the very fact of the construction of a harbour at Port Kembla knock the Illawarra scheme on the head? I do not see why it ought to do so. They have any amount of land there, and they have the whole thing free to their hands, and according to their account the work is not going to cost them a great deal.

4651. Practically, from your own knowledge, do you not know that a scheme has been entered into for the purpose of providing a harbour on the coast? Yes.

4652. In the event of another harbour being formed in the immediate vicinity, do you not think that would have a detrimental effect upon the scheme? I do not see why it should.

4653. Would you invest any money in the scheme under those conditions? I am thankful to say I have just made sufficient to keep me comfortable, and I am not going to speculate.

4654. *Mr. Farnell.*] You say that on one memorable occasion there was a boat that could not ride in the harbour at Wollongong, while at the same time there were vessels safely lying in Port Kembla? Yes. When vessels could not enter Wollongong I have seen them anchored in Port Kembla. That is before there was a jetty there.

4655. For how many days in the year would you say that the harbour at Port Kembla as at present existing was safely available for shipping? I could not say.

4656. If a statement were made that for the whole of the year, with the exception of thirty days, the harbour was available and safe, would that be correct? I think so, because we do not have thirty storms during the year.

4657. What would be the most dangerous or inconvenient wind that could affect the harbour of Port Kembla under existing circumstances? I think the south-east winds.

4658. Do they get any easterly winds there? They get north-easterly.

4659. No easterly? Very seldom. Perhaps once in the whole of the twelve months we get a good easterly gale, and then it baffles the masters of vessels to lie in shore, and they must get out to sea.

4660. If it were decided to establish the proposed harbour at Port Kembla, do you think it would be the means of diverting any of the traffic at present going to Wollongong? I do not think so.

4661. You think that the companies at present taking advantage of the facilities afforded at Wollongong Harbour would still continue to do so? I think so; and I think they would load also at Port Kembla, because you cannot take a vessel into Wollongong of more than 800 tons burden, while you can take a vessel into Port Kembla of 8,000 tons. The owners of Mount Pleasant and Mount Keira who use Wollongong also load vessels at Kembla. Coal from Wollongong and Mount Pleasant goes to Kembla now, so that they would still use Wollongong as well as Kembla—that is for smaller vessels.

4662. You think then that the trade of the port of Wollongong would not be interfered with? Not very much; probably it would a little, but not very much. At Mount Pleasant they have a narrow-gauge line, and it would not pay them to run it down to Port Kembla. You could not run the railway waggons, or even the Mount Keira waggons, on it.

4663. *Mr. Fegan.*] Has there been much agitation in the southern district for some port of refuge or some better facilities there? There has been for many years.

4664. I suppose that was one of the reasons why the trust was formed at Wollongong? Yes.

4665. In answer to Mr. Hassall you said that as far as you were personally concerned you were not opposed to the Lake Illawarra scheme? No, I am not. I should like to see it carried out myself.

4666. You have not come here to speak against the scheme as laid before this Committee in reference to the Corporation's scheme? No.

4667. But you say there is a doubt as to whether the company intends to carry out the work? There is a doubt.

4668. In what way? Simply because they have not gone on with their work.

4669. Have you been on the lake very often? Yes.

4670. You know the locality well? Yes.

4671. Have you any property about there yourself? None whatever.

4672. Therefore, as far as that scheme is concerned, personally you are disinterested? Yes.

4673. Do you think that £200,000 or £300,000 will complete that scheme? They reckon that £300,000 would do it, but of course I could not say.

4674. You have been a member of the Wollongong Harbour Trust? Yes, for five years.

4675.

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4675. In view of the work done in connection with the Wollongong Harbour Trust, is it your opinion that £300,000 will cover the cost of the necessary work at Illawarra? I think myself it would take £300,000 to open the entrance—to cut away the rock I was speaking about this afternoon.
4676. The amended proposal is, as you are aware, not only to dredge a 15-foot channel but to dredge to a depth of 27½ feet;—do you think that £300,000 would cover that expense? I am afraid it never would.
4677. Do you think that the people of the south coast district, not only the colliery-owners, but other men with other interests, should wait until 1898 to see whether or not the company will carry out this scheme? I think we have already had proof enough that they do not mean to go on with the work.
4678. Do you think the coal trade and other interests should wait until they see whether or not this work will be carried out? I do not think they should wait.
4679. Are you of opinion that the interests of the southern coast districts are of such value that something should be done to facilitate shipping and make a harbour of refuge there? I think so; I think we ought to have a harbour made there immediately; I think we have waited quite long enough.
4680. Do you think there is room for two harbours down there? I think there would be room. I think it would pay the Lake company, and I think it would pay the Government too, simply because the southern coal supercedes the northern coal—that is for steam purposes. Therefore I believe that if we had proper facilities for loading coal the trade would increase. As far as I understand, the smelting company would almost keep a coal company going.
4681. Then there would be no necessity for a shipping place? But we have no ore to smelt down there. They would have to bring the ore into the harbour. They cannot smelt it without coal.
4682. If the trade is to consist of ore sent from Broken Hill to Lake Illawarra, what are you going to send away? We will send away coal. Our coal is required now for steam purposes, for which it is considered to be the very best in the Colony.
4683. If two harbours were constructed, how would you find trade for them: seeing that Newcastle with all its appliances only ships about 3,000,000 tons per year, where is this district going to get the trade for two harbours? The only answer I can give you is that I do not believe we are going to have two harbours; I believe we shall get only one.
4684. Do you think it possible for trade to develop to that extent that it will pay to construct two harbours in the southern district? I think it ought to; seeing that we in Wollongong, with our small harbour, are able to collect a revenue of £3,000 a year, having a port like a little basin only about 13 ft. or 14 ft. deep.
4685. Do you know the output of the southern mines? I think that in a good time it is about 900,000 tons a year.
4686. At Bellambi would it pay the company to ship at their own jetty? If we had a safe harbour with proper facilities for loading, I feel satisfied it would not pay any of the companies to have jetties on the coast to load there.
4687. Do you think it would pay the owners of the Bulli Colliery who ship at Port Bellambi, to run their coal down to Lake Illawarra should the lake scheme be carried out, or would it pay them better to send their coal to Port Kembla, being so many miles nearer? They would go to Port Kembla.
4688. We are told by the Engineer-in-Chief for Public Works that there is no room for two harbours on this part of the south coast—that it must be either Port Kembla or Illawarra. Is it fair that the south coast people should wait for the construction of the harbour at Illawarra, or should the Government go on with the proposal before this Committee and construct a harbour at Port Kembla? My opinion is that they should go on with the Port Kembla scheme.
4689. But if the Port Kembla scheme goes on, and the Lake Illawarra is also carried out? I do not believe that the Lake Illawarra scheme will be carried out.
4690. For what reason? Simply because they have had six years to go on with the work, and they have not attempted to do anything. They spent about £2,000 over Windang Island, and then they stopped.
4691. Have they not constructed a railway? Yes.
4692. Is not that spending money towards the completion of the scheme? It looks to me like a blind. Why did they not go on with the harbour first.
4693. For what reason may they be adopting this blind? Well, I do not know; they have a large quantity of land to sell there for one thing.
4694. Do you think the chief reason then for holding back is in order to sell building allotments there, or something of that kind? It might be, for what I know.
4695. You cannot say? No, not particularly.
4696. You would not like to give an opinion? I think the Government, under the terms of the Act, ought to appoint somebody to look through their accounts and see really what they are doing, and what money they have spent on the harbour. The Government have power to appoint a consulting engineer.
4697. You really cannot say why this company is not carrying out this scheme? I cannot say. I suppose if they had the money they would be able to go on with it; but they have not.
4698. You say you have been on the lake often and know the property well;—how far would you have to sink down before you got rock? I think the depth inside the lake is right enough, but at the entrance for about half a mile inward, at a depth of 6 feet, it is nothing but rock, and it will take hundreds of thousands to make an entrance to a depth of 27 feet, and it would take, I suppose, ten years to do it.
4699. Do I understand you to say that from the entrance, for a distance of half a mile inside, there is only about 6 feet of sand before you come to the rock? I think so.
4700. Do you know the thickness of the rock? I suppose that to get a depth of 27 ft. you would have to go 21 ft. into the rock. I know that in the lake there is an average depth of 10 ft. of water and that outside there is something like 30 ft. of water. If the rock was at a depth of 27 ft., a channel cut in the sand would be worn down to the full depth of the bed-rock and the whole of the sand to that depth would be carried away; but as a matter of fact it is not carried away to a greater depth than 6 ft.
4701. You are sure then that there is only about a depth of 6 ft. of sand before you come to the rock? That is my firm belief.
4702. If that be the case dredging operations will not be so easily carried on? They could not get their dredge in there at all. They would have to get their dredge in by the railway and put it on the lake.
4703. Have you any property at Port Kembla? No; not within 6 miles.
4704. You came here as a resident of the district to advocate what you believe to be in its best interests? Yes; I have been there for many years and have always taken an active interest in the place, having been an alderman there for about thirty years.

Andrew Love, Esq., Civil Engineer, sworn, and examined:—

4705. *Chairman.*] What are you? A civil engineer.

4706. *Mr. Hoskins.*] Have you been engineer for Mr. Amos, the contractor for the Illawarra Harbour works, since the scheme started? Yes.

A. Love, Esq.

27 Jan., 1897.

4707. How long have you been engaged with Mr. Amos as an engineer? Off and on for about 11 years. While Messrs. R. and A. Amos were constructing heavy railways throughout the colony. I was then in their employ as engineer and manager of works.

4708. Where? The first contract was between Tamworth and Uralla, the next was between Newcastle and Gosford. I was engineer and manager for them there, and have been on other works.

4709. Have you ever been employed by Messrs. Amos or any other contractors in connection with marine work or harbour work? No.

4710. You have never had anything to do with harbour works before? No.

4711. Have you any statement you would like to make to the Committee? I should like to say one or two words with regard to the quantities in connection with the Illawarra Harbour contract, and the time it will take to do the work. I have checked the quantities of the engineers for the Lake Illawarra company, and I find that in the breakwaters 215,177 cubic yards, or about 404,000 tons of stone will be required. This includes both the northern and southern breakwaters, and also the training-banks. The length of each breakwater is about half a mile, speaking roughly.

4712. What will be the width at the base and at the top? The width at the base will depend entirely on the depth, but the width on the top will run from 10 feet, increasing towards the end of the breakwater.

4713. How far will the training-wall be carried inside the lake beyond the breakwaters? It is a continuation of the breakwater. It is really one bank, except that it is lighter stone.

4714. How far beyond the breakwater and into the lake will it be taken? I think about 13 chains.

4715. Where is it proposed to get the 404,000 tons of stone from? From Windang Island if the stone proves suitable. There are different quarries around containing suitable stone; some within $1\frac{1}{2}$ mile and others within 3 miles.

4716. How far would Windang Island be from where you will erect the breakwaters and training-wall? 20 chains to the nearest point.

4717. That would be the nearest quarry where you would get stone? Yes. We are not confined to that.

4718. But you are not sure whether the stone from Windang Island would be suitable for your work? I cannot form an opinion as to that; that rests with the engineers for the company.

4719. If the stone at Windang Island is accepted how do you propose to convey it to the breakwaters and the training-wall? By a training-bank of which part has been made. It is an embankment made to the nearest point on the breakwaters and about 10 chains of it have already been made.

4720. How are you going to get the stone across the water from the island? At present there is a sandbank there.

4721. Do you think you can depend upon the sandbank to be used as a roadway to convey the stone from the island to the breakwaters and training-wall? Yes, undoubtedly.

4722. During the whole time that the works are under construction? Yes. There is a part there now made in quite a rough unfinished state and it has stood all weather, though there has been a heavy storm since it was made.

4723. If this place is already made will not the sand you are going to use to convey the stone from the island to the breakwater be an obstacle in the way of the entrance to the channel? Not after the breakwaters are made. The sand over which we shall convey the stone will be outside the breakwaters altogether.

4724. Would the sandbank over which you are going to take the stone limit the width of the entrance? No; it has no connection with it at all.

4725. How many tons of stone a day do you think could be quarried from Windang Island and taken over to the breakwaters and training-wall? It depends on the length of face you have in the quarry and also the height. If the stone is taken from Windang Island you can have a face about 1,000 ft. in length to 33 ft. in height. It just depends upon the number of men you put on or the capital you could employ. It is the quantity of stone you can tip over the ends of the breakwaters—that I can give you.

4726. Have you inspected Windang Island? Yes.

4727. Have you ascertained the length of face you can have in the quarry and the depth of the quarry? Yes. By cutting through the island in the first place you could get three working faces.

4728. But you cannot say whether Windang Island will be accepted as the place from where the stone will be taken? No.

4729. Where are the other places? There is one place within 2 miles of it; that is on the southern side of the entrance—what they call Wild Dog Hill. That is within 2 miles of the breakwaters. Another one is to the north again, within about 3 miles.

4730. Have these other quarries been properly explored to ascertain what kind of stone can be obtained and what length of face you can get? On either of them you could have any length of face; they are long hills and high as well.

4731. How many tons a day on an average could be taken from Windang Island, or from either of these two other quarries, to the breakwaters and training-wall? Mr. Darley said 400 tons a day, but that is over one tip; that is doing good work I should say. But there would be four tips. There would be two tips over the training-banks where you strike them, and two tips over the breakwaters. They will be all worked simultaneously, so that there will be four tips, and taking Mr. Darley's figures that would be 1,600 tons a day. I do not say that would be done.

4732. If Mr. Darley estimates that only one road can be used from the breakwaters to Windang Island, how can you put in four or five roads? There will be one leading road—that is to connect on to the breakwaters. Then from where you strike that point there will be one tip back on the southern breakwater, and one forward into the ocean, and the same on the northern breakwater.

4733. If the stone on Windang Island is found unsuitable how much longer would it take to get the requisite quantity of stone (404,000 tons) from the two other quarries? It would not take any longer; it would take more plant—extra waggons.

4734. How far are these other two quarries from the quarries the Government propose to use in their scheme for making a harbour at Port Kembla? The one on the northern side of the harbour would be within about one mile or a mile and a quarter.

4735. A mile away from Port Kembla? From where the Government propose taking the stone. We inspected that at the same time. It would be within 4 miles of the Illawarra Harbour.

- A. Love, Esq. 4736. Having suggested so many roads to be brought into use in this work are you quite sure there would be sufficient face of quarry either on Windang Island or the other places—sufficient room to lay down all these roads as well as sufficient room to find employment for all the men you could utilise? Undoubtedly.
- 27 Jan., 1897. 4737. What work has the contractor done towards opening out these quarries? He has not done anything except at Windang Island.
4738. What has he done there? He has tipped about 10,000 yards on the road to the breakwaters. That has opened a face.
4739. Supposing that the company and the contractor intend to proceed with the work before you had got through a quarter or more than a quarter of the 404,000 tons, would you not find the difficulties greatly increased as compared with the difficulties you had to contend with in dealing with that small quantity of 10,000 yards? No. In dealing with that 10,000 yards of stone no proper facilities were used. Had the contractor been authorised to go on and construct a harbour right off, he would have had proper appliances to do so. What has already been done has been merely a makeshift.
4740. The contractor you say has not yet been authorised to proceed with the work? I cannot say; that I do not know.
4741. You said just now that if the contractor had been authorised the work would have been proceeded with, and the quarrying work would have been carried on more vigorously? Yes.
4742. Taking the most sanguine estimate of the time it would take to carry and deposit on the proposed breakwaters and training-walls 404,000 tons of stone, how long do you calculate it would take to complete that work? I consider that it could be done well within two years—that is if the matter were pushed.
4743. How long did it take the contractor to deposit the 10,000 yards of stone? He was working about a month at it.
4744. Are we to understand that if the contractor had received instructions to go on vigorously with the work at the entrance to Lake Illawarra the breakwaters and the training-wall could have been constructed in two years? I have no doubt they could.
4745. What plant has the contractor got on that work at the present time with which to commence operations? There is very little on it.
4746. What is there on it? A few tip-waggons and rails.
4747. Not a hundred? No, nothing like it.
4748. What plant would he require to have to get all that work completed in two years from the present time? He would require about sixty or eighty tip-waggons and two engines.
4749. Would he not have to lay down a pretty permanent road on which to carry the engine and the trucks of stone across from the Island to the breakwater? No; not any more so than would be the case on a temporary road on a railway.
4750. If the contractor got instructions to proceed vigorously with the work so as to complete it in two years, how long do you think it would take him to collect sufficient material including trucks, engines, derricks, cranes, and everything required for the work? I have no doubt that Mr. Amos could have the greater part of these things on the ground within two or three weeks. The bulk of them could be picked up in this colony almost at any moment.
4751. What object had you in coming here to give evidence? I am not interested either in one harbour or the other. I have no interest to serve.
4752. Did you come here with the view by your testimony of disproving a statement that has been made, and to throw some new light on the subject? I desired to give evidence more with regard to the time that it would take to complete the work as referred to by Mr. Darley, and also as to the quantities in the breakwaters.
4753. Have you read Mr. Darley's evidence? It was read to me.
4754. You assume that Mr. Darley gave evidence as to the time that should be occupied in this work on the basis of having only one road from the quarry? Not one road from the quarry but one tip—that is one place of deposit. I understand that Mr. Darley said there would be only one tip, whereas for the great bulk of the time there would be four tips.
4755. *Mr. Clarke.*] You said that it would take two years to complete the breakwaters and retaining wall from Windang Island to the entrance to the lake? Yes.
4756. How long would it take to complete the proposed dock in which, after they got in, vessels could lie with safety? That would be another matter. Of course that would be done at the same time. That would be done by dredges—either ordinary dredges or sand dredges. The work would be carried on simultaneously.
4757. Would the construction of the channel, about 100 feet wide from the lake to the main land, be also carried on simultaneously with the breakwaters? Yes. That would be quite apart;—another work altogether you might say.
4758. It would be part of the same contract? Yes; but it would be carried on under other men, though under the one firm.
4759. The contract is taken, I understand, by Mr. Amos? Yes.
4760. And do you give the Committee to understand that the whole work could be completed and ready for vessels to enter the lake within two years? That is my opinion.
4761. And are you of opinion that the work proposed to be carried out by the Illawarra company would be satisfactory? Yes; I am certain of that.
4762. Have you formed any idea as to the probability, when the work was completed, of the sand, during an easterly gale, or one from any other quarter, blocking up the channel to a certain extent? I do not think it would.
4763. The previous witness has stated his belief that there are only 6 or 7 feet of sand before you come to the rock;—do you believe that to be a fact? I sounded right throughout the lake and bored it, and I found that there was 25 ft. 6 in.—the depth required. We did not try any further. It was mostly composed of loose mud.
4764. How was it near the entrance? We tried the depth at the entrance, adopting the method of driving right down through the sand, which offers great resistance owing to the suction. Three men, after driving for about three hours, went down 21 ft. 6 in. below medium water level.
4765. You heard the statement of the previous witness with regard to rock—do you agree or disagree with that? I disagree with him entirely.
4766. Are you aware of the nature of the bottom of the lake where the canal would have to be excavated? Yes.

4767. Of what does it consist? Throughout the lake it is of very soft mud, almost in a liquid state. If A. Love, Esq. you allow the rod to go down, it will go down 25 feet almost without any pressure at all.
4768. You are aware that it is intended to excavate that canal to a depth of about 27 feet, and that 10 feet ^{27 Jan., 1897.} or 15 feet of that would be underneath the bed of the present lake? Yes.
4769. Is that practicable? Undoubtedly. It is the very place for such a work.
4770. When the canal was excavated underneath the lake, would the sides remain firm or have a tendency to fall in? I have had no experience with regard to that, and would not like to offer an opinion.
4771. *Mr. Lee.*] You told the Committee that you proposed to carry out the breakwater and dredging simultaneously? Yes.
4772. How do you propose to get your dredges into the lake? If they were imported of course they would have to come out in pieces, and be built on the shores of the lake; they would have to be put together on the lake and floated out.
4773. Has that matter not been decided? That is a matter that is always left to the contractor.
4774. But inasmuch as the contract has been signed for doing this work, has that question not been decided? By the contractor, of course—he is the responsible man.
4775. You do not depend upon the entrance opening itself in the early stages of the construction of the breakwater sufficiently to admit the dredge? No.
4776. And if the dredging were to go on simultaneously, you are of opinion that the dredges would have to be imported in pieces and constructed on the lake? Yes; no doubt that is the way it will have to be done.
4777. *Mr. Hoskins.*] Do you know whether Mr. Amos has given orders for the dredges? I have not seen Mr. Amos for some days.
4778. *Mr. Wright.*] Could you tell the Committee how the silt dredged out of the lake will be disposed of while the training-walls are being constructed? It will have to be conveyed in pipes or pontoons.
4779. You would have a sand-pump dredge? Yes.
4780. Where would you convey the silt to? It is supposed to be conveyed a thousand feet away from the channel.
4781. And there deposited? Yes.
4782. If it were all liquid mud would it not be carried back into the channel again? I do not think so.
4783. An enormous amount of silt will be taken from a channel 2 or 3 miles long, 100 feet wide, and 25 feet deep, and I want to know what provision has been made for the disposal of this silt? There are places where a large portion is supposed to go,—parts to be reclaimed; around these there are to be fascine banks built to enclose the silt.
4784. The fascine banks would have to be built simultaneously with the progress of the work? Yes.
4785. Do you not see very great difficulty in that? Not at all.
4786. For instance, if you started two sand dredges dredging 8,000 or 10,000 yards of silt per hour every day, you must have some place in which to retain the silt, unless you throw it on the dry land? There will be places for the purpose. Fascine banks will be constructed.
4787. Before the dredging is proceeded with? By the time the dredges were at work I expect these banks would be constructed.
4788. Then your contention is, that while the dredges are being put together, the contractors would construct the necessary fascine banks to hold the dredged material? Exactly.
4789. In reference to the entrance of the harbour and the depth of water, did you do the boring yourself? I did not actually handle the rods, but I was on the steam launch; it was under my supervision.
4790. And you can vouch that there is a depth of 25 feet in the lake itself, and you say that your rods got down to a depth of 21 ft. 6 in. in the sand at the entrance,—a witness has sworn distinctly that he has been told there is only 6 feet of sand on top of the rock? That is a mistake.
4791. *Mr. Fegan.*] Is it your intention to use the stone on Windang Island? If suitable.
4792. But is it suitable? It certainly is suitable, under water.
4793. You have already used some stone from that source? Yes.
4794. You do not find it suitable to deal with? Suitable under water.
4795. You would not like to build a breakwater with it? As I say, up to water-line it seems perfectly suitable.
4796. But it is more perishable above the water-line? It certainly does not stand so well when exposed to the weather.
4797. Is the stone different in the other two quarries you mentioned? Yes; entirely different. With regard to Port Kembla, I was one of the contractors who built the jetty for the Mount Kembla Coal Company, and at one time we had very rough weather there. The top of the jetty was about 26 feet above high-water, and on one occasion part of it was swept away—I think about two spans. During this storm a blue wave rose to a height of about 17 feet upon the piles. That would be 17 feet above high-water, and the waves themselves broke over the jetty and deposited seaweed on top.
4798. You prefer not to express an opinion with regard to the quality of material on Windang Island? I did not say that: I said the stone was suitable below water.
4799. Could large blocks be got out of that quarry? Yes.
4800. Would you depend on that quarry to complete the work? No: Mr. Amos is not tied to that quarry.
4801. Do you believe the stone from that quarry is sufficiently good? As I say, it is sufficiently good for all work under water-mark.
4802. Is it sufficiently good to complete the breakwater? I do not say with regard to the stone above the water line; that could be conveyed from elsewhere if the stone on Windang Island were not suitable.
4803. You have seen the tie-bank at Windang Island? Yes.
4804. How wide is that tie-bank? It was made roughly about 10 feet on top.
4805. If you are going to work four tips, how many sets of rails would you require? Only one set of rails.
4806. One set of rails would work four tips? Yes.
4807. And carry 1,600 tons of stone a day? I take Mr. Darley's figures for the 400 tons over one tip. I do not say 1,600 tons would be put over in a day.
4808. Still you believe that the one connecting line from Windang Island along the tie-bank would be sufficient to feed the four tips? There is no doubt of that.
4809. Are you aware whether the estimates for this work were prepared on the belief that the stone could be got from Windang Island? I fancy so, but I would not be sure about it,

- A. Love, Esq. 4810. Supposing the quarries are 2 or 3 miles away, instead of 16 or 20 chains away, would that make a difference in the calculations? No; it would mean extra plant and extra waggons.
- 27 Jan., 1897. 4811. It would mean extra haulage? Yes.
4812. It would mean the construction of a road either on the northern or southern side of the lake? Yes.
4813. *Mr. Hoskins.*] Do you believe that a channel $3\frac{1}{2}$ miles long and 100 feet wide at the bottom, and a basin of about 35 or 40 acres, can be completed and the harbour ready for work in two years? Yes; the breakwaters would take the longest time.
4814. *Mr. Wright.*] Were you present when the stone was taken out of the quarry at Windang Island for the present retaining wall or breakwater? No. I was not actually present; but I went across on two or three occasions and saw them at work.
4815. Would it be possible to get out of the quarry one stone weighing 20 tons without a fracture in it? I have no doubt you could get some, although you might not get many. It would be very easy to get blocks of 10 tons and a little over that.
4816. Did you ever see a stone taken out of the quarry 20 tons in weight? Yes. I have never seen it carried away.
4817. It would not stand being moved? No, I do not say that at all.
4818. Is not that stone fractured into comparatively small blocks; is it not of the ordinary basaltic formation? It depends very much upon the explosives you use.
4819. You think that blocks of stone could be obtained from that quarry sufficiently large to be put into an ocean breakwater? Yes, I do.

THURSDAY, 28 JANUARY, 1897.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.	CHARLES ALFRED LEE, Esq.
The Hon. JAMES HOSKINS.	JOHN LIONEL PEGAN, Esq.
The Hon. CHARLES JAMES ROBERTS, C.M.G.	THOMAS HENRY HASSALL, Esq.
The Hon. WILLIAM JOSEPH TRICKETT.	GEORGE BLACK, Esq.
The Hon. DANIEL O'CONNOR.	FRANCIS AUGUSTUS WRIGHT, Esq.
HENRY CLARKE, Esq.	FRANK FARNELL, Esq.

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

William Lovegrove, Esq., late Clerk of Petty Sessions and District Officer, Nowra, sworn, and examined:—

- W. Lovegrove, Esq.
28 Jan., 1897.
4820. *Chairman.*] What are you? I have no occupation at present; but for thirty years I was Clerk of Petty Sessions and District Officer for the Shoalhaven District, resident near Nowra.
4821. What is the nature of the evidence you desire to tender to the Committee? It is similar to the evidence given by Mr. McLean and Mr. Morton, M.L.A. I gave evidence before a Parliamentary Committee, and it will be found in their report, which is called 24 of 91. The Committee, in their report, stated they were unanimous in recommending the extension of the railway to Jervis Bay. That was in 1891. If the railway had been carried out it would have made a great difference by this time. For instance, Mr. Howell, who has established his smelting works where he has no port and is not likely to get one, would have established them at Jervis Bay had there been a railway there.
4822. Do you desire to place the extension of the railway to Jervis Bay in antagonism to the question of expending money on the coast? It is not altogether in antagonism. Port Kembla is very useful; but I do not think the proposed plan for a harbour there would add very much to its value.
4823. *Mr. Clarke.*] You have been a resident of Shoalhaven for a great number of years? For thirty-four years.
4824. Are you thoroughly acquainted with the resources of the district? Yes; I think no one more so.
4825. You seem to imply from what you have stated that you are against the construction of a breakwater from Port Kembla? Not against the construction of a breakwater or the construction of some work at Port Kembla, but I think the proposed work will not be a very good one.
4826. Are you virtually against the proposed breakwater at Port Kembla? No; I would rather say that Jervis Bay is a more suitable place for the expenditure of any money, and that it will require very little in comparison with Port Kembla.
4827. Can you give any reasons for your rejecting the proposed breakwater at Port Kembla and also reasons for the extension of the railway to Jervis Bay? Well, the first reason for the extension of the railway to Jervis Bay is that the railway was promised to the district as long ago as fifteen or sixteen years, and the money was borrowed in England to construct it, a very much larger sum being borrowed than was required. Of the sum borrowed £804,000, only about £250,000 has been expended on the extension of the line from Kiama to Nowra. Therefore, there remains a balance of about £550,000 for the remainder of the line of which sum not more than £150,000 will be required.
4828. The money having been voted for the extension of the railway to Jervis Bay, can you give any reason why the work is not carried out? There was no reason except some political undercurrent.
4829. I suppose the Government of the day declined to carry it out? Not only so, but they prevented a Melbourne company from constructing a railway from Jervis Bay up to the coal seams.
4830. What are the capabilities of Jervis Bay for shipping purposes? Well, it is supposed to be one of the finest harbours in the world.
4831. What part of the bay would be the most suitable for the erection of jetties which I suppose is all that would be required at Jervis Bay? You may say that from the Curranbene Creek the whole of the southern shore and the whole of the eastern shore to Bowen Island would be available for that purpose. At the present moment vessels could go alongside at any point along that part of the shore without anything but an insignificant jetty. In some places there are 30 feet of water right up to the land.
4832. I suppose what is known as South Huskisson would be one place? South Huskisson would be the best place pretty nearly on the western shore.
4833. And the place known as the Hole in the Wall? That would be better still, but it would require 4 miles more railway.
4834. That is nearer the heads? Yes; it is in fact only a mile from the lighthouse.

4835.

W.
Lovegrove,
Esq.
28 Jan., 1897.

4835. In the event of a railway being constructed to Jervis Bay, what produce or what freight would be likely to be sent in order to produce a revenue? In the first place I think all the coal-mines south of Kiama would be opened and that there would be junctions with the railway in order to ship the coal at Jervis Bay. I think the coal from the Jamberoo seam would also go to Jervis Bay, and there are about 50 miles of coal seams south of Jervis Bay.

4836. But have these coal-fields been proved to be of good quality for commercial purposes and for export? Yes; not many of them have been proved but reports concerning them have been furnished from the Department of Mines from time to time, principally by Mr. Wilkinson, late Government Geologist. Mr. Norman Taylor, of Melbourne, also reported on those seams and I think Mr. Pittman; but of course until a coal-seam is opened you cannot see very much of it.

4837. Would you be surprised to learn that we have it in evidence, both from Professor David and Mr. Pittman, that there are no coal-fields of proved commercial value south of Mount Kembla? I do not think you can have such evidence as that. I think the misunderstanding arises from the word "proved." As I said before they have not been proved in the sense in which coal-seams are generally proved, but it is known they extend as far up as Moss Vale.

4838. At all events they are not developed? That is true.

4839. And it is uncertain whether coal would be found suitable for export? There is no question that coal could be found.

4840. Not suitable for export? Well, Mr. Wilkinson said so at all events.

4841. Leaving coal out of the question altogether, what other goods would be sent by a railway to Jervis Bay? There are minerals in the Shoalhaven district, both copper and gold. The Rev. Mr. Clarke said that tin also existed there, but that has not been proved yet, except that he found a stray specimen in the bed of the Shoalhaven.

4842. Where are the mines to which you refer situated? The gold-mines are at Yalwal, and the whole bed of the Shoalhaven is worked for gold.

4843. But gold as an article of export would not give much freight to the railway? Not the gold itself; but the miners would.

4844. Would the miners get their supplies from Jervis Bay;—would they not get their supplies from Nowra or the nearest place in the district? If they did, Nowra would be a station on the railway.

4845. Is there any other source of revenue likely to induce the Government to carry the railway to Jervis Bay? I do not think there is anything to induce the Government to do it, because the Government seem to have made up their minds that Sydney should be the only port in the Colony. I have seen statements one after another that there is no good land at the back of Jervis Bay, and that that is the reason why Jervis Bay is not used as a harbour. The whole of the Shoalhaven district lies at the back of Jervis Bay—one of the finest districts in the whole Colony.

4846. But would not people on both banks of the Shoalhaven continue to send their goods by rail to Sydney or by steamer to Sydney? My own idea of the course of trade is that the coal-mines would be opened, that the produce of the Shoalhaven would go to feed the coal-mines, and the coal-mines would go to feed Jervis Bay.

4847. The land along the line of railway which the Committee passed through the other day from Nowra to Jervis Bay by the new line of road does not seem to be very good? No; but that is not the proper line of road—that is a line which takes 16 miles, whereas the distance is only 11 miles.

4848. Is there better land along the 11-mile route? It touches Mr. Berry's estate very nearly, and without very much deviation it might be made to touch his estate altogether.

4849. Can you give any further reasons why the railway should be carried to Jervis Bay? I think it should go there as a mere act of honesty to begin with.

4850. Do you think it would be advisable to carry a railway across the Shoalhaven River from Bomaderry into the town of Nowra independently of the extension of the line to Jervis Bay? No. I have already given evidence in a former inquiry to the effect that if Nowra was the only consideration there is nothing to show why the railway should go across the river though the people of Nowra offered to pay 6d. carriage for the one mile.

4851. But do you not think that if the railway were carried into Nowra a large quantity of goods which now go by steamer to Sydney would be sent by rail to Sydney? I cannot say. I look upon the traffic of the Shoalhaven at the present moment as being crippled altogether for want of a railway.

4852. A railway going into Nowra? To Jervis Bay. Without the railway it is impossible for the district to develop.

4853. If the railway were carried into Nowra would it not be a step towards the line, at some time or other, being carried to Jervis Bay? I do not think so. I do not look at it in that light at all. I look at it as a national question.

4854. *Mr. Lee.*] What is the distance from Jamberoo to the nearest point on the South Coast railway? The Jamberoo seam, at its southern end, is about 3 miles westward of a station named Toolijooa, and from that station the distance to Jervis Bay would be about 26 or 27 miles.

4855. Has the southern end of the seam been tested? It has not been tested. I have seen it. There are two seams of about 6 ft. 6 in. divided by a sandstone band of a foot.

4856. Then from the most southern end of the Jamberoo seam to Jervis Bay the distance is 29 or 30 miles? Yes.

4857. Consequently from the middle of the seam the distance would be about 39 miles? I do not think so. I take it that all these things would be worked from the most available point on the railway, and not from the furthest point.

4858. What distance would it be from that point to Kembla? It would have to be a private railway from the northern end.

4859. In any case you would have to make a private railway from the pit mouth to the existing railway? Just so.

4860. If the coal were carried to Toolijooa, how far would it be from there to Port Kembla? About 33 miles.

4861. If the northern portion of the Jamberoo seam were worked it would practically be as close to Kembla as the southern portion of the seam is to Jervis Bay? There would not be very much difference.

4862. So that if it became a choice as to shipping coal, there would be very little inducement to send the coal on to Jervis Bay? The inducement would be this;—that you have only a problematical harbour at Kembla. You have a fine weather harbour—an open roadstead. Whereas at Jervis Bay you have a harbour that is undeniable;—one of the known harbours of the world. 4863.

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4863. But that hardly enters into the question of the cost of getting there? The cost of getting there is simply the cost of the railway, which is about one-fourth of the estimated cost of the harbour.

4864. But would not expensive jetties have to be erected at Jervis Bay? It would be absurd to talk of a cost of a jetty there, because the deep water is so close up to the land. It is not like these other places where they have to send out long jetties for a quarter of a mile. I was in charge of the "Chimborazo" at the time she got on to the north head at Jervis Bay. She was lying close to the land, and she could swing in her own length. There was no difficulty in her having over 26 feet of water with a depth then of 8 feet or 10 feet between her bottom and the ground.

4865. Where was the "Chimborazo" stranded? She was not stranded, she ran on to a cliff.

4866. Was that outside or inside the bay? I should call it outside. Then she backed into the bay to the Hole in the Wall.

4867. But you would not suggest having jetties for the shipment of coal at that point? It would not be necessary so far as I can see that the railway should be carried right round there.

4868. Then if you put the jetties on the more southern or south-western side you would have shallower water near the shore? Not always. At Captain's Point for instance there is a depth of upwards of 30 feet at the shore.

4869. But you have to get out to that point first of all? There is not much getting out wanted there.

4870. Have you examined the soundings at Jervis Bay, because it seems difficult to understand your statement that only short jetties would be required? If you talk of the western side, which is known as Sir Henry Parkes' frontage, that is all a sand beach, but I am talking of south of that towards the Moona Moona, and from the Moona Moona south again.

4871. The more you work round towards the Hole in the Wall the greater length of railway you will have to make? Yes; of course.

4872. Can you give the Committee any idea how it is that Jervis Bay, being such a splendid port as it is held to be, no trade has yet sprung up between that place and Sydney? When a Government is centralised it can do what it likes. The Government make all the railways in this colony to come to Sydney. When it thought that Newcastle was going to be an independent port it made a railway from Newcastle to Sydney in order to try and get the trade of Newcastle.

4873. But the trade was at Newcastle all the same—it differs from Jervis Bay in that respect—that there appears to be no trade at all at Jervis Bay? Well, there is none except ship-building.

4874. What is there going to be in the future? There is nothing to bring the trade there; there are no means of conveyance. The very road over which the Committee travelled the other day was not intended to convenience Jervis Bay at all. It is a mere offshoot from the Ulladulla Road.

4875. Then your contention is that unless the railway is taken down to Jervis Bay we cannot expect that there will be any trade from that place? Yes.

4876. And if the line were taken there you think that the coal in the vicinity of Port Kembla would be shipped from there? I think it is likely that a great deal of it would go there. But I have said nothing against Port Kembla as an open roadstead.

4877. But your contention is that if the railway were extended to Jervis Bay the collieries in the vicinity of Port Kembla could ship their coal there? They come from Clifton and they probably would in certain cases if they had contracts. Supposing, for instance, that the Bulli Colliery got a contract to send 1,000 tons of coal to Adelaide, and there was a railway to Jervis Bay, it would probably ship that coal at Jervis Bay, unless it was fine weather, and then it might ship it at its own jetty.

4878. Do you think it at all probable that collieries would send their coal from there to Jervis Bay, such a long distance, when they lie so much closer to Sydney? That all depends. We will suppose that the railway had been constructed to Jervis Bay, as it honestly should have been, and suppose that Mr. Howell's smelting works had been established at Jervis Bay, Mr. Howell's ships would have brought his ore to Jervis Bay and would have received a cargo of coal from Jervis Bay and gone away to Frisco or wherever they were going. It is because Jervis Bay has not got its facilities that the thing does not happen.

4879. Does not that go to prove that what you and other residents of the Nowra district require is an extension of the railway from Bomaderry to Jervis Bay, is not that really the gist of your case? That is true.

4880. If that were done then the question of the trade that might spring up in the future would depend entirely upon circumstances? Yes. It does depend on the fact of the railway being made.

4881. But you do not wish this Committee to understand that if a railway were taken to Jervis Bay the coal-fields that would be served by a port at Kembla Bay would be served by Jervis Bay? Unless there was a contract.

4882. What is the use of talking about contracts; it is a question of haulage and the distance? And it is a question also of safety for the ships.

4883. But is Jervis Bay safer than Port Jackson? Well, it is easier to enter. Vessels can enter in south-easterly weather when they have to stand off the land at Port Jackson.

4884. Is Jervis Bay a safer port than Port Jackson? You have had the proof of that. Vessels in a south-easterly gale have had to run to Jervis Bay for shelter.

4885. You are aware that any trade, if carried on to a large extent, must be conducted in ships carrying cargo both ways? That is quite true.

4886. Is it not extremely probable that vessels coming to Port Jackson loaded with cargo would prefer to take in their cargo of coal there rather than ship ballast and go down to Jervis Bay to take in a cargo of coal there? Such a thing they would not do.

4887. Therefore, is it not extremely probable that although the railway might be carried to Jervis Bay those intermediate collieries being closer to Port Jackson would send their coal to Port Jackson for shipment? It all depends. I have already mentioned one class of trade which would go there. Vessels carrying ore to be smelted if there were smelting works at Jervis Bay would get their coal at Jervis Bay.

4888. I notice that you have a great objection to the proposed harbour at Kembla as being made in an open roadstead? Well, it is this way; I consider that Wollongong was spoilt by the harbour works carried out there; it was diminished; it was cut to pieces in order to make a small harbour inside what was really a very much better harbour. The same thing happened at Kiama. Nature as I thought had pointed out the way there for a larger harbour at very much less expense. But a small harbour is made in the middle of the larger harbour, and that small harbour would be an obstacle to the making of a larger harbour. If the same thing is to be done at Kembla it would have been far better to have left the company to use its own jetty and to have helped them by contributing to the maintenance of a jetty.

4889. You are aware that there is a proposal to make a deep water harbour at Lake Illawarra? Yes.

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4890. If that were carried out, do you not think it would meet most of the objections you have raised? I do not think there is the slightest likelihood of its being carried out.

4891. Why? I have ridden across the mouth of the lake and I noticed that when the tide was going out it was pretty firm and when the tide was coming in it was a quicksand.

4891½. Does not that go to prove that if proper breakwaters were erected there would be a scour that would create a deep channel there? When the company was formed I expressed my opinion about it pretty strongly—that they would never do it.

4892. Supposing it could be done and carried out, do you think that would be a harbour sufficient to meet the requirements of the coal trade of the south coast? I do not know, because it would depend on the depth of water at the entrance and the width of the channel, and also upon how they would dredge the whole of the shores on the western side where there is not 6 inches of water. For instance, where Mr. Howell has put his works there are not 6 inches of water.

4893. If these works were carried out in their entirety with a mean depth of water of 27 ft. 6 in. do you think there would be a harbour sufficient to meet the requirements of the south coast? I think by the time that was done £6,000,000 or £7,000,000 would have been spent.

4893½. Therefore, you think the scheme is impracticable? I do not look upon it as a serious project.

4894. Do you think it would be wise in the interests of the company to refrain from making a harbour at Kemplia until such time had elapsed as would enable the Illawarra people to see whether or not they could carry out their harbour? I do not think the Illawarra scheme ought to be considered at all. It has been on foot for ten years, and it has not been carried out yet in the slightest degree.

4895. In other words, you would dismiss that scheme from consideration altogether? Just so.

4896. Therefore, you limit the question to one as between Kemplia and Jervis Bay? Yes; and it must be understood that I have no objection whatever to Port Kemplia.

4897. But you think Jervis Bay is better? I would let Kemplia take its chance. It has a railway there, and there are mines close to it, and I think Mr. Howell's smelting works will have to use Port Kemplia.

4898. Have you considered the matter from this point of view,—what objection could the Nowra people raise if the Kemplia harbour were constructed and the railway were extended from Bomaderry to Jervis Bay? They could raise no objection, and they would not.

4899. Do you not think that both will be required in the future? First of all, I think that as the money was voted about thirteen years ago the railway to Jervis Bay ought to be completed as a mere act of honesty.

4900. But if both those works were carried out could one interfere with the other? No.

4901. Is there not a possibility of work for both in the future? Quite.

4902. Therefore, you do not urge anything against Kemplia at present, but you think that the extension of the railway to Jervis Bay is a more urgent matter? No; not more urgent. I have looked upon it, as I have said, as a mere act of honesty that it should be done. And as for Port Kemplia, it gets along very well with its jetty in anything but extreme weather; and I think if the Government were to confine their assistance to the jetty and to other jetties at Bulli and Clifton that are established,—if the Government wished to help those jetties a little and the owners of them, it would be far less expensive than attempting to confine Port Kemplia to a small place.

4903. But you understand that the maintenance of these jetties will not meet the case, inasmuch as the contention is that the colliery owners require to have large sailing vessels to enable them to carry on their business satisfactorily, and to do that they must have a protected harbour? Even so, more jetties at Port Kemplia might meet the case.

4904. No matter how many jetties you made there you would not give any stiller water than there is at present? Well; I have thought myself that a jetty further out even than the jetty that is there now would give quite as still water. There are three islands. I have passed between the nearest island and the mainland on at least three occasions and I have been up and down the coast a great many times, and it seemed to me that the water was as still within those islands as it was further in shore.

4905. *Mr. Wright.* Can you tell me what is the population of the country between Berry and Jervis Bay? I suppose about 10,000.

4906. Is it an increasing population? Yes.

4907. It is principally engaged in the dairying industry? They have confined themselves principally to dairying of late, but I think they will again turn their attention to crops a good deal.

4908. Has not the agricultural industry at Shoalhaven almost died out? Well, young men are not very fond of using the plough nowadays.

4909. You say that to keep faith with the people there should be a railway to Jervis Bay? Yes.

4910. What means would there be of giving profitable employment to that railway? Where there is a railway industries spring up all round it, and as the railway will go close to the coal-fields the coal will be opened up for one thing.

4911. It is said by very good authorities that the coal there is no good? My answer to that is that they have not tried it.

4912. Supposing the experts to be correct and there is no marketable coal in that district, is there any earthly prospect of a railway paying between Nowra and Jervis Bay, putting coal out of the question altogether? I think the railway ought not merely to go to Jervis Bay, but I think it ought also to go up to Conjola towards Ulladulla.

4913. You think it ought to go right down the south coast? Well, between Ulladulla and Bateman's Bay there is a stretch of disconnected sort of country without much agricultural land. But Ulladulla itself has a great deal of agricultural land, and coal at the back of it which has never been tapped because there are no means of conveyance.

4914. You think that to make the railway pay it would have to go to Jervis Bay? I do not say to make it pay.

4915. The people of Nowra cannot ask the Government to construct a railway unless there is some reasonable hope of its paying either now or in the distant future? We do not ask the Government for that now, because the Government thirteen years ago decided that it was desirable to make the railway. The money was voted for it, and the Government got the money for it.

4916. They took authority to borrow the money? They borrowed the money.

4917. Can you give the Committee any forecast of what the traffic is likely to be, presuming that the coal is not marketable? The traffic would pour in from all sides. For instance, you do not convey sandstone from Sydney by railway, and yet because of the railway, the sandstone is used. The same thing would happen

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happen in the case of this railway. We have immense limestone beds at the back of Jervis Bay, and those limestone beds would all come into use. The same thing would happen with regard to other products. The moment you construct a railway in the country, that country begins to develop its resources, because everything is wanted for different purposes. There are large iron deposits which might possibly be worked.

4918. If the Kembla harbour scheme is not proceeded with, and the railway is constructed to Jervis Bay, do you think it probable that coal would be taken there for shipment? Yes.

4919. Even though the distance from the mines to Jervis Bay is greater than from the mines to Sydney? You cannot say what will spring up in the future. When you have a railway terminus at the bay, it will be time enough to touch that question.

4920. It is all in the distant future then? It appears to me to be very distant.

4921. *Mr. O'Connor.*] You know the district well? Yes.

4922. How far does the agricultural wealth of the south extend in a southerly direction from Wollongong? About 40 miles.

4923. What is the name of the place? Part of Mr. Berry's estate. That is all rich agricultural land.

4924. If the railway were extended not only to Jervis Bay, but right along the coast, do you think there would be any chance of a favourable return from the expenditure? Yes.

4925. If Jervis Bay did not realise the expectations as to the richness of the coal-fields, is it your opinion that the agricultural land beyond is sufficiently productive to provide freight for the railway to Sydney? My opinion is that that district, acre for acre, is the richest in the Colony.

4926. Do you think the produce of that wealthy land would be sufficient to yield a considerable annual revenue to the Railway Commissioners? Yes, I think so.

4927. With regard to the coal-fields of Jervis Bay, what prospecting has been done there to enable anyone to say that the coal-fields are rich, or on the other hand that the district is stricken with poverty? All I can say is this: I was mining warden in that district for several years, and it was my business to visit any locality that was reported to me as mineral bearing, and to report to the Department. In the course of my duty I visited and inspected the Jamberoo seam, and I saw the outcrops in various places. I visited an outcrop in Cambewarra, about 12 miles further west, and I visited an outcrop at the back of Broughton Creek. I have also been in communication with Mr. Seaver, formerly member for Gloucester, who examined and reported on a seam of coal near the head waters of the Clyde, at the back of Jervis Bay, 18 miles distant in a straight line. Mr. Seaver found the coal there a bituminous shale, and he found that the seam was very large, but a good deal broken by bands.

4928. Are you a professional man? I have not any professional title; but I have studied geology, and know a good deal about minerals.

4929. You have had a good deal of experience with regard to minerals? Yes.

4930. How long have you been in the Colony? About 44 years.

4931. Is it not a fact in your experience that some places that have been declared sterile and poor after a few years have been discovered to be wealthy in minerals? The most glaring instance of that kind which I recollect was in connection with a piece of land of some 8,000 or 9,000 acres, which Dr. Alcorn first tried to get surveyed, and which I also tried to get surveyed, but which surveyor after surveyor declared to be impenetrable scrub, and the whole of which is now cleared and is carrying about a cow to the acre.

4932. It is not outside the region of probability that Jervis Bay and the country surrounding it, as far as investigations have gone up to the present time, may be one of the richest coal-fields in Australia? Yes; the presumption is that the coal seams extend 50 miles south.

4933. Apart altogether from its very fine geographical surroundings, if that district should prove to be coal-bearing it must of necessity, in your opinion, become very wealthy? Yes.

Philip Mackell, Esq., late Post and Telegraph Master, Wollongong, sworn, and examined:—

P. Mackell,
Esq.
28 Jan., 1897.

4934. *Chairman.*] What are you? I was a resident of Wollongong for over twenty-five years. I occupied the position of post and telegraph master.

4935. What information do you desire to give to the Committee? I wish to state that I was post and telegraph master at Wollongong for over 25 years. It was part of my duty to report the movements of the shipping, and also to report the wind and weather three times a day for the information of the Government Astronomer. I thus became conversant with the shipping interests. My position also gave me ample opportunity of knowing the general opinion of the residents of Wollongong and the district on all subjects of general interest. I consider Port Kembla the most suitable place for a harbour to serve the developed interests of the south coast because it would, when the breakwaters were constructed, be not only amply capacious, but give a sufficient depth of water for the largest vessels afloat. It would be easy of access in all weathers, and would, therefore, be of great advantage as a harbour of refuge in that locality. I do not think the making of a harbour at Port Kembla would be at all injurious to Wollongong, because Wollongong would then have all the advantages of a coal port with the minimum of disadvantages. Up to the time I left the residents and property owners of Wollongong, seeing that experience had proved the impracticability of constructing a suitable harbour at Wollongong, were in favour of the port at Kembla. I have good reasons to believe that they still hold that opinion. I may add that masters of vessels trading to Wollongong, with whom I had constant intercourse, always discouraged any attempts to make a suitable harbour at Wollongong, and said that Port Kembla was the proper place. They would say, "Why does not the Government, instead of throwing money into the sea at Wollongong, make a proper harbour at Kembla." I do not think the harbour at Port Kembla would suffer to any serious extent from the south-easterly gales. The islands to the east would, in my opinion, break the sea before it reached the breakwater. There would, therefore, be very little range inside; I think there would be comparatively still water at the loading jetties.

4936. Have you seen many easterly gales on the coast? A great number.

4937. There is a considerable amount of easterly sea on the coast? Yes.

Frank Jarvis Esq., Secretary, Illawarra Harbour and Land Corporation (Limited), sworn, and examined:—

F. Jarvis,
Esq.
28 Jan., 1897.

4938. *Chairman.*] What are you? Secretary to the Illawarra Harbour and Land Corporation (Limited).

4939. *Mr. Lee.*] Have you been secretary to the company since its registration? No.

4940. For how long? The last eighteen months.

4941.

4941. Are you acquainted with all the details in connection with the contract? Fairly so.
4942. Could you give the Committee any explanation as to the cablegram which appeared recently in the Sydney papers as to the despatch of dredges from the old country? Officially I have had no intimation from London—that is to the company; but Mr. Armstrong has had advices from Mr. De Wolf as far back as November last, and Mr. De Wolf was then in treaty with a firm—Messrs. Gwynn & Co.—for two dredges of large power with steel barges, and a subsequent letter informed us that those negotiations were still going on. We heard nothing further, although we expected to hear, until we saw the cablegram in the paper.
4943. You really do not know then officially whether any contract has been entered into with the makers for these dredges and hoppers? No. Not officially.
4944. Have you sufficient preliminary information to be able to say how they are to be sent to the Colony, whether they are to be sailed out to the Colony or otherwise? I know nothing of that.
4945. For what purpose were they coming? For dredging Lake Illawarra—the channel.
4946. In its formation? The formation of the channel.
4947. I suppose these dredges would have to be of a powerful character and of high pressure? I understand they would be capable of throwing out 800 tons an hour each.
4948. You do not know how they were to be brought to the Colony? No.
4949. Could you tell us how they were to be got into the lake after they were brought here? Either by cutting their way through the sand—
4950. From where? From the outside.
4951. Did you ever hear of a dredge working in a heavy surf? There is not always a heavy surf there.
4952. Do you think they would last there ten minutes? I do.
4953. Then your idea is that they would come out and attack the channel from the ocean side, and cut their way through into the lake? Of course there are two ways,—it could either be done that way or by the dredges being sent out in parts and being put together on the lake. I do not know which method was intended.
4954. You do not seem to know really anything about the dredge matter? Well, I have had very little information with regard to it.
4955. If the dredges were to be built on the lake it would take considerable time? Not very long; it appears to me to be a matter of rivetting.
4956. How long do you estimate it would take to put an ordinary dredge together and fit it with machinery, even if all the appliances were at hand? That is a question I cannot answer; it is more for an engineer.
4957. Taking all these things into consideration, are you prepared to endorse the evidence that has been given that the work of cutting the channel, making the breakwaters, and dredging the basin can be carried out in two years? I am informed it can be done, and I believe it can.
4958. You believe it on the statement made by the engineers? By the engineers and the contractor.
4959. And from what they have said you are of opinion it can be done? Certainly.
4960. Being secretary to the company, you know that unless the work is done by the end of next year they will forfeit £10,000? I do.
4961. Do you think there is the remotest possibility of your being able to do the work within the time? I do indeed.
4962. Do you swear that in face of the evidence of the contractor, who says he has no money to go on with, that he is waiting for money, and he does not know when the money will be ready? I say provided always that the contractor is told to go on with the work.
4963. The contractor swears that he cannot go on until he gets the money;—what the Committee want to know is this—what possibility is there of the company being able to carry out the terms of their Act by the end of December, 1898? I have had no official information regarding financial matters in London.
4964. But you must remember that your representatives have been here and have contended that the Port Kembla works should not be proceeded with, on the ground that they have certain rights under their Act in connection with Lake Illawarra, and those rights expire at the end of 1898? I feel very confident myself that the financial part of it will be carried out satisfactorily. I am not in a position to say how far it has gone or what has been done.
4965. Are you in a position to assure the Committee approximately that the amount of money required by the contract entered into between Mr. Amos and the company will be raised in sufficient time to admit of Mr. Amos proceeding with his work, and having it accomplished by the time the Act expires at the end of 1898? No; but I feel confident that successful financing will eventuate.
4966. *Mr. O'Connor.*] Your position is that of secretary to the company? Yes.
4967. Is it any portion of your business to know exactly what may be the most delicate and important relations between your company and the outside world? I only know what comes before me.
4968. For instance, if the company were borrowing £50,000 or £5,000, would you know that? If they borrowed it I should know it.
4969. But you do not know it up to the present time? I have had no official intimation.
4970. Is it possible that they could do it without your knowing it? They might do it and not advise me until by letter per incoming mail.
4971. Mr. Lee asked you if there was any probability of the contract being completed within the specified time, in view of the fact that there appeared to be no money in the treasury;—is it within the region of commercial probability that at the present time a loan or grant of money for £50,000, or £15,000, or £1,000, may be coming out without your knowing it? Not without my knowing it.
4972. Then it is a positive fact that there is no money and no probability of the company getting any? No; I do not say that at all. I have every reason to believe that the money will be forthcoming.
4973. I asked you if it were possible that the company might be negotiating a loan? They are negotiating a loan.
4974. And that a sum of money might be coming along without your knowing it, and that although to-day there might not be 1s. in the treasury to-morrow you might have a considerable sum—is it a fact that that could happen without your knowledge? I know that negotiations are pending and I believe they will be satisfactory.
4975. Then it is possible that they may be satisfactory? Quite possible.

F. Jarvis,
Esq.,
28 Jan., 1897.

Stephen Henderson, Esq. (Messrs. Harper, Harper, & Henderson), sworn, and further examined:—

S. Henderson, 4976. *Chairman.*] You have had an opportunity of reading Mr. Darley's evidence with regard to the time required to carry out certain works at Lake Illawarra? Yes.

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28 Jan., 1897. 4977. Do you desire to make a statement to the Committee with regard to that matter? Yes; and with regard to one or two other points. I would first refer to the question as to the depth of the harbour at Lake Illawarra. Mr. Darley pointed out by diagram that while the depth was 25 feet 6 inches at mean tide level, it would only be 22 feet 6 inches at low water spring tide. In that calculation he took a range and fall of tide of 6 feet. Now he has only got 5 feet 6 inches at Kembla, so I think he ought to have given us a depth of 3 inches more, which would be 22 feet 9 inches. And I want to point out that if that is the depth at low water the depth at high water six hours afterwards will be 28 feet 3 inches, taking that range and fall of tide. Then at neap tide with about 3 feet 6 inches range the depth at low water would be 23 feet 9 inches, and at high water 27 feet 3 inches. As far as the depth of the Illawarra harbour is concerned, I have made enquiries in shipping circles, and I find that 23 feet is the maximum draught allowed by the harbour master at Newcastle. If vessels draw more they must proceed with great risk. Mr. Darley made the remark that our scheme would not be adequate for the south coast trade for some time to come; but in view of the fact just stated, I think it would be adequate. Of course, we are not prevented from dredging further; but still, it is a very well thought out scheme and takes a fairly good mean draught of vessel. For instance, take sailers from Newcastle, very few of them ever load more than 22 feet 6 in. A draught of from 21 feet to 22 feet is about the maximum of sailers in Newcastle.

4978. *Mr. Hoskins.*] They want 3 feet of water under the keel then? They want 1 or 2 feet under them. Our harbour at high water neap tide will have a depth of 27 feet 3 inches, so that vessels would have a good lot of water under them. As far as the width of the channel is concerned, I should like to put on record figures with regard to the width of some of the most important canals in the world. The Suez Canal, which was originally 72 feet wide at the bottom, has now been enlarged to a width of 113 feet; the Manchester Ship Canal has a width of 120 feet; the North Sea and Baltic Canal 85 feet, and the Amsterdam Ship Canal 88½ feet.

4979. *Mr. Wright.*] May I ask you where you got these measurements from? From a book on the Nicaragua Ship Canal, by Mr. Colquhoun, the first administrator of Mashonaland. I checked the measurements by figures from another source. In giving his evidence about the time it would take to construct the Illawarra Harbour, Mr. Darley said that 10,000 tons a month was about the maximum that a contractor could put over the tip. He had in his mind a working day of eight hours, because he was asked whether 400 tons would not be 50 tons an hour. I believe 10,000 tons a month is a very good record, but if you worked overtime and were pushed, you could average that easily, and probably do more. The time taken to construct the Illawarra Harbour will depend, not on the total number of tons you have to put in, because there is more than one tip—there are four tips.—but on the number of tons you put in the biggest breakwater, added to the number of tons you put in the tie-bank, which is the connection between Windang Island and the works. According to our estimate, the tonnage is 163,000 in the biggest breakwater, added to the tonnage in the tie-bank. At 10,000 tons a month, according to Mr. Darley's estimate, and taking our estimate of tonnage, it would take one year and four months and a half to construct the Illawarra Harbour. Therefore, to say that we can complete it in two years is, I think, a very fair thing. Then let us compare it with the proposed eastern breakwater at Port Kembla—Mr. Darley said there were 633,000 tons in that work. At 10,000 tons a month, that would be five years and three months and a half, and the work would be done at tremendous speed. The Government estimate for the completion of the Kembla work is six years. Taking it altogether, I think the Illawarra work would have as great a chance of being completed in two years as the eastern breakwater at Kembla would have of being completed in six years. That is all I have to say about the time. I have had the quantities of our breakwaters taken out again, and the new estimate practically checks the old. For the northern breakwater the old estimate was 139,000 tons and the new estimate is 139,748. For the southern breakwater the old estimate was 153,000 tons and the new estimate is 152,671 tons.

4980. So that in effect you have verified your previous estimate? That is so. I should like also to say a word about the strength of the breakwaters. Mr. Darley said our breakwaters were very low and narrow, but that he estimated for more substantial designs. In view of that statement I had a few sections made of our breakwaters, which I desire to show to the Committee. It will be seen that for the outer 13 chains of the breakwaters our section is larger for the same depth of water than the Government section of the northern breakwater at Port Kembla. At the present high-water mark on the beach the sections of our breakwaters are slightly smaller; but I am confident they are sufficiently large to withstand any seas that can possibly strike them. Our breakwaters get larger as they approach the end; the end section of our breakwaters is considerably stronger than the Government section of the northern breakwater at Kembla in the same depth of water. The following table is compiled from the sections now before the Committee, and shows in detail the comparative strength of the Illawarra breakwaters and the Kembla northern breakwater:—

	Distance from present high-water mark.	Width at mean tide.	Width at top.	Height above mean-tide level.
	Chains.	ft. in.	ft. in.	ft. in.
Lake Illawarra—North breakwater	0-00	31 1	11 4	7 11
	6-40	37 5	12 5	10 0
	20-00	58 6	15 0	14 6
South breakwater.....	0-00	30 2	11 2	7 7
	2-50	32 8	11 5	8 6
	11-20	46 3	13 3	12 0
	20-90	58 6	15 0	14 6
Kembla—North breakwater	type section	34 6	14 0	10 3

4981. Do you wish to make any further statement? No.

4982. These works were designed by your firm? They were designed by Messrs. Harper and Harper, with whom I have since been associated.

4983. Are you quite clear about the possibility of these works being carried out in a couple of years' time? Undoubtedly.

4984.

4984. If Mr. Darley says they will take at the very least five years, do you doubt the correctness of his belief? Certainly. S. Henderson,
Esq.
4985. It is a matter of opinion, and you think that his opinion is wrong? Exactly. 28 Jan., 1897
4986. What method are you going to adopt for dredging—are you going to dredge the entrance to the channel? That is a matter for the contractor. Mr. Amos proposes, if his contract is gone on with, to get suction dredgers—sand-pump dredges.
4987. Supposing Mr. Amos undertook to do this work in about eighteen months—because by the time he got his plant he would not have any more time than that—where would he deposit his silt? He has to fill up a lot of ground marked on our plans—he has to reclaim it.
4988. Reclamation inside the lake? On the shores of the lake—at Coonawarra Bay, and also at the entrance.
4989. Would not that necessitate training-banks of some kind? Yes; fascine banks, which are provided for in the contract.
4990. And you think that the construction of these fascine banks to hold the silt—the dredging out of the enormous amount of silt that would be taken from a channel $3\frac{1}{2}$ miles long and 100 feet wide, with a depth of over 20 feet, and also the dredging of the basin—you think that all this could be done inside of two years, especially considering that within that time the contractor would have to place his plant on the ground? Yes.
4991. You still contend that it is quite possible to do the work? Yes.
4992. That it is only a question of money and machinery? Just so.
4993. That with the supply of the necessary funds and with judicious management the work could be done in the time specified? Yes.
4994. Under the Illawarra Harbour and Land Corporation's Act they are compelled to have a channel only 15 feet deep within the time specified? I think the Act says, "ships with a draught of 15 feet."
4995. So that if they could manage within the time to get two or three vessels in drawing 15 feet of water they would in effect comply with their charter? I believe so, but that would be a lawyer's question.
4996. The question of constructing the breakwaters is one you know something about;—have you inspected the quarries in the district? I have seen Windang Island.
4997. Do you think there is any stone to be got on Windang Island suitable for a breakwater? Yes, certainly.
4998. Where would you get it from? It was my opinion that the whole of Windang Island contained stone suitable for a breakwater. But a portion they have used for the tie-bank has weathered a little, and this makes it a bit doubtful. I certainly think, however, that the stone at the other end of the island is perfectly suitable. It is very hard stone.
4999. What do you call it? It is a sort of sandstone—a ferruginous sandstone.
5000. Is there any basalt? I think there is a little vein of basalt through the centre.
5001. Is not the stone on the western end of the island, where the quarries are now situated, very much broken up? I have not seen that myself. I hear that it has weathered a little.
5002. Did you supervise the construction of the wall that is there now? Yes.
5003. Is the stone used there sufficiently good, in your opinion, for a breakwater? The stone in the bank down below the water has stood very well, and the edges are still sharp. Above the water where smaller stuff was used the stones have been rolled about and have become slightly rounded, but there is not much trace of weathering.
5004. You are aware as an engineer that in constructing a breakwater exposed to the ocean the stones must be of a pretty good size? Yes.
5005. And they must be free from natural joints which will eventually open? Yes. I believe that you will get very large blocks of stone from the end of Windang Island.
5006. The outer end? Yes.
5007. But how are you going to get it from the outer end? By a tramway.
5008. A wire tramway? No; a tramway along the base of the island. This will be done as they open out the quarry.
5009. It has been stated in evidence that in the event of the stone on Windang Island not being suitable there were two other quarries from which stone could be obtained—one about a mile and a half, and the other three miles from the entrance to the lake;—have you visited these? No; I have not visited them myself.
5010. And you can say nothing as to the suitability or otherwise of the stone? No. In our contract we say that the contractor has undertaken to get sufficiently good stone should stone not be procurable at Windang Island, and when the time comes of course we shall investigate.
5011. But you have yourself personally examined Windang Island? Yes.
5012. And you consider that the stone to be obtained there is good enough for the breakwater? I do. I believe we shall get most if not all of our stone from Windang Island.
5013. Supposing that two breakwaters are constructed and the channel is cut through, have you any doubt about the channel remaining permanent? I have no doubt whatever; the scour will maintain it.
5014. There is a very small outflow from the lake, is there not? At present, yes.
5015. What would increase it? If you have a small pipe you have a small outlet, and if you have a big pipe you have a larger outlet. When we construct the channel we shall have a tremendous scour.
5016. You will have a scour caused by the tide flowing in and out of the lake, except in times of flood, when it would be greater? We do not want a flood; the tidal water is quite sufficient.
5017. Do you think that the tidal water passing through a channel 100 feet wide will be sufficient to maintain a scour which would keep the channel free? Yes.
5018. Would not floods and heavy rains assist in the scour? No, not materially.
5019. Is it not likely that while the lake may gradually deepen by the scour the silt will block the entrance? No; because through the lake there will practically be no current at all.
5020. There will be the tide in and out? Yes; but the lake has a large area.
5021. The channel is simply the neck of the bottle? Exactly.
5022. But if you are going to have a scour there will be a certain amount of current? There would not be much velocity a quarter of a mile from the neck of the bottle. At the neck of the bottle there would be some scour but as regards the whole of the lake there would not be much disturbance.

- S. Henderson, Esq. 5023. *Chairman.*] Could you state how far from the entrance into the narrows on the western side the velocity would cease to have any practical effect? Speaking as a guess I should say about 1,000 feet.
- 28 Jan., 1897. 5024. You say you have no fear of the channel silting up from the inside;—is there any danger of it silting up from the outside—from storms? I think that heavy gales from the north-east might tend to make a bar there but that gales from the south-east would not, and heavy north-easterly weather is so rarely met with that it may be discounted.
5025. The wall you have already built there from the island has silted up and the sand is going over the top? Yes; that is coming from the south.
5026. Do you think Windang Island would afford sufficient protection to prevent a similar thing happening to the extremity of the breakwater? Certainly.
5027. *Mr. Hoskins.*] On what date was the information prepared which you furnished to the Committee with regard to the width of various canals? It was taken from a book published last year or the year before.
5028. Because the Suez Canal has been considerably widened? As far as that is concerned the information published in the book was to this effect. It was in the report of an engineer describing the result of a Commission to widen and deepen the Suez Canal. It stated that in 1889 they had started this work of widening the canal.
5029. They started to widen the canal in 1889? I think it was in 1889, but I am not sure.
5030. Do you mean to say that since the Suez Canal has been widened the width is only 113 ft.? Exactly, that is what I mean to say.
5031. That it is only 113 ft. now? Yes—at the bottom.
5032. You know that only steamships pass through the canal? Yes.
5033. Do you think that a sailing vessel with a long tow-rope from a tug and with scarcely any ballast could go through a canal, where there is a great expanse of water and where violent gales of wind occasionally occur, as readily as a steam vessel could go through the Suez Canal propelled by steam? Steam vessels have some difficulty in going through the Suez Canal; they very often knock up against the sides and often run right across.
5034. Would not a sailing vessel being towed in a narrow channel under the conditions I have described not be liable to be driven against the banks and against other vessels? If she had no cargo she might not strike the bank at all, she might drift over the top of it. At any rate if the vessels did strike the bank and rubbed along the whole way they would only have to put on a little more paint when they got into a dry dock.
5035. *Chairman.*] You say that at a distance of 1,000 feet to the west of the entrance to the lake the current would be such as not to be of any vital importance? Yes.
5036. If that is the case, it would not have any velocity 1,000 feet from the entrance to the lake in an easterly direction? That is so.
5037. That being so, the sand which the water carries through the entrance of the lake will be deposited at the point where the velocity ceases? It will go further out into the sea than into the lake.
5038. The water would not go much further than 1,000 feet outside before it commenced to deposit the silt. Very likely it would lose its power or velocity immediately it passed outside the training wall? The silt will be carried away by the ocean current. There is a steady current there.
5039. What evidence have you got of a current off Lake Illawarra? There always is a current along a coast.
5040. There would be a current off the Five Islands, but it would probably pass just east of the Five Islands. That would not prove that there would be a current in the bay near Windang Island. If you had any evidence with regard to a current there it would be important? I do not think we have any data as to the strength of the current.

FRIDAY, 29 JANUARY, 1897.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.	CHARLES ALFRED LEE, Esq.
The Hon. JAMES HOSKINS.	JOHN LIONEL FEGAN, Esq.
The Hon. CHARLES JAMES ROBERTS, C.M.G.	THOMAS HENRY HASSALL, Esq.
The Hon. WILLIAM JOSEPH TRICKETT.	GEORGE BLACK, Esq.
The Hon. DANIEL O'CONNOR.	FRANCIS AUGUSTUS WRIGHT, Esq.
HENRY CLARKE, Esq.	FRANK FARNELL, Esq.

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

Frank Jarvis, Esq., Secretary, Illawarra Harbour and Land Corporation (Limited), sworn, and further examined:—

- F. Jarvis, Esq. 5041. *Chairman.*] Do you desire to make a statement to the Committee? I wish to add something to the evidence I gave yesterday which I had not then an opportunity of stating. In reference to the apparent discrepancy between Mr. Amos' evidence and the recent cable from London in regard to the dredges, I would state that Mr. De Wolf in London, not knowing what arrangements Mr. Amos had made in the event of his being instructed to proceed with his contract, to save time, took the matter of the dredges into his own hand; and Mr. Amos has expressed to my managing director, Mr. Armstrong, his willingness to accept such dredges, provided they are up to date, as a cash payment on account in his contract. The Committee will remember that Mr. Amos in his evidence said he had made arrangements in San Francisco.

5042. You desire to say something in regard to the working of the tug at Illawarra? Mr. Hoskins, when asking some questions of Mr. Henderson yesterday, seemed to imply that a sailing vessel could not go up our channel, that she would be sagging all the time alongside the channel at the end of a long tow-rope. Such a thing would never occur. Under our Act we have to provide an efficient tug service and make by-laws for that service, subject of course to the approval of the Marine Board. When a vessel approached the entrance to the harbour the tug would either range alongside under the lee of Windang Island or else shorten

shorten rope; so that a sailing vessel could be brought in under perfect command of steam—for the time being the vessel would be a steam vessel to all intents and purposes. Mr. Amess, the Government contractor for the tug service at Wollongong, is now in attendance with the view of showing the practicability of what I have just stated, and he will be willing to give evidence to that effect if desired. A sailing vessel would never go up the channel behind a long tow-rope; she would have the tug alongside or a short tow-rope.

5043. *Mr. Hoskins.*] She would have to be taken along a channel 100 ft. wide? There would be plenty of room. 100 ft. is the width at the bottom which should give about 250 ft. at the top.

5044. *Mr. Wright.*] When did you receive the communication referred to from Mr. De Wolf? In November; I forget the exact date, but I think it was about the 10th or 12th.

5045. You were aware then that he had purchased dredges? No. I knew he was in negotiation for the purchase of dredges and he mentioned the name of the firm, Messrs. Gwynne & Co.—very eminent men in that branch of business.

F. Jarvis,
Esq.
29 Jan., 1897.

Edward Fisher Pittman, Esq., A.R.S.M., Government Geologist, sworn, and further examined:—

5046. *Chairman.*] The evidence the Committee desire from you is in reference to the stone at Windang Island, as to whether it is suitable for breakwater purposes—have you seen the place? Yes. I have been on Windang Island and inspected the stone.

5047. Can you describe it? It is a volcanic tuff. It is composed in fact of volcanic ashes and fragments of rock which have been formed into a sedimentary rock. It is not at all, in my opinion, a suitable rock for making breakwaters or retaining walls which will be exposed to the atmosphere. It crumbles very readily on exposure. In fact, an inspection of Windang Island will show at once that disintegration is going on very rapidly there, where the stone has been quarried, and also in the retaining wall, or foundation for a retaining wall, which has been made between Windang Island and the mouth of Lake Illawarra. The rock there is crumbling very rapidly. I do not think it at all a suitable rock for such a purpose.

5048. Would it come out in large rocks? I do not think so.

5049. Could you say definitely whether it would or not? In my opinion it would not. Of course it altogether depends on what you call large rocks.

5050. Twenty tons weight? Certainly not. It is in beds, the maximum thickness of which I should say from memory does not exceed 3 feet.

5051. Therefore, it would not do for breakwater purposes exposed to the sea? That is my opinion.

5052. The same objection would not apply to so great an extent to its use in training-walls, where the sea would not affect it? I think the ordinary effect of the atmosphere is largely responsible for the disintegration.

5053. First of all, if the rocks were not of 20 tons weight, they would not be suitable for breakwater purposes? No.

5054. Still, the stone on Windang Island might do for training-wall purposes, where it would not be affected by the force of the sea—do you consider it would be unsuitable for such a purpose as that? I think it would be unsuitable, very much less suitable than other rock in the same district. I think it is rock that would always have a tendency to disintegrate under atmospheric influences.

5055. It would be impossible, or most likely impossible, to build a breakwater with it that was exposed to the force of the sea, and it would not be a good material to use for the training-walls inside? It would not be impossible to build a breakwater, but I think it would not last any time.

5056. What other stone is there in the vicinity? There is a rock which geologically is called *augite andesite* which occurs all through that district. It is a volcanic rock occurring in what are called contemporaneous sheets. It is to be found right through these coal measures in the south. The bed is of varying thickness, but in places it goes up to several hundred feet, and it outcrops very near the volcanic tuff to which I have referred, and could be easily obtained. In my opinion that would form an excellent stone for breakwaters, and it could be got in large blocks.

5057. Can you state where it is to be found? Yes; it occurs in the locality where it is proposed to construct a harbour at Port Kembla—alongside the jetties. The Illawarra smelting works are really built on the same rock, only there it is a bit decomposed, but if you sank down a few feet I have no doubt you would get on to the solid stone there also.

5058. Is that the stone that is lying southward that shows on the rise south of Port Kembla? Yes.

5059. It would come out in large blocks beyond doubt? Yes.

5060. Have you seen the two shafts that have been put down? I have not.

5061. You have only inspected the outcrop? That is all.

5062. Is that the nearest stone to the lake that you know of, of that class? Yes; it occurs right on the bank of the lake where the smelting company's works are.

5063. But on the sea-board side of the lake? Yes; that is the nearest stone.

5064. Might there not be some nearer which might be found on further inspection? No; I think not. The only other stone in the district that I know of which would answer the same purpose is the basalt known as the Blow Hole basalt which occurs at Kiama.

5065. In your opinion could no other stone be found within three miles of the entrance of the lake? I can certainly say that no other stone can be found within that distance suitable for the purpose.

5066. You know that long sand-tongue dividing the ocean from Lake Illawarra? Yes; I have ridden all down that.

5067. And you are sure there is none there? Yes.

5068. That really brings you almost abreast of Five Islands Point? The same rock of which I spoke, the *andesite*, comes through between the lake and Five Islands Point.

5069. That brings you down a little closer? Yes.

5070. *Mr. Wright.*] Is the same rock on Five Islands Point? I have not been on Five Islands Point, but I think it very likely. I have no moral doubt that Five Islands are composed of the same rock; but I have not been on the islands, and I cannot say. From the shore it looked as if they were.

5071. *Chairman.*] Then we can interpret your reply in this way, that in a northerly direction suitable stone for breakwater purposes is not likely to be found nearer than the north-east point of the lake? Quite so.

5072. To the west, the same formation is found where the smelting works are being erected? Yes.

5073.

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5073. Then as to the south? I have been along the road from Shellharbour Railway Station to Shellharbour township, and right on to Windang Island, and the nearest point along that road at which I saw the *andesite* was at the junction of the Shellharbour Road with the railway line. In my opinion, no suitable stone will be found nearer to the mouth of the lake on the south than at Shellharbour Railway Station, unless it may be on the coast south of Shellharbour. The basalt which occurs at Shellharbour station would be equally suitable.

5074. That would appear to be a distance of about 5 miles? I should think it is about 5 miles.

5075. Are you fairly sure of this information? I am quite sure of it. I have been over all the ground you mention quite recently.

5076. And you have no doubt whatever about it? No.

5077. Are you aware that Mr. Evans, a mine manager of some repute on the south coast, has given evidence contradictory to that given by Professor David and yourself with reference to the coal deposits south of Kembla? I have not had an opportunity of seeing Mr. Evans' evidence, but before visiting the Wongawilli site Professor David and myself were informed at Dapto that Mr. Evans was working the coal there, and that he and several others had stated that it was magnificent coal; in fact, we heard one statement to the effect that it was better than Newcastle coal. I can only say that the analysis of the samples, which I took very carefully and which represented the entire thickness of the seam where visible, showed a very inferior coal indeed to that of Newcastle.

5078. *Mr. Hoskins.*] What was the percentage of ash? 20·75 and 18·35. The coal was full of bands.

5079. *Chairman.*] Do you say that the evidence given before the Committee, as reported on page 139, is a correct statement in regard to the Wongawilli coal deposits? Yes.

5080. Where were the samples taken from? From the end of the tunnel; as far in as we could get.

5081. And in regard to the Jamberoo coal, you still maintain your position? Yes; I have not seen any reason to alter my opinion.

5082. Can you tell us anything in regard to the coal contiguous to Jervis Bay? No; I cannot. We did not make any examination of that recently, and, as far as I know, Professor David is the only one who has really examined it at any time.

5083. How far south did you investigate recently with Professor David? Down to Jamberoo and Broger's Creek.

5084. You have no desire to alter your evidence previously given, in which you told us definitely that there was no coal fit for export south of Mount Kembla? No.

5085. *Mr. Humphery.*] Have you any recollection of the analyses of coal submitted to your Department by Mr. Evans, in 1889 and in 1895,—the former of which gave a result of 12·66 of ash, and the latter 11·45 of ash, as against the analysis of 15·10 mentioned by Professor David in his evidence on the 16th December last? The return given in 1895, no doubt, passed through my hands, and I have no doubt I signed the letter conveying the information, but I have no distinct recollection of it, and it is quite possible that these analyses are quite correct. But I should like to point out that the value of a coal analysis depends entirely upon the manner in which the sample is taken. It is quite possible that you might get small samples of coal, taken from some of these southern seams, which would contain even less than 11 per cent. of ash. But the analyses furnished in Professor David's evidence and my own, were from samples taken by ourselves and representative of certain thicknesses of the seam. That is the only way in which an analysis of coal can be regarded as of any consequence at all. Then, again, although I have no doubt whatever that the evidence referred to is right, and that an analysis was made showing 11 per cent. of ash, still the locality of these samples is always taken for granted by us when people send them in, and I cannot really say they actually came from that country at all, although I think it is quite possible they did.

5086. It is not impossible that the coal could have been got from elsewhere? It is quite possible.

5087. As the result of your personal examination of the seam of coal referred to the percentage of ash from a fair representative sample was, as stated by Professor David, 15·10? Quite so. I do not think that coal could be worked commercially containing as high a percentage as that. The sample taken by us was a representative sample of a certain thickness of a seam that could be commercially worked. It was not an analysis of a small picked sample which might have been taken out from the most promising part of the seam, which perhaps might not have been more than 2 or 3 inches thick.

5088. You are not now referring to coal at Dapto Creek belonging to the Illawarra Harbour and Land Corporation, but you are referring to what is known as Brownlee's coal? Yes.

5089. *Mr. Wright.*] In regard to the stone on Windang Island, if it has been described as ferruginous sandstone, would that be correct? No; that is not a strictly correct term. It is really a sedimentary rock formed of volcanic ashes and small fragments of shale and sand.

5090. Not a sandstone at all? No; a geologist would not call it a sandstone. It is really a volcanic tuff, but passes into a tuffaceous sandstone in places.

5091. Did you examine the stone on the outer part of the island over which the sea washes—the lower layer? No; my examination was chiefly confined to the quarry. I thought I should have a better chance of seeing the stone in the solid there, and therefore confined my attention to that. I walked round the top of the island. The sides there were so precipitous that I did not care to go down, especially as I was pressed for time and the tide was coming in.

5092. On the sea face there is apparently a bed of solid stone;—you do not know what that is? I am certain the whole of the island is composed of volcanic tuff; because I examined the same beds right along the coast beyond Shellharbour.

5093. What do you call the stone found close to Port Kembla? *Augite andesite.*

5094. There is a shaft there 30 feet deep—have you examined that? No.

5095. Can you tell the Committee what is the usual character of the stone? The character of it can be best ascertained at the quarries on the top of the hill at Kiama where it occurs in pentagonal prisms, as it were. You can see it in the quarries there looking like five-sided pillars.

5096. *Chairman.*] Is it what we are accustomed to call columnar basalt? It is a kind of basalt, but it is not true basalt. It occurs in the columnar form.

5097. *Mr. Wright.*] Does it usually occur in beds of sufficient size to enable you to get large blocks of stone? Yes.

5098. In the 30-foot shaft just mentioned there is only a depth of 5 feet near the bottom showing solid stone, all the rest being considerably fractured? Yes.

5099. You think that stone is of a quality which will enable large blocks to be quarried out? I think so. The size of the blocks would only be limited by the columnar structure I have mentioned.

5100. Would that columnar structure enable you to get out blocks of from 20 to 25 tons? I think so. The width of the columns is about the width of this table (about 3 feet), as a rule, and they are five-sided.
5101. There is no evidence of that in the shaft? Possibly not.
5102. You are satisfied the stone is of a quality suitable for a breakwater? I think it is essentially so.
5103. *Mr. Fegan.*] Is it not possible that you may receive samples of coal stated to come from places where you would be surprised to find coal of such quality? We have received samples of ores—I cannot call to mind any samples of coal—from localities which I am perfectly certain were incorrectly given.
5104. And there might be that possibility in regard to the various coal lands south of Kembla? There is quite that possibility. I do not say for a moment it is done.
5105. But it could be done? Yes.
5106. If people wished to make their property appear more valuable than it really was, they could do that? Yes.
5107. You never make any question as to the place from which the coal comes—all you do is to give an analysis of the sample? Yes; except that in publishing the analysis in the annual report wherever I am doubtful I always put in the words "said" to come, &c.

E. F.
Pittman,
Esq.,
A.R.S.M.
29 Jan., 1897.

Mr. John James Amess, lighterman and tug-owner, sworn, and examined:—

5108. *Chairman.*] What are you? A lighterman and tug-owner.
5109. *Mr. Wright.*] You are familiar with the handling of vessels? Yes.
5110. The proposed channel at Lake Illawarra is 100 feet wide at the bottom and 3 miles long, and about 450 feet wide between the breakwaters, where there would be a considerable sea;—are you quite positive in your own mind that you could take a ship of (say) 4,000 tons burden in and out of the lake in an ordinary stiff breeze of wind? Yes.
5111. There would be no danger of her fouling the bank? I do not think so with a powerful tug.
5112. And no danger of her fouling the breakwaters? No; as soon as you pass the breakwaters you get your tug close on to the ship's bow and shorten your line.
5113. Supposing it was blowing a stiff breeze? You get on the lee side and keep her up.
5114. You think that an ordinary tug could keep her up? Yes; an efficient tug—a tug of 100 horse-power.
5115. Such a tug would be sufficiently powerful to take a ship of 4,000 tons through the breakwaters and through the channel just described? Yes, in my opinion it would.
5116. There would be no danger of a ship fouling? No.
5117. Would there not be a danger of a strong breeze striking the ship's side, forcing her on to the bank of the channel? I do not think so with a powerful tug ahead of her, because it would give her steerage way.
5118. You are satisfied in your mind that a big ship could be taken in and out with perfect safety? Yes.
5119. *Mr. O'Connor.*] You have been engaged in this business for years, and have had considerable experience? Yes.
5120. And you are now in the same business? Yes.

Mr.
J. J. Amess,
Esq.,
A.R.S.M.
9 Jan., 1897.

Stanley Alexander, Esq., Acting Inspecting Engineer, Railway Construction Branch, Department of Public Works, sworn, and examined:—

5121. *Chairman.*] What are you? Acting Inspecting Engineer in the Railway Construction Branch of S. Alexander, the Department of Public Works.
5122. *Mr. Fegan.*] Have you information with regard to the cost of resumption at Port Kembla in connection with the Mount Pleasant line and the Mount Keira line? I have a paper sent to me by the Committee which mentions only the cost of the lines at Port Kembla within the resumed land—two lines, the Kembla line and the Great Southern line within the land proposed to be resumed.
5123. Including the Mount Pleasant line? No.
5124. *Chairman.*] Assuming that a port was to be made at Kembla, and it was determined to resume the private railways, how much per mile would it cost going west? The cost that would be incurred to reproduce a line similar to that portion of the Mount Kembla line, exclusive of land resumption, would be £3,800 altogether.
5125. *Mr. Fegan.*] What is the distance? The length of the line is 105 chains, and there are 40 chains of sidings. To reconstruct the line would cost £3,800. I do not know what the resumption would cost.
5126. There is the resumption of the jetty? Yes. That estimate is really for a railway line up to the beginning of the jetty.
5127. Have you the figures with regard to the Mount Pleasant line? No. The Mount Pleasant line is not at Port Kembla.
5128. If a harbour is constructed at Kembla, and if you resume one line, it would be better to resume all; therefore the Mount Pleasant line would come in also, would it not;—the Mount Pleasant collieries slip at Kembla, do they not? They do ship at Kembla. But they tranship their coal at their own junction, which is several miles away from Port Kembla. They have to tranship into other waggons. The Mount Pleasant line is a separate affair altogether. Mount Pleasant communicates directly with Wollongong Harbour. It is not within miles of Port Kembla.
5129. But if a breakwater were constructed at Kembla which would give security to shipping, is it not probable that the Mount Pleasant Company would ship there also? They would then have to go by the new railway which the Government would construct, transhipping their coal into Government trucks at the port of Wollongong.
5130. But there would be some resumption in connection with their railway also, would there not? No.
5131. Now with regard to the Great Southern line? The length of that line is 77 chains and there are 54 chains of sidings. The cost would be £3,308.
5132. That is to construct a similar line to-day? Yes.
5133. With the resumption of land? No, exclusive of land resumption.
5134. Have you any idea what the resumption of land there would be? It would be very little. The land is not worth much. The resumption, I suppose, would amount to about 10 or 15 acres, at £5 an acre.
5135. Do you think you could get it for that? I do not suppose they ever gave more than that for it; but I am not sure that there is not a right-of-way. I think there was some right-of-way given. I do not think the land was ever purchased.

29 Jan., 1897.

5136.

- S. Alexander, Esq.
29 Jan., 1897.
5136. What would be the easier grade or the nearer way to get from the collieries to Port Kembla—that is on to the Government line? I think the best route would be to go from Wollongong, from the gaol. But it is only a matter of personal opinion.
5137. Right through the town? Along the beach and across the Tom Thumb Lagoon.
5138. Is that a good place to construct a line? The only difficulty is the crossing at the mouth of the Tom Thumb Lagoon.
5139. What would it cost to put a bridge over? I think Mr. Deane has given you that information in his estimate. I merely made an exploration.
5140. Could you trace on the map the route by which you propose the line should be constructed? There were two lines surveyed. After passing round the gaol and going along the sand the line would cross over to the shore of Tom Thumb Lagoon. Then it would follow a straight course past the Agricultural Ground and Racecourse, and then across the mouth of Tom Thumb Lagoon to Port Kembla. That is what has been talked of as the beach line.
5141. Have you any doubt that the Mount Pleasant collieries would ultimately ship at Kembla if a break-water were constructed there;—could they safely ship at Wollongong at all times? The Mount Pleasant Colliery has been shipping at Wollongong for the last twenty-five years.
5142. But they want to employ large steamers, and only comparatively small vessels go into Wollongong? Any evidence I could give you about the shipping of coal would not be of any value. I will tell you all about the railways. The Mount Pleasant line traverses the borders of Wollongong. It passes right along the foreshore to the port.
5143. What is the grade there? It is practically level.
5144. The grade on the Government line—the South Coast line—is rather steep there, is it not, and that is why you suggest that the line should be brought round along the beach? That is one of the advantages to be gained by adopting the route of the Mount Keira line.
5145. But is not that one of the reasons—that you would miss the steep grade there? Yes.
5146. What is the grade there on the main south coast? Between the crossing of the Keira line and the railway station the grade is 1 in 75.
5147. On the proposed beach line you would have practically level country? From where the Mount Keira line crosses the South Coast railway line there is a rising grade of 1 in 80 on the Keira line.
5148. That is not a heavy grade, is it? It is nearly the same as on the main line. It is a comparatively simple matter to cut it down.
5149. Would it be cheaper to cut down the grade on the main line than to construct the beach railway? I would cut down the grade on the Keira line. It is the line already resumed by the Railway Commissioners.
5150. The Kembla line? No, the Keira line.
5151. There would have to be a larger resumption, would there not? I believe that no further resumption would be necessary.
5152. Do you think that in the construction of a line to Port Kembla the junction should be made with the Mount Pleasant line instead of with the Mount Keira line? No; I do not think so. That is my personal opinion.
5153. Do you not think it would be more expensive to cut the grade down on the main line than to resume the Mount Pleasant line? No. To make the Mount Pleasant line available for a portion of the new line would be very expensive.
5154. More so than cutting down the grade? Much more so. It is only a narrow gauge now, and near the port of Wollongong there is a quantity of rock, more or less hard, and the work would be very expensive. It would practically mean the construction of a new line.
5155. Therefore, you suggest that the connection should be with the Mount Keira line? Yes.
5156. *Mr. Hassall.*] Would the extension along from the Tom Thumb Lagoon be an expensive one to construct? The Mount Pleasant portion has not been estimated. Mr. Deane in his evidence in regard to the other portion estimated the cost of a double line at £30,000.
5157. In your opinion which would be the more suitable route—to run the line along the sea-coast or to follow the main line and go round the Tom Thumb Lagoon? I think it ought to go along the coast.
5158. *Mr. Roberts.*] Would any difficulty be experienced with the sand-drift which occurs close to where the proposed line would run? No.
5159. How far would the line be west of the beach? It is only just in passing the gaol that the sand would interfere with the line, and there has been no motion of the sand there for a great many years. Some little expense would have to be incurred to protect the line from the sand, but there would be no practical difficulty in dealing with it.
5160. No difficulty that you are quite sure could not be grappled with? None whatever. The position of the sand has not changed ever since I have known the locality. I knew it first in 1883.
5161. Would the line pass to the east of the agricultural buildings? It will pass between the Agricultural Ground and the lagoon—that is, to the west.
5162. If it goes to the west, will it not go right through the centre of the agricultural ground? No; it will avoid the agricultural ground and also the racecourse. It will go along the eastern shores of the Tom Thumb Lagoon.
5163. Was there a route suggested by a bridge over the Tom Thumb Lagoon, and round the western shore of the lagoon instead of the eastern shore? I think such a route has been explored. There is no difficulty about it. The only objection to it is that it is altogether through private property—grazing land, which is of some value.
5164. The cost of the resumption would be considerably greater along that route? Yes. Along the other route there is practically no resumption, or at all events very little.
5165. On the ground of expense, you recommend the more eastern route? Yes. There are other points in favour of the eastern line. One of them is that it connects the port of Wollongong with the proposed port at Kembla. Then, again, a railway constructed between the two ports would have a platform at the foot of Crown-street, which would be useful for ordinary communication between Wollongong and Port Kembla. In addition to that there would be the traffic occurring two or three times a year in connection with the racecourse and agricultural ground, which all means revenue. The people of Wollongong all prefer this line.
5166. Where would the new line start from—from the Mount Keira line? Yes; just outside the Custom House at Wollongong.

5167. Would the traffic on the Mount Keira line and the Mount Pleasant line have to be transhipped? *S. Alexander, Esq.*
 No. The Mount Keira line is of the same gauge as the Government line. It is connected with the main line by a loop, and is actually in use by the Railway Commissioners, and under their control. The Mount Pleasant line has a narrow gauge, and the colliery proprietors would have to make some transshipping arrangement if they intended to unload at Port Kembla. 29 Jan., 1897.

5168. Either that or alter their gauge? Yes.

5169. Any alteration of gauge would have to be done at the expense of the Mount Pleasant Colliery? Yes.

5170. *Mr. Hoskins.*] Did you make a survey of the shortest distance and the most practicable route for a branch line of railway from Port Kembla to the smelting works? It was explored.

5171. By you? No; by Mr. Wickham, one of our engineers.

5172. What would be the shortest distance? Six and a half miles.

5173. And would it be an easy matter to make the line? No. It is not an easy line but it is a perfectly practicable one.

5174. No estimate has been made of the probable cost? No; it was only explored. Any estimate of cost would be merely a guess. It would cost about £5,000 or £6,000 a mile.

5175. *Mr. Lee.*] Kindly look at this little sketch showing the Mount Pleasant line. There has been a suggestion to start the line from the Government line at the 47-mile post, with a slight loop on to the existing Mount Pleasant line, the object being to avoid the heavy grade on the main line;—do you not think that would be better than making the connection with the Mount Keira line? It would produce a better result but it would be more expensive.

5176. In what would the cost consist? In making practically a new railway along the Mount Pleasant line.

5177. Why? The Mount Pleasant line has a gauge of 3 ft. 6 in. and the bridges are very poor constructions indeed—very old.

5178. Practically that would mean an entirely new line? Yes.

5179. Is the gauge of the Mount Keira line 4 ft. 8½ in.? Yes. It is now Government property and therefore there will be no further expenditure upon it as a single line. On the Mount Pleasant line near the port of Wollongong it is doubtful whether there is sufficient land to make the cuttings. The slopes are now nearly vertical and if we increase the width of the line and flatten down the curves, the slopes of the cuttings would run back for some little distance and it is doubtful whether there would be sufficient land. The locality I refer to is right along Smith's Hill, after you pass Stuart Park and right into the park.

5180. You look upon that as an important matter? The line would certainly have to be increased in width, and you must either take the extra width, and I doubt whether there is sufficient land, or else you must go out to the sea side and build a wall.

5181. At all events you have the Mount Keira line with a workable grade which will admit of a maximum load being carried, and which belongs to the Government? Yes.

5182. And it could be used to-morrow, I suppose, for any amount of traffic? It could be used at once.

5183. *Mr. Wright.*] I suppose the line along the beach is really, all things considered, the most economical one to construct? Yes, I think it is.

5184. And the chances of traffic are greater than in the case of any other route that could be adopted? I think so.

5185. Has the country from Wollongong station along the western side of the Tom Thumb lagoon been closely examined? Yes.

5186. And you say unhesitatingly that you are in favour of the eastern or sea-beach line? Yes; I think that will prove to be the cheapest.

5187. Do you think a double line would be required there? As a matter of personal opinion I do not think it would—not yet; but in this proposal to adopt the Mount Pleasant line you must always bear in mind that a double line may be required some day.

5188. In the event of the coal shipment at Port Kembla reaching 2,000,000 tons per annum, as we have been told might be possible, would not a double line be necessary then? Yes; it would probably.

5189. You think that at present a single line would carry the traffic? Yes.

5190. *Chairman.*] Reverting to the Mount Pleasant line, what would be the length from Stuart Park towards the port of Wollongong where the hill drops enough to render it no longer necessary to have a heavy cutting;—what would be the length between the bridge close to Brighton and the bluff on the Wollongong side of Stuart Park—that is where your trouble is? I should think the length is under ¼ of a mile.

5191. And you regard that as involving heavy expenditure? Yes.

5192. Can you give us any idea of the cost? It would be only a guess. As I mentioned just now, there are several conditions we have to find out,—whether there is room enough on the land side for the cuttings. If there is room, it is a matter of cutting only; but if there is not, then we must go on to the sea side and build the wall. It is a heavy piece of line in any case. That piece might cost (say) £5,000.

5193. Do you regard that as the extreme for a single line? Yes; it would not cost more than that in any case.

5194. Then going west you have the main part of the embankment done up to the south coast line? Yes.

5195. It is very narrow, you say? Yes.

5196. And the bridges are bad? The bridges will require to be renewed altogether.

5197. What would be the total expense right through, approximately;—you have another ¼ of a mile, have you not? Yes. The earthwork from the cuttings could go to make the banks.

5198. Would you make the whole job for £10,000 right through? You see, you want ballast; and you would have to re-rail the whole thing and re-sleeper it. The rails and ballast and sleepers would be worth £2,000.

5199. You have a 1¼-mile to make? Yes.

5200. £10,000 seems a very reasonable thing, considering a good deal of the work is done? Yes; perhaps £10,000 might do it.

5201. That is from the Mount Pleasant line to Wollongong? Yes.

5202. From the intersection of the Mount Pleasant line with the main south coast line, what is the grade along the latter to the intersection of the Kemplia line? There is a grade of 1 in 75 running up to the Wollongong Station.

5203. Between Mount Pleasant and the Mount Keira line what is the grade? One in 150.

5204.

- S. Alexander, Esq.
29 Jan., 1897.
5204. Is there nothing worse than that? No. I have before me the working plan of the Sydney to Wollongong and Kiama line, and I find that immediately south of the intersection of the Mount Pleasant line with the main line the grade is 1 in 400 for 37 chains; then it is 1 in 150 for 10 chains; then there are 15 chains of 1 in 75—up to the crossing of the Mount Keira Railway.
5205. Therefore, the grade of 1 in 75 running up into the town of Wollongong extends 15 chains northward beyond the Mount Keira line? Yes.
5206. How are you to get rid of that 15 chains of 1 in 75? The loop-line turns off about 4 chains south from the beginning of the 1 in 75 grade, and, therefore, we have only 4 chains of the 1 in 75 grade to deal with. The loop I believe to have a grade of 1 in 80, and the length is 31 chains to the top of it.
5207. Then when you join the Mount Keira line what grade have you got? The 31 chains extend right up to the top of the grade along the Keira line.
5208. That includes the loop line and that portion of the Mount Keira line that is 1 in 80? Yes.
5209. The rest is a down grade? Yes.
5210. Then what we have to deal with is 4 chains of 1 in 75, and 31 chains of 1 in 80—the question is how to get rid of that? Yes. Mr. Deane estimated the cost of reducing the grade on the loop line to 1 in 100 at £1,600. That will leave no grade worse than 1 in 100 between Belmore basin and Mount Pleasant crossing.
5211. The cost of the Mount Kembla line and the Great Southern line leading to a point west of the jetties you have given at £7,108—is that the value of new lines similar to these, or the present value of the lines? New lines similar to these.
5212. What ought to be allowed by the Department for depreciation in resuming them? All sorts of things come in when considering the cost of resumption.
5213. However, you could build new lines for that money as good as the present ones were when new? Yes.
5214. What, in your opinion, would be the cost of a single line between Belmore basin and Kembla? About £18,000.
5215. In the first statement given in answer to question 1854 the amount for a single line of railway is stated at £14,613;—what reason have you for adding on 25 per cent? For additional sidings and better ballast and heavier rails. The lower estimate was made in June, and there is now an expectation of greater traffic.
5216. The Department now intends to make the line very much more stable than they did in the first instance? Yes.

TUESDAY, 2 FEBRUARY, 1897.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHREY.	CHARLES ALFRED LEE, Esq.
The Hon. JAMES HOSKINS.	JOHN LIONEL FEGAN, Esq.
The Hon. CHARLES JAMES ROBERTS, C.M.G.	THOMAS HENRY HASSALL, Esq.
The Hon. WILLIAM JOSEPH TRICKETT.	GEORGE BLACK, Esq.
The Hon. DANIEL O'CONNOR.	FRANCIS AUGUSTUS WRIGHT, Esq.
HENRY CLARKE, Esq.	FRANK FARNELL, Esq.

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

Fitzwilliam Wentworth, Esq., Trustee of the Wentworth Estate, Port Kembla, sworn, and examined:—

F.
Wentworth,
Esq.
2 Feb., 1897.

5217. *Chairman.*] Are you acquainted with an area of 2,400 odd acres of land lying adjacent to Port Kembla? Yes.
5218. Are you the owner of that property? I am not the owner. I am merely trustee for it. The owner is my brother.
5219. Are you empowered to deal with it in any way that appears to be in the interests of the property? Yes, subject to my brother's consent.
5220. Your brother would take your advice with regard to it? Most probably.
5221. Are you aware of the proposal to construct a port at Kembla? Yes.
5222. You are at present, I believe, in receipt of a sum of money for way-leave from the two coal companies? Yes.
5223. The way-leave is represented by a $\frac{1}{2}$ d. a ton upon all coal going over those lines? A $\frac{1}{2}$ d. a ton at present, with power to raise it at a certain time to 1d. a ton.
5224. If those lines were resumed the way-leave would go with them? Certainly.
5225. And then your estate would be injured? Certainly.
5226. If those lines were resumed, and the rights under the Bill not impaired, the way-leave, therefore, not being interfered with, your estate would not be injured, so far as the lines are concerned? That is so.
5227. Supposing the Government resumed a piece of land adjacent to the loading-places, running back, say, by way of illustration, a quarter of a mile, and they took the delivery of the coal a quarter of a mile from the jetty, as if it were on the jetty, and conveyed it free of cost from that boundary on to the jetty;—under those circumstances, would your way-leave be unimpaired? Certainly not, as far as I can see.
5228. The more coal that goes along the Port Kembla line to Port Kembla the more advantageous it is to you as the owner of the way-leave? Yes.
5229. If there were a good port at Kembla more coal would come from the Port Kembla mine in all probability over your land? Yes.
5230. And to that extent your land would appear to be benefited? Yes.
5231. Supposing the Government relieved the coal companies, at a distance say of a quarter of a mile from the jetties, of the cost of haulage, leaving you still the right to charge way-leave, delivery being taken at the end of the resumed land instead of at the jetty, would you consider your right then impaired? I would, for this reason: I gave them this low rate of way-leave simply with the additional prospect of getting the benefit which I saw would ultimately accrue from settlement at the end of the lines, and I made it a distinct condition in the terms that they were not to erect any buildings, or anything of that sort—that the estate was to get the prospective benefit.

5232.

F.
Wentworth,
Esq.
2 Feb., 1897.

5232. Your way-leave is under certain stated conditions for a term approximately of fifty years. If the Government saved the companies using the railway lines the last quarter of a mile haulage, your agreement with the companies still being allowed to stand, how could it affect you with regard to the way-leave? It would affect me in this way: if the Government took a quarter of a mile —

5233. We will come to that presently—we are now only talking of the way-leave? No, I do not think it would affect me materially.

5234. Take the question of the land resumption. You are aware that an expenditure such as the Government propose at Port Kembla, if carried out, would have some effect upon any estate adjacent thereto. Your rights are limited by the foreshore. It is within the right of the Government to refuse any private owner permission to erect a wharf? Yes.

5235. Supposing they spent a large sum of money at Kembla, so that it became possible to have a large extent of wharfage, would you recognise it as being of some benefit to your estate, provided there was no resumption. Supposing the Government constructed large works at Port Kembla and made no resumption at all, would it be beneficial to an estate adjacent to those works? I should think it would.

5236. And to all parts of that estate? Well, no, I do not think it would to all parts, because a great deal of the estate is only fit for the use to which it is put at present. I think it would within a certain distance of the terminus of the railway.

5237. You recognise that the fact that vessels from all parts of the world would come to that port would produce some benefit to the estate? I do not know that it would. It has not up to date. It has not brought any considerable value to the estate, though there has been an extensive shipment of coal.

5238. You recognise what a very different state of things there would be with a large port there? There is a considerable shipment of coal there now.

5239. Do you recognise that it would be of any benefit to your estate? Yes.

5240. By the increase in the quantity of coal for shipment it would receive some benefit, but you cannot say how much? No.

5241. Would you be prepared to give the Government any land for the erection of wharfs, jetties, breakwaters, and other works pertaining to the port? I am prepared to recommend my brother to give it to them, provided I see that his rights are maintained, and that he gets his way-leave on the coal and stuff hauled.

5242. Would you be prepared to give the Government free of cost a sufficient quantity of land as an approach to such wharfs as they might erect at a port in Kembla Bay? I should like to know how much land they required first; they might take the whole lot unless I had a limitation.

5243. A little south from Kembla headland is a rise in which it has been ascertained with reasonable certainty that there is a large deposit of stone suitable for the construction of a breakwater; would you be prepared to give a quarry site to the Government? I cannot say on the spur of the moment. It is a matter which requires consideration. This is the first time I have heard of such a thing.

5244. What area would you be prepared to recommend to your brother as a reasonable area to give for all purposes? I should like in the first instance to see how much the Government required. Let the proposition come from them. I cannot off-hand say anything definite about it.

5245. What do you think the land adjacent to Kembla is worth? I could not say just now.

5246. Have you any idea of the value of it? No, I cannot say. At the present moment it only has the value of dairy land. But it has a prospective value. I gave these people the land for their railways and gave them a right to haul their coal on very liberal terms so as to increase the value of the land.

5247. *Mr. Wright.*] Have these concessions given an increased value to the land? Not a bit, up to date.

5248. *Chairman.*] The value of the land is primarily dependent upon its position? Yes.

5249. As dairy land do you regard it as of a high class? It is of the ordinary Illawarra class; it is very good land.

5250. Have you no idea what the value of the land is? As to the value of land a buyer and a seller have different ideas. I consider the value of the land is greatly increased by the fact that it is situated in one of the choicest places for a natural harbour on that part of the coast.

5251. But you cannot make use of those natural opportunities furnished by Kembla Bay without the permission of the Government? Yes; but the Government never interfere with the development of private estates. That would be altogether an arbitrary thing to do—to interfere with legitimate development such as I have been giving to this estate. I have been giving the people there facilities for shipping coal on the most favourable terms. We have got very little out of it. I should like to know if the Government would let them ship coal for a ½d. a ton? I think the Government would charge 6d.

5252. Could you not state approximately the value of the Kembla land? No, I could not. The Government have the right to resume any land they want for a public work. You see I am a trustee, and I have to act very cautiously. My position is this: if I see that my brother's income from the estate is going to be increased in value, or that the estate is going to be increased in value, I shall be prepared to deal liberally with the Government or anybody else, as I have dealt liberally with the coal companies. The price of the land would depend upon the price offered by the Government.

5253. And you are prepared to take into consideration the fact that the construction of a harbour adjacent to your land will have some benefit? Certainly.

5254. But what that benefit is you are not prepared to say? No, not offhand.

5255. If you were still left in a position to charge way-leave over the lines running to Kembla as heretofore, you would not regard the way-leave as impaired? Certainly not.

5256. You would be prepared to recognise in the construction of a port some betterment given to the property? It ought to be the case, certainly.

5257. How much the betterment you do not know? No.

5258. If the Committee make a definite proposal to you after considering the main question whether or not it is well to make a port at Kembla, you will let us have as speedy a reply as you can? Certainly.

5259. *Mr. Hoskins.*] You will be prepared to recommend your brother to deal liberally with the Government? Certainly; provided his way-leave is not interfered with.

5260. *Chairman.*] Can you inform the Committee what is the present return from the property, outside the way-leave? The present return from the property is the same as it was thirty or forty years ago. We have had people there who have been born and bred on the land, and we have never increased their rent; they pay the same rent now as they did thirty or forty years ago.

- F. Wentworth, Esq.
2 Feb., 1897.
5261. Can you tell us what it amounts to? I think it is £500 a year for 2,400 acres. The people who rent it were born on it; their fathers and mothers lived there before them.
5262. *Mr. Lee.*] How much land actually is under way-leave by the two companies? I cannot say from memory.
5263. They have a strip 2 chains wide for the whole length of your property? Yes; and they have a certain amount of land at the terminus for any railway works, such as sidings.
5264. *Chairman.*] Could you let us know exactly these three points—first of all the return from farming pursuits, the return in the shape of way-leave, and the extent of land under way-leave? Yes; I shall be glad to do so.
5265. *Mr. Lee.*] I think you said that you would prefer that the Government should leave this matter of a harbour at Kembla alone altogether? Yes.
5266. At the present time you get what you call a way-leave from the existing collieries of $\frac{3}{4}$ d. per ton? Yes; to be increased after a certain number of years to 1d. per ton.
5267. Your land is occupied by the length of the railway for $2\frac{1}{2}$ miles and about 2 chains wide? Yes.
5268. The estimated shipment from Kembla of coal brought along that railway will be 750,000 tons a year? Yes.
5269. What would that bring to your estate at $\frac{3}{4}$ d. per ton? £1,552 per year.
5270. In the face of such figures, can you say that you would rather that the Government should not interfere in the matter at all? Yes; because only a year or two ago the shipment of coal amounted to only 50,000 tons, whereas it is now 250,000 tons. It is a growing trade, and there is room for three or four more lines of railways.
5271. And room for more jetties? Certainly.
5272. But you would not be giving up a source of income such as you are now getting in the shape of way-leave unless the Government actually resumed the land on which the railways stand? No.
5273. You have already said that you would have no objection to the Government taking over the railways so long as the way-leave was not interfered with? I say if the estate would be benefited by the increased haulage of coal.
5274. The more the Government develop that port, and the more coal that is shipped there, the larger would be the income to your estate? Certainly.
5275. In point of fact, instead of the income being £1,500 a year as at present, if the way-leave were raised to 1d. a ton, and if the quantity of coal shipped was 750,000 tons, the income would be increased to £3,000? Certainly. If the Government will show me what they want I shall be prepared to deal most liberally with them.
5276. *Mr. Wright.*] If the Government should decide to construct a harbour at Port Kembla, would that fact cause you to put an enhanced value on the land beyond what you think it is worth now? It all depends. Of course if I am to lose the shipping facilities altogether, and the Government are to step into my shoes, I shall want fair compensation.
5277. But provided that the Government did not interfere with your way-leave, you would not require much extra money then? I do not think so. I want to deal fairly and liberally with the Government, while at the same time protecting my brother's rights.

Henry Richard Carleton, Esq., M.E., M.Inst.C.E., Principal Assistant Engineer, Harbours and Rivers Branch, Department of Public Works, sworn, and examined:—

- H. R. Carleton, Esq., M.E., M.I.C.E.
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5278. *Chairman.*] What are you? Principal Assistant Engineer, Harbours and Rivers Branch, Department of Public Works.
5279. *Mr. Hassall.*] Are you in a position to furnish the Committee with the estimated cost of purchasing the two jetties at Port Kembla? Yes. Mr. Darley's estimate is—for the Mount Kembla Company's jetty, £5,450; and for the Southern Coal Company's jetty, £8,100, making a total of £13,550. That is the present value.
5280. Could you give us the estimated cost of a wharf providing two unloading berths? For two berths, each 100 feet long, the cost would be £1,725; for ballast and retaining-wall along the back of the wharfs and jetties, £1,400; cost of dredging, 21 feet at low water, in front of the wharf, and reclaiming the land at the back, £6,700. That is the whole cost in connection with the two berths.
5281. Can you state the cost of constructing a low-level jetty for unloading purposes, running out parallel with the existing jetty? One has been designed 500 feet long, of which the estimated cost is £6,250; shipping appliances on the wharf embracing six whips, £1,500; railway lines, four sets of lines, £1,000, with sundries, £925. Total estimate for the two berths, each 100 feet long, and the jetty 500 feet long, £19,500.
5282. That amount, added to the previous sum of £13,550, would make a total cost for the works mentioned of £33,050? Yes.
5283. So that you estimate that the two existing jetties can be resumed, and every convenience provided for loading and unloading at Port Kembla, at a total cost of about £33,000? That would be sufficient at present.
5284. What area of land do you think would have to be resumed to enable operations to be carried on? I think it would be necessary to resume about 660 acres, as shown on a plan I have had prepared.
5285. Where is that land situated? It would embrace all the land to the east of a north-west line running from near the south-east corner of David Allen's grant of 2,200 acres.
5286. Would that include the point at Port Kembla? Yes, it would include Red Point, which would probably be required as a signal station.
5287. Would it also include the land upon which the quarry is situated? Yes; a sufficient area to give us stone for the whole of the works. I think it would be very necessary to take in Red Point, as it would be required for a signal-station.
5288. Does the existing railway stand upon any portion of the land you propose to resume? Yes; the railway passes through it.
5289. The resumption you propose extends from Red Point right up to Tom Thumb Lagoon? Yes, to the entrance to Tom Thumb Lagoon. It has an average width of about 85 chains.

5290. Do you think it will be necessary to resume the whole of that? I think we cannot do with any less, in order to provide for an approach, to obtain sufficient land in the proper position to give what stone we require, and to take in Red Point as a signal station.

5291. Would you require Red Point for signalling purposes? Yes.

5292. And in the event of the whole of the other land not being required for shipping purposes, you think it would, perhaps, be feasible for the Government to sell a portion of it, so as to recoup themselves for some of the outlay? I think we ought, at least, to have a width of about 30 chains at a point near the jetties for approach and sidings.

5293. In the event of the railway being carried on from Belmore basin, you think it would be necessary to have that width of land to enable the railway to be brought along without any trouble? Yes.

5294. Would you state concisely the reasons why you think it advisable to resume this area of land? I think we should have the portion at Red Point as a signal station. The adjoining piece between that and the wharfs, or the greater portion of it, will be required for quarry purposes; and the remaining part will be required for approaches to the harbour—for road and railway purposes, for shunting and sidings.

5295. You think it advisable to resume a sufficient area in view of the further development of trade which might ensue if these harbour works were carried out? Yes. We thought we ought also at this time to take all the land fronting the harbour even as far as the northern breakwater.

5296. You think the whole of that land surrounding the work should be in the hands of the Government to be dealt with as they think fit? I do.

5297. *Mr. Roberts.*] I think you said just now, in answer to Mr. Hassall, that if this breakwater were carried out you would recommend the construction of another jetty at Port Kembla? Yes, a low level jetty for unloading purposes, the existing jetties being merely for the loading of coal.

5298. You think there should be a jetty for the inward traffic? Yes. The deck would be 4 feet 6 inches above high water.

5299. If only the eastern breakwater were constructed, do you think the water in the harbour would be sufficiently calm to enable ships to unload with safety? Not in all weather. I think there would be days when they would have to haul off from the jetties.

5300. That being so, do you not think it would be desirable to leave the question of an extra jetty for future consideration? I think you will require something to unload at. No doubt there must be some inward traffic. There may be days in the year when you would not be able to work there.

5301. Am I to understand that it would only be in the very severe weather indeed that there would be a difficulty about unloading? Yes; in easterly weather, when there would be a range at the wharf.

5302. Would those wharfs be for the accommodation of the inward traffic? Yes, and for the discharge of ballast.

5303. What is the estimated cost of the wharfs? We only propose at present to construct two lengths 100 feet each, which will be quite sufficient for the discharge of ballast.

5304. What is the new jetty to cost for the inward traffic? £6,250. It will be 500 feet long.

5305. Have you had large experience in the selection of stone suitable for the construction of breakwaters? Yes, I think I have. I have been at that work for some eighteen years now in the Department.

5306. And you have made recommendations, I presume, with regard to nearly all the works on the coast? Yes, from the Tweed southwards.

5307. Would you mention a few of them? The Richmond, the Clarence, the Bellinger, the Nambucca, the Macleay, Trial Bay, and Lake Macquarie.

5308. And in every instance the opinion you formed as to the quality of the stone has been realised? Yes; I think so.

5309. Are you of opinion that the stone from the quarry close to Port Kembla is well adapted for the construction of the proposed breakwater? Yes. I think we could get very good stone there.

5310. Do you think the deposit of stone in the quarry is sufficiently extensive for all purposes? Yes, quite sufficient for the complete scheme.

5311. Have you visited Lake Illawarra? I was there with the Committee.

5312. Did you inspect the stone on Windang Island? I did.

5313. Would it be suitable for the construction of a breakwater at Lake Illawarra? Well, it is not a stone I should advise the Government to use. I do not like it myself.

5314. If the stone on Windang Island were on the shores of Port Kembla would you recommend its being used? No, I would not.

5315. Have you gone into the commercial aspect of the question as to the probability or otherwise of the proposed harbour works proving remunerative? I did, to a slight extent, in my preliminary report, which I think was handed in to the Committee with Mr. Hickson's statement.

5316. *Mr. Black.*] Do you know how many days during the year on an average it is possible for vessels to load at Port Kembla now? No, I do not.

5317. If it were stated that they could load on an average 335 days in the year, would you think that would be a fair statement? I hardly think the harbour would be available so many days in the year under present conditions.

5318. If that statement were a correct one, do you think the Government would be justified in constructing works for the improvement of the harbour? I do. It would induce another class of vessels to go there—sailing vessels.

5319. Have you formed any opinion with regard to the use of sailing vessels for the conveyance of coal—do you think they are likely to increase or decrease in number? I do not think there will be any diminution.

5320. Do you not think that their slowness, and the difficulty of handling them puts them out of court, as compared with vessels driven by steam? I think the same number are still going to Newcastle—rather increasing I think.

5321. Then you believe that if the eastern breakwater were constructed at Port Kembla it would make that harbour suitable for sailing vessels? Yes, far more convenient.

5322. Do you think they could get in as easily as they do now in rough weather? I think a sailing vessel would only go in and out with a tug at any time, as is the case at Sydney and Newcastle.

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5323. In what particular way would a sailing vessel be benefited by the construction of the eastern breakwater? It would diminish the roll in the harbour very much indeed.

5324. And how is that a point that tells against a sailing vessel more than against one driven by steam? Well, there would be a certain amount of shelter provided as well. I daresay a vessel, if the breakwater were constructed, could ride through any gale, but she could not hang on there under present circumstances.

5325. Why should the roll in the harbour militate more against a sailing vessel than a steamer? I do not say that it would, but a certain amount of protection would be afforded to the vessel by the breakwater. She would know that she could ride out against almost any gale that occurred while she was loading. At present she would have to be on the watch to get away at once on the slightest sign of a sea getting up.

5326. Would not that be true of any vessel, whether driven by steam or sail? Yes; except that a sailing vessel is far more helpless than a steamer.

5327. Where does the special inducement for sailing vessels come in then, as contrasted with steamers? I do not know that there is any inducement. It is cheaper freight, of course.

5328. I mean special inducement for them to use the harbour. I asked you in the first instance whether, if it were true that the harbour could be used 335 days in the year under present circumstances without the breakwater, the Government would be justified in constructing a breakwater in order to make the harbour safe during the other thirty days, and you said "Yes, because of the advantage it would give to sailing vessels." Now, I want to know from you what special advantage it gives to sailing vessels over vessels driven by steam? Well, a sailing vessel would not go there at all now—not the large class.

5329. Do you think they would go there if the eastern breakwater were constructed? I think they would.

5330. And the reason they do not go there, you think, is because of the danger that might arise from sudden storms? Yes; a vessel might be caught in a trap at present.

5331. And you think that the eastern breakwater would be sufficient protection? For loading purposes, but not for discharging. Sufficient protection for a vessel; she could lie behind it in any weather—she would not have to go to sea.

5332. If she could not load she could lie there? Yes; she could haul off from the wharf and lie behind the breakwater.

5333. Then we are to understand that the construction of the eastern breakwater will not so much increase the facilities for loading as to furnish the sailing vessels with a safe harbour? Yes. Of course the breakwater would not increase the facilities for loading.

5334. I mean facile loading in rough weather. I suppose it is difficult to load vessels there when there is any kind of a jumble? Yes.

5335. And even with the eastern breakwater, when there was rough weather outside, there would still be a slight range which would make it dangerous to vessels and to the jetties if they were alongside? Yes.

5336. Then it lessens down to this—that the construction of the eastern breakwater would make the harbour safe—vessels could always lie there at anchor without danger? I believe they could; it would be a harbour of refuge.

5337. Would it make any difference what quarter the wind came from? The worst would be an easterly gale.

5338. Do you think that is worse than a north-easter? The north-easters are never very bad. You never get the long sea from the north-easters that you do from the others.

5339. You heard some of the evidence given with regard to Jervis Bay? Yes.

5340. If that port were protected by the junction of an island situated at the entrance with the mainland by means of a breakwater, do you think it would be a safe port in all weathers? Yes. I believe there would be shelter down at the southern end of Jervis Bay in any weather.

5341. Do you think the water is sufficiently deep? No; you will have to go a greater distance from the shore to get the same depth of water at Jervis Bay than you will have to do at Port Kembla. We get into deep water more quickly at Port Kembla.

5342. At what distance from the shore do you get into deep water at Jervis Bay? I think I am right in saying that it is over a quarter of a mile.

5343. At that distance, do you not lose a great deal of the shelter? No; there would still be considerable shelter if you connected Bowen Island with the mainland.

5344. You think the connection of Bowen Island with the mainland a necessity? Yes; if you want to make a shipping port there, I think it would be.

5345. *Mr. Hoskins.* In the event of this Committee recommending, and Parliament sanctioning, the construction of a port at Kembla, how soon afterwards do you think the works could be commenced, so that some benefit would result from them? The resumption of the land would be the chief thing. As soon as that was completed we could start work, as far as getting plant on the ground is concerned, in a month.

5346. How long would it take you to open up the quarry to make it fit for work, and ready to turn out large blocks of stone for the breakwater? We should not want the very large blocks at the root of the breakwater; the smaller blocks would come in there at the start. It would be three or four months before we could get out the 30-ton blocks.

5347. Still, you could get to work and get stone suitable for the breakwater within how long a time after receiving orders and after the land had been resumed? We could be running stone down in three months' time.

5348. Is it intended to proceed with the eastern and northern breakwaters at the same time? Yes; we could do both at the same time.

5349. Do you intend to do so? It would be more economical in that way, because the smaller class of stone would go to the northern breakwater.

5350. Evidence has been given that by the construction of the eastern breakwater a very great improvement would be effected, and vessels could lie in Port Kembla in comparative safety; and some witnesses have even gone so far as to say that for every 20 yards of the breakwater that was constructed an improvement would be observable in the water in the harbour;—do you think that is correct? I do.

5351. Then would it not be desirable, if possible, to go on with the eastern breakwater first? Certainly; I think the eastern breakwater should be first built, but there might be material that we would get from the

the quarry which would not be suitable for the eastern breakwater, and would have to be run for spoil, but which could be used in the northern breakwater.

5352. Have you any doubt that you would be able to get plenty of stone of sufficient size and durability, and suitable in other respects for the purposes of the breakwater from the quarry you propose to open at Kembla Bay? From what I have seen of it, it looks as well as any quarry we are working for harbour 2 purposes on the coast.

5353. *Mr. Humphrey.*] Are you of opinion that it would be unnecessary to construct the northern breakwater? I think it will have to be constructed eventually.

5354. Why? To make a complete harbour.

5355. Are you of opinion that when the eastern breakwater is completed all the necessary facilities for shipping inwards and outwards will then exist in Port Kembla? I do not think it would be a perfect harbour with only one breakwater.

5356. You have expressed the opinion that there would, perhaps, be some interruption from the prevalence of easterly gales? Yes; that would simply mean that any vessel unloading would probably have to haul off from the wharf and ride out the gale.

5357. Would there be any danger to the shipping? No, I do not think ships would ever have to leave the port.

5358. The worst that would happen without the construction of the northern breakwater is that a slight interruption might for a time take place in the unloading of sailing vessels at the wharf? Yes, and until the northern breakwater is constructed the unloading will not be carried on as easily or as well as if we had the second breakwater; there will always be a slight range.

5359. When the wind is from a certain quarter, or at all times? With an easterly sea.

5360. Do you think it desirable to proceed at all at the present time with the northern breakwater? I think it would be sufficient to build the eastern one first.

5361. Will any saving in your estimate be effected by reason of the discovery of the present quarry site? Yes. Mr. Darley thinks he can save 9d. per ton on all stone used in the eastern breakwater, since he submitted his original estimate—that is, that the price can be reduced from 5s. a ton to 4s. 3d.

5362. I suppose there will be no saving in quantity? No. I think the quantity has been estimated liberally.

5363. You are speaking now, I suppose, of a saving of 9d. per ton in connection with the eastern breakwater? The saving would be similar in both cases.

5364. What would be the total? On the eastern breakwater there would be a saving of £23,745, and on the northern breakwater £22,710. The cost of the eastern breakwater would be reduced by £23,745, leaving it at £135,890.

5365. Do you say that that sum would be ample to construct the eastern breakwater as designed, and shown on the plan now before the Committee? Yes.

5366. *Mr. Trickett.*] During the earlier stages of this inquiry several witnesses went into the question of the proposed height of the breakwater above ocean level—has that been decided upon yet? It is proposed to construct the eastern breakwater 20 feet above low water.

5367. Is it proposed to use the top of that breakwater for the conveyance of goods to the ships or anything of that kind? No, not for wharfage purposes at all.

5368. I ask the question because some discredit was sought to be thrown upon the scheme on the ground that if the top of the breakwater was to be utilised for the conveyance of goods it would have to be a great width. That objection, I understand, will not apply, because it is not proposed to use the breakwater for the purpose mentioned? No; I do not think it would be a suitable site for a wharf.

5369. And it is not intended? It was never contemplated by the Department.

5370. It was also urged by some witnesses that even with a breakwater of the height proposed the waves would occasionally break over into the basin,—supposing that did happen, would it, in your opinion, cause such a disturbance as to effect the safety of the ships? In the first place, I do not admit that the waves would break over. The breakwater at Trial Bay is the same height above low-water, and it is in a far more exposed position, being situated on the most easterly point on the coast. The waves do not break over the breakwater there. At first the Trial Bay breakwater was only 16 feet above low-water, and the waves then went over it. We have since raised it 4 feet.

5371. Now that its height is 20 feet, does the water go over it, even in easterly gales? No; no green water. Of course, there is a splashing over it.

5372. No water that would have the effect of disturbing the basin as a port for vessels to lie in? No.

5373. You referred just now to a proposal to resume 660 acres of land for the purposes of this scheme? Yes.

5374. If that area, or anything approaching it, is resumed, is it intended by the Government that a portion of it should be re-sold for the purpose of recouping some of the expenditure? Yes; I think a portion of it might be disposed of hereafter.

5375. Mr. Darley in his evidence, in answer to question No. 165, said, "I think it is only right that the Government should resume a liberal area, and get a profit on the improved value,"—as far as you know, there has been no alteration of that policy? None whatever.

5376. *Mr. Clarke.*] You said just now, that when the eastern breakwater was completed there would still be some danger to sailing vessels, either loading or discharging? I do not think I said there would be any danger in loading when the eastern breakwater was completed.

5377. In discharging? Yes.

5378. If a tug was at hand to assist sailing-vessels in the case of rough weather setting in, would not that be something in favour of sailing vessels loading there? Yes.

5379. There would be less danger? Yes. Still we want to get the port as good a name as we possibly can, to induce vessels to go there.

5380. *Mr. Lee.*] I want to be quite certain as to the approximate cost of this proposed scheme,—at what do you estimate the total cost of the eastern breakwater? £134,555.

5381. And the cost of the purchase of the existing jetties, and the construction of additional jetties with loading appliances? £33,050.

5382. And then there is a sum of £42,580 for lighthouse, signal station and quarters, engineer, supervision, and cranes? Yes.

5383. At what do you value the 660 acres which you think will have to be resumed? I could not give an opinion upon that.

5384.

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5384. How many acres of land are included in the area over which the railways run at present? From the crossing of the colliery companies' lines with the main south coast line, down to the harbour, I think there are 66 acres—33 acres in each line.

5385. Then in addition to the figures you have given as to the cost of the breakwater and incidental work, there will have to be added the value of the 660 acres to be resumed, and also the 66 acres upon which the railways run at present? No; I do not see any necessity for resuming the land upon which the railways run up to our proposed boundary.

5386. Why not? I do not see why it should not still remain the property of the company.

5387. But you are aware that the owners of that estate have a permanent charge upon all coal that goes over their land of from $\frac{1}{2}$ d. to a maximum of 1d. per ton? I did not know what the terms were.

5388. Therefore, if it is going to be a Government port with Government charges, does it not necessarily follow that the Government must resume the railway lines and the land? It is a matter that requires further consideration. I did not know the terms under which the ground was held.

5389. If the facts are as just stated, the cost of the 66 acres will have to be added, and also the cost of resuming the railway lines themselves? Yes.

5390. And the cost of constructing the line from Wollongong along the beach to Port Kembla would have to be added also? Yes.

5391. Are there any other charges? I think that covers the whole ground.

5392. You know a little about dredging, do you not? I think so.

5393. Do you think it is possible—I mean within practicable limits—to work a dredge in the surf outside the proposed entrance to Lake Illawarra? It would have to be a dredge specially constructed. We have no dredge here with which it could be done.

5394. Is it the practice to use dredges in the open surf? It is not a common practice. But we are about to design a dredge at present for bar work. Such dredges, however, do a very small amount of work.

5395. When the Newcastle work was under consideration either yourself or some other officer of your Department said it would be impossible to use a dredge on the bar. That being the case, how would it be possible to use a dredge in a heavy surf like that at the entrance of Lake Illawarra? We have not a dredge with which we could do that work; but we are about to design one for that kind of work on the northern bars.

5396. As a matter of fact, if you put a dredge in a heavy surf, either at Lake Illawarra or anywhere else, would it not be in imminent danger of being stranded on the first blow that came up? There would be very few days on which she could work at all, and then you would perhaps only get an occasional hopper full at a time.

5397. You do not look upon that as a practicable idea at all? I think if any of these bars have to be deepened it must be done by scour. You can do the interior portion by dredging, but I do not think we shall be able to deepen the bars themselves by dredging to any great extent. You might afford temporary relief on some of the smaller bars.

5398. Supposing you wanted to construct a dredge on the shores of Lake Illawarra for the purpose of dredging out that lake, how long would it take you to have the material made, to convey it there, and to fit it together? If we fitted the dredge together before sending it down there, I should say it would not take more than two or three months.

5399. Have you any idea how long it takes a contractor to build one of the ordinary dredges? Six months.

5400. And equip her ready for service? Yes. I am speaking of a dredge of the larger class. It all depends on the size and style of dredge.

5401. *Mr. Wright.*] Of the land proposed to be resumed, a portion of it is to be reclaimed, is it not? No; we shall reclaim some land in addition to that proposed to be resumed.

5402. Is there not some low-lying land a couple of hundred yards behind the beach? There is, but that is not included in the area proposed to be resumed.

5403. So that no portion of the land to be resumed will have to be raised artificially? Some of the land just above high-water mark we should want to raise from 3 to 4 feet.

5404. In reference to the resumption of Red Point, is there any stone on Red Point or anywhere near it? Yes, our quarry is at the root of it. I think we should get the same stone at Red Point.

5405. Can you explain to the Committee why you want a signal station on Red Point? You cannot see to the southward from the harbour itself on account of the intervening high land.

5406. Would not the proper place for a signal station be on Kembla Point? That would be the proper place for a harbour light.

5407. What other light do you want along that coast;—you have Kiama on the one side and Wollongong on the other? They are only harbour lights; they are not looked upon as coast lights.

5408. From your experience, do you consider you want a lighthouse on Red Point to indicate the harbour? I do not know that we should want a lighthouse, but we should want a look-out station and a signal station.

5409. To report vessels? Yes.

5410. That would not be a very expensive thing? No; but we ought to resume that land.

5411. What have you put down in your estimate as the cost of the signal station? Mr. Darley in his evidence (Question 160) said—

Will there be any necessity to erect a lighthouse on the breakwater? There will be a leading light on the breakwater, and a lighthouse on the headland. That is included in the item of £75,000 in the estimate submitted to the Committee. The whole thing will only amount to £2,000 or £3,000.

Does the headland there mentioned refer to Kembla Point? No; I think Mr. Darley was referring to Red Point.

5412. Would he speak of Red Point as the headland in connection with Kombla Bay? Yes.

5413. Will you kindly find out what are Mr. Darley's ideas in regard to a signal-station and lighthouse and the cost of each, and where they are to be situated? Yes.*

5414. You think there is almost a certainty of finding suitable stone at the site you selected for the quarry—all along that ridge? Yes.

5415. Supposing on further testing it should be found not suitable, where would you obtain the stone then? I searched the whole of that country, and there are two or three other sites I could fall back upon.

5416.

* NOTE (on revision):—Mr. Darley has since supplied the Committee with this information.

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5416. At any distance? The next nearest one would be about $3\frac{1}{2}$ miles away.
5417. Would that increase the cost very much? We should have to build a railway at not less than £2,000 a mile, and probably resume some land.
5418. Then that would involve an additional £15,000 or £20,000? Yes; probably the £23,000 we have saved as represented by the 9d. per ton on the stone.
5419. But you yourself have no doubt that the stone found will be suitable? I feel very confident about it.
5420. I suppose you recognise the fact that there is only one bed of stone there at present which is suitable? We have another 40 feet to go below that still, to take us down to high water.
5421. But in the event of that stone not being found suitable, you have other suitable stone at a distance of 3 miles? Yes; I believe so.
5422. Has that other stone been tested? It has been opened up slightly, and it shows very well; it is just as hard as the other.
5423. It is on private property? Yes.
5424. In what direction—further inland? Yes, it is near the main south coast road, about half way between Wollongong and Unanderra.
5425. That is immediately west of Port Kembla? Yes.
5426. In bringing the railway along the coast as proposed from Wollongong, would it be of sufficient elevation to enable the existing jetties to be used? We should have to raise the latter portion.
5427. You propose to build up the railway so as to utilise the existing jetties? Yes.
5428. There is no intention on the part of the Department to depart from the old system of loading, and to adopt the Newcastle system of loading by cranes? I think the existing jetties will be utilised for the shipping of coal. There will have to be some slight alteration, so as to suit the waggons of the different companies.
5429. But you will continue the shipment of coal by gravitation without lifting? I think so.
5430. It is proposed to construct the low-level jetties to a height of 4 feet 6 inches above high-water mark? Yes.
5431. Is that necessary? It is more convenient, and, of course, cheaper.
5432. In the first place if you construct that jetty on which to discharge cargo, you will have to climb up a steep ascent in order to get on a level with the railway line, on which you bring in the coal? There would be quite a different approach to the low-level jetty.
5433. Then there must be a different railway? It would be the same line until you commenced to rise on to the jetties.
5434. But the high-level jetty is 50 feet above high-water mark, and the low-level jetty only 5 feet? I do not think the high-level jetty is 50 feet above high water.
5435. Take it at 40 feet. The low-level jetty is only 5 feet. There is a rise of 35 feet to get on to the main line of railway? Exactly.
5436. Is not that an excessive rise in a short distance? It is done under existing circumstances. The railway approaching there at present has portions that are quite as low as the line from Wollongong would be.
5437. But you have to make a junction with the line almost immediately after you leave the jetty or construct a separate line? I think we have quite sufficient length to rise in.
5438. If you are going to construct a low-level jetty, and run a railway on that jetty, you will have to construct a long length of railway before you can get on to the line by which you approach the high-level jetty? You would, certainly.
5439. Is there any provision made for that in the estimate? I do not think we have made out any estimate for the lines at all.
5440. You have left the railways out altogether? Yes.
5441. But that would involve extra expense in the railway station? Yes.
5442. Has that been brought under the notice of the railway authorities in preparing their estimate;—is Mr. Deane cognisant of the fact? I think he is. I think Mr. Darley told him.
5443. Will you kindly ascertain from Mr. Deane whether he has made provision for meeting that expenditure? Yes.
5444. Is there any necessity to resume such a large area of land as you have stated? We tried to cut it down as much as possible.
5445. You do not propose to build summer residences on Red Point, do you? We must have that point, and we must have some 40 acres of land for quarry purposes. We could not see our way to cut down the area any more.
5446. Could you not cut off a small portion at the northern end of the proposed resumption by taking the boundary line further to the east? We might cut off a small portion there, but it is the least valuable portion of the land.
5447. *Mr. Fegan.*] Is it not better to resume at once the full area of land that is necessary, than to make a further resumption after the breakwaters and the harbour have been constructed? I think every acre that is required should be taken in the first instance.
5448. It is much cheaper to take it in the first instance? Yes.
5449. After the construction of the breakwaters and the jetties, the land would be of greater value, and more costly to resume? Yes.
5450. On those grounds you propose now to make provision for resuming 660 acres? Yes.
5451. *Chairman.*] Can you give me the soundings across from the point to Five Islands? We have not got the soundings there. I was able to get one sounding that I saw on the Admiralty chart, and that was quite sufficient to give an indication.
5452. If the mainland were connected with the island the southern seas would not go round on to Kemplia? The effect would be to diminish their forces very much.
5453. It would be a great help to the harbour? I believe it would.

WEDNESDAY,

WEDNESDAY, 3 FEBRUARY, 1897.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHRY.

The Hon. JAMES HOSKINS.

The Hon. CHARLES JAMES ROBERTS, C.M.G.

The Hon. WILLIAM JOSEPH TRICKETT.

The Hon. DANIEL O'CONNOR.

HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.

JOHN LIONEL FEGAN, Esq.

THOMAS HENRY HASSALL, Esq.

GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

FRANK FARNELL, Esq.

The Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

Louis Richard Gundlach, Esq., sworn, and examined:—

- L. R. Gundlach, Esq.
3 Feb., 1897.
5454. *Chairman.*] Do you know Windang Island? Yes.
5455. Are you competent to express an opinion with regard to the material to be obtained therefrom? I think so.
5456. What has been your experience? I have been connected with engineering works for a good many years, and I have had a good deal of stone going through my hands. I have made it a special study to some extent, and I think I am competent to speak about it.
5457. With what works, for instance, have you been connected? Since I have been in the colony I have been connected with the construction of a jetty at Kembla; I was engaged in the construction of the Manly Waterworks; and prior to that I was engaged in the Department of Railways. I have since been engaged as resident engineer in the Dapto district in connection with the works going on there.
5458. You have a statement you desire to lay before the Committee? Yes. I wish to make a statement concerning some matters that came under my notice during this inquiry. I heard the evidence given by Mr. Pittman regarding the stone at Windang Island; but before I refer to that evidence, I beg to state that the quarry from which the stone for the tie-bank is taken, and which, I presume, the Committee has inspected, displays probably the worst portion of the stone on the island. But as the tie-bank is a minor portion of the works which, when the southern breakwater is once constructed, will be of very little importance beyond forming a sort of backbone for the sand deposit to the south of the entrance works, and a roadway on to the island, it would have been unwise to use the stronger material from the northern and eastern portions of the island, and which will be far better employed in the more exposed works. Mr. Pittman gave evidence that he visited the quarry and saw the tie-bank; but he also stated that he did not inspect the northern and eastern portion of the island. He further said that there is no stone on the island fit for the proposed works, and that no large blocks could be quarried owing to the thickness of the beds being nowhere greater than 3 feet. I have repeatedly and carefully examined the large faces on the northern and eastern sides of the island, and I regret that Mr. Pittman omitted to inspect these freely accessible places that show the whole rock formation. I believe that at least 75 per cent. of the rock showing there is of a durable nature, and can be readily quarried in large blocks up to 20 tons and more in weight. At the eastern end this is exemplified by several huge blocks, probably up to hundreds of tons in weight, which have been exposed for many years to the fiercest attacks of the Pacific, and yet show hardly any wear. I understood Mr. Pittman to say that the rock was a sort of volcanic tuff. Mr. Card, to whom I submitted a sample, taken from the tie-bank, thinks that the stone is a sandstone; and the late Mr. Wilkinson, to whom I submitted a sample, stated it was a ferruginous sandstone. In any case, should it be found in opening up the main quarry that sufficient sound material is not to be got at the island the contractor, under the terms of his contract, is bound to procure suitable stone elsewhere at the schedule price of the contract. One other matter I wish to refer to, is the height of waves. As resident engineer in charge of the construction of the Kembla Coal Company's jetty at Port Kembla, I had an opportunity, on or about the 28th May, 1889, to personally observe several waves to rise to a height of 17 feet above high water, at a distance of about 850 feet from the shore, where soundings showed about 21 feet depth below low water. The height of the waves was observed on a pile of the jetty, above which I stood at the time. The waves were solid and without any sign of break, and measured probably over 30 feet in height, from trough to crest, and were the result of a heavy southerly gale.
5459. In your opinion the information furnished to the Committee with regard to the stone on Windang Island appears to have been based on the stone that was exposed on the southern side of the island, and which did not clearly convey your view with regard to the matter? Yes.
5460. You believe that the stone to the north and the east will be found satisfactory? Yes; I am sure of that. I have been several times with the contractor examining the stone, and I am sure it is of an excellent quality, and that as good stone as is to be got in the district is to be found there.
5461. You heard the evidence given by Mr. Pittman, Mr. Carleton, and others with regard to the question? Yes.
5462. And you still maintain your position? Yes; I have observed the same quality of stone in that district in various places. I have found the stone weathered in portions the same as it is weathered in that quarry; but other portions of the stone we have used for metal on our railways, and although the test is severe under those conditions it has stood very well indeed, and shows no sign of weathering.
5463. *Mr. Wright.*] You say that large blocks may be got from the island? Yes.
5464. No big blocks have yet been quarried? No; the specification for the tie-bank only requires blocks up to a ton in weight.
5465. Practically rubble? Yes; and for that very reason, not wanting to waste the better material, we use that particular spot to get the stone from.
5466. Have you seen the tie-bank lately? Yes.
5467. What has been the effect of the weather upon it? I find that only that portion of the stone that is exposed to the air is weathering, while the portion that is under water is showing hardly any sign of weathering, although that stone is not good.
5468. You spoke of the large blocks of stone on the extreme eastern point of the island;—can you get any large bed of stone similar to that on the island itself? I think we could quarry stone up to 50 tons in weight on the eastern end of the island.
5469. If you could get those big stones you are under the impression that they would be suitable? That is so.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

Construction of a Deep-water Harbour at Port Kembla.

APPENDIX.

A.

[To Evidence taken before the Committee.]

RETURN showing the quantity of Coke shipped from Port Kembla from 30th June, 1891, to 30th June, 1896, inclusive :—

Year.	Tons.	
1891	3,189	To Port Pirie.
1892* .....		.....
1893	3,209	To Port Pirie.
1894	10,790	Do
1895	7,120	Do
1896	511	Do
	24,819	

This was shipped from the Southern Coal Co.'s Jetty at Port Kembla. The coke works have been closed now for some time.

* NOTE.—There were only 80 tons of coke shipped during the year 1892, and that was shipped at Belmore Basin, Wollongong, for Strahan, Tasmania.

E. POTTS,
Customs Officer, Wollongong.

B.

[To Evidence of Hon. E. Vickery, M.L.O.]

RETURN SHOWING NAMES OF STEAMSHIP COMPANIES AND OTHERS USING SOUTHERN COAL.

Orient S. N. Co.	Own consumption.
P. and O. S. N. Co.	"
Messageries Maritimes Co.	"
North German Lloyds	"
Japan Mail Line	"
British India S. N. Co.	"
Gulf Line of Steamers.....	"
E. and A. Ss. Company	" and Shanghai and Singapore.
Port Line of Steamers.....	"
Aberdeen Line of Steamers	"
China Navigation Co.	" and Shanghai.
Shire Line of Steamers	"
H.M. Navy	"
Canadian Australian Ss. Co.	"
A. U. S. N. Co.	} Intercolonial trade.
Melbourne Ss. Co.	
Huddart, Parker, & Co.	
J. Patterson & Co.	
Adelaide Ss. Co.	
M'Ilwraith M'Eachran	
Intercolonial Ss. Co.	

Sailing vessels trade to American ports, Shanghai, Singapore, Colombo, Bombay.

C.

[To Evidence of H. Deane, Esq.]

THE SOUTHERN COLLIERIES.

DISTANCES to Ports from intersections of Colliery Railways with Main South Coast Railway.

Colliery.	To Port Bellambi.	To Port Wollongong.	To Port Kembla via Wollongong Railway Station and across the lagoon.	To Port Kembla via Osborne-Wallsend Railway and across the lagoon.	To Port Kembla via Great Southern Railway.	To Lake Illawarra.
	m. c.	m. c.	m. c.	m. c.	m. c.	m. c.
Clifton	10 40	14 56	18 22	18 77	20 44	24 50
South Clifton	8 50	12 66	16 32	17 7	18 54	22 60
Bulli	3 36	7 52	11 18	11 73	13 40	17 46
South Bulli	1 44	5 60	9 26	10 1	11 48	15 54
Bellambi	1 0	5 16	8 62	9 37	11 4	15 10
Great Southern	1 75	4 21	7 67	8 42	10 9	14 15
Mount Pleasant	4 34	1 62	5 28	6 3	7 50	11 56
Osborne-Wallsend.....	5 16	1 0	4 46	5 21	6 68	10 74
Mount Kembla	8 33	4 17	6 15	8 38	3 51	7 57
Lake Illawarra	13 60	9 44	11 42	13 65	8 78	2 30

December 22/96.

S.H.A.

C1.

RETURN showing distance from pit's mouth to Ports from Collieries in Illawarra.

Name of Colliery.	From pit's mouth to Port Kembla via Mount Keira Railway and Toni Thunb's Lagoon.	From pit's mouth to Port Kembla via Mount Kembla Company's Railway.	From pit's mouth to Lake Illawarra.
	m. c.	m. c.	m. c.
Coal Cliff or Clifton.....	19 6	21 13	24 50
South Clifton	17 16	19 23	22 60
Bulli	13 42	15 49	19 6
South Bulli	11 30	13 27	16 74
Bellambi	11 46	13 53	17 10
Great Southern.....	9 51	11 58	15 15
Mount Pleasant	7 32	9 39	12 76
Osborne-Wallsend	7 30	9 37	12 74
Lake Illawarra.....	Will not use this route.	13 7	5 70
Mount Kembla.....	Will not use this route.	7 60	11 17

D.

[To Evidence of H. C. Russell, Esq., C.M.G.]

FORCE OF SEA-WAVES ON EXPOSED STRUCTURES.

EXTRACT from *Nature*, page 87, Vol. XL.

"It is extremely difficult to estimate, with a fair degree of accuracy, the maximum force of the waves with which some of the most exposed of these sea structures may occasionally have to contend.

"The late eminent lighthouse engineer Mr. Thomas Stevenson, F.R.S.E., carried out a long series of experiments with a self-registering instrument he devised for determining the force of sea waves on exposed structures. He found at the Skerryvore Rock Lighthouse the Atlantic waves there gave an average force for the fine summer months in 1843-44 of 611 pounds per square foot. The average result for the six winter months for the same year was 2,086 pounds per square foot, or three times as great as the summer months.

"The greatest force registered was on 29th March, during a westerly gale, when a pressure of 6,083 pounds, or 2½ tons nearly, per square foot was recorded."

27/1/97.

H.C.R.

E.

[To Evidence of A. Campbell, Esq., M.P.]

RETURN SHOWING THE EXPENDITURE ON HARBOURS OF THE COAST NORTH AND SOUTH OF SYDNEY, FROM 1855 TO 1895, INCLUSIVE.

North of Sydney.

	£	s.	d.
Tweed River	38,670	16	2
Brunswick River.....	1,147	12	3
Richmond River.....	206,832	5	6
Clarence River	347,088	16	10
Bellinger River	24,857	6	7
Coff's Harbour.....	13,521	17	2
Woolgoolga Bay	13,848	10	8
Nambucca River	8,273	1	6
Macleay River (Trial Bay)	143,257	4	11
Port Macquarie	3,367	13	8
Manning River	15,710	11	4
Camden Haven	3,061	5	1
Cape Hawke	4,226	2	11
Byron Bay	17,573	13	10
Port Stephens	1,116	10	7
Newcastle.....	1,101,310	13	8
Lake Macquarie	137,149	3	4
			£2,081,013 6 0

South of Sydney.

Shellharbour	15,682	11	0
Port Hacking	1,455	14	5
Wollongong.....	116,090	9	5
Kiama	92,588	6	11
Shoalhaven River	981	5	0
Jervis Bay	3,757	18	3
Ulladulla	18,588	0	10
Bateman's Bay	1,559	12	5
Moruya.....	73,833	8	1
Bega	5,557	7	7
Gerrigong	1,380	12	6
Wagonga River	583	18	6
Eden	8,815	12	11
			340,874 17 10
			£2,421,888 3 10

NOTE.—These figures do not include the port of Sydney, or the cost of dredging works other than those connected with the immediate entrances to the rivers, except in the case of Newcastle, where the cost of harbour dredging is included.

F.

[To Evidence of J. R. M. Robertson, Esq.]

STATEMENT OF COAL SHIPPED AT PORT KEMBLA, BELLAMBI, AND BELMORE BASIN DURING THE YEAR 1895.

Sir, 40, Pitt-street, Sydney, 5 February, 1897.
In reply to your letter of yesterday's date, I now beg to give you the shipments of coal at the under-mentioned ports during the year 1895:—

Kembla	233,438 tons
Belmore Basin	163,226 „
Bellambi.....	178,317 „

I can give you no information regarding Bulli, but believe that no coal was shipped during 1895, the colliery being stopped.

The Secretary, Parliamentary Standing Committee on Public Works.

I have, &c.,
E. G. WEYLAND,
for J. R. M. ROBERTSON.

G.

[To Evidence of S. Alexander, Esq.]

RAILWAY CONNECTION WITH PORT KEMBLA.

The cost of constructing a single line between Belmore Basin and Port Kembla has been estimated at £18,000, and the value of portion of the coal lines on land to be resumed at Port Kembla has been estimated at £7,108.

Whether these lines are resumed or not, they, or some substitute for them, will be required for carriage of the coal from the collieries by which they are now owned.

Certainly, considerable rearrangement of lines will be made, but it would not be safe to say now that any saving can be made on the estimated cost of construction by reason of these resumptions.

I concur.—H. D., 2/2/97.

S. H. A., 2/2/97.

H.

[To Evidence of C. W. Darley, Esq.]

TIDAL RANGE AT LAKE ILLAWARRA.

Sir, Department of Public Works, Engineer-in-Chief's Office, Sydney, 24 November, 1896.
In reply to your letter of the 21st instant, with reference to Lake Illawarra, I beg to inform you that there is no tidal range inside the lake at present. It stands at about mean tide level except during wet weather, when it rises and breaks out again.

The water at Tallawera Point deepens out from 0 at water-edge to 10 feet at about 100 feet out.

The Secretary, Parliamentary Standing Committee on Public Works.

I have, &c.,
C. W. DARLEY,
Engineer-in-Chief for Public Works.

H 1.

EQUIPMENT OF PORT KEMBLA AS A HARBOUR.

Sir, Public Works Department, Sydney, 4 February, 1897.

In reply to your letter of this date, I submit the following estimate for cost of the works mentioned. I must explain that from date of starting the works it would probably be quite seven years before a light could safely be placed on the end of the breakwater. In the meantime, seeing that the port would be growing into importance, and probably a large amount of shipping would be resorting there for coal long before the breakwater is complete, it will be necessary to establish a port light on the headland or island at a site to be selected. It is my opinion that the main port light should not at any time be located on end of breakwater, but a small leading light only placed there. I therefore think that a fourth order port light should be provided for in conjunction with the signal station, and on this I have based my estimate.

I estimate the cost as follows:—

1. Cost of a 20-ton steam derrick crane, complete	£4,000
2. Cost of leading light in the harbour and a small light on breakwater hereafter.....	1,500
3. 4th order light, complete	3,000
4. Signal station and quarters	1,500
	<hr/>
	£10,000

Besides the above, of course, provision must be made for pilots and boatmen's quarters, boat-sheds and slips, buoys and moorings in harbour, and, in fact, an allowance for general harbour equipment, which must inevitably be required if a large harbour is to be established.

I consider a sum of £25,000 in all will be required for expenditure within a few years of the harbour starting, to cover the items I have mentioned, as well as equipment generally.

The Secretary, Parliamentary Standing Committee on Public Works.

I have, &c.,
C. W. DARLEY,
Acting Under Secretary and Commissioner for Roads.

H 2.

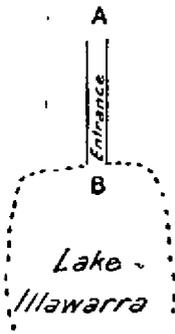
POINTS IN THE INQUIRY RESPECTING THE CONSTRUCTION OF A HARBOUR AT LAKE ILLAWARRA.

Department of Public Works, Engineer-in-Chief's Office, Sydney, 9 December, 1896.

Sir,

In answering the following questions put to me by the Chairman of the Public Works Committee, I should point out that they deal with some very abstruse subjects in hydraulic engineering, so involved indeed, on account of the number of points that must be assumed, that the merest prediction only can be given of what is likely to result from so large an interference of the natural regime of the lake entrance.

The



The questions asked are :—

1. The width to be estimated as the narrowest permissible, or as proposed by the Lake Illawarra Corporation.
2. Taking into consideration rise and fall of tide, what rate and for what periods would the current run daily from A to B and from B to A.

1st. The width proposed by the Lake Illawarra Corporation is 430 feet between bases of the breakwaters, or say 500 feet clear at low water-mark. This should form a safe entrance, bearing in mind that vessels must always be under control of a tug boat when entering or leaving.

2nd. Tidal action alone must be relied upon to scour the entrance. Waves have no scouring effect whatever in an entrance such as this. The rise and fall of tide on the coast is from 3 ft. 6 in. to 5 ft. 6 in. neaps and springs. In the lake there is no tidal range; we must assume that its normal level coincides with mean sea level. Should such an opening as that proposed be constructed, the tide would run ebb, say 5½ hours, and flood 5½ hours, and slack water about one hour out of every 12; or daily during 24 hours, there would be about 11 hours flood-tide, 11 hours ebb-tide, and 2 hours slack water.

Assume that an average rise and fall of one foot was brought about in the lake, this would necessitate the tide running in and out at an average rate of 2½ miles per hour during the 5½ hours allowed for each tide, but as the velocity would start at nil and end at nil, and only gradually reach its maximum, it is probable that its maximum rate would exceed 7 miles per hour. This would cause a very severe scour through the entrance; but in all probability this velocity would not be reached, and the average tidal range in the lake would not exceed say 8 inches, being somewhat greater near the inlet, and less at the furthest extremities.

I have, &c.,

C. W. DARLEY,
Engineer-in-Chief for Public Works.

The Secretary, Parliamentary Standing Committee on Public Works.

H 3.

PARTICULARS RESPECTING WHARFAGE ACCOMMODATION AT PORT KEMBLA.

Sir,

Public Works Department, Sydney, 28 January, 1897.
With reference to your letter of the 27th instant, in which you ask for certain particulars in regard to the wharfage accommodation at Port Kembla, I have the honour to forward herewith a statement containing the information asked for.

I have, &c.,

C. W. DARLEY,
Acting Under Secretary and Commissioner for Roads.

The Secretary, Parliamentary Standing Committee on Public Works.

Proposed Harbour at Port Kembla.

Replies to questions asked by the Parliamentary Standing Committee on Public Works, 27th January, 1897 :—

1. The estimated cost of purchasing the two jetties at Port Kembla?

<i>Answer</i> —Mount Kembla Company's Jetty	£5,450	
Southern Coal Company's Jetty	8,100	£13,550

2. The estimated cost of constructing a wharf providing two unloading berths?

3. The position and estimated cost of constructing a low-level jetty for unloading purposes, run out parallel with the existing jetties?

Answer—

2. { Two berths, each 100 feet long	£1,725	
{ Ballast-retaining wall along back of wharfs and jetty	1,400	
{ Dredging to 24 feet at low-water in front of wharf, and reclaiming land at back	6,700	
{ Jetty 500 feet long	6,250	
3. { Shipping appliances, cranes, &c.	1,500	
{ Railway-lines, &c., on jetty	1,000	
{ Sundries	925	
	19,500	£33,050

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

SECTIONAL COMMITTEE.

CONSTRUCTION OF A DEEP-WATER HARBOUR AT PORT KEMBLA.

REPORT.

THE Sectional Committee appointed to inspect, take evidence, and report with reference to the proposed construction of a Deep-water Harbour at Port Kembla, left Sydney for Wollongong on Friday, the 15th instant.

On the following day they visited Bellambi for the purpose of inspecting a proposed site for a breakwater at that port, and hearing the views of the local residents thereon.

At the Bellambi Railway Station they were met by the managers and engineers of the local collieries who accompanied them during their inspection.

A careful examination was made of the bay and the existing jetties, and a full explanation was given the Sectional Committee by Mr. Charles Morton, C.E., of the Harbour Works suggested by him.

On Monday, the 18th instant, the Sectional Committee took evidence at the Wollongong Council Chambers. Amongst the witnesses there were several from Bellambi who strongly recommended the construction of a harbour at Bellambi instead of at Port Kembla.

Mr. Morton furnished elaborate details of his project, and contended that a harbour at Bellambi would be more convenient than any other to the greater part of the coal measures of North Illawarra, and would be both safe and commodious.

The great majority of the inhabitants of Wollongong are in favour of the construction of a harbour at Port Kembla.

Evidence given by persons engaged in the shipping business supported the testimony already furnished as to the superiority of the bay at Port Kembla over that at Bellambi with regard to depth of water and good anchorage, and as a place of safety in stormy weather.

An opinion was expressed that if a secure harbour were provided at Port Kembla the colliery owners would no longer burden themselves with the expense of maintaining their private jetties.

The visit of the Sectional Committee confirmed the evidence given before the Parliamentary Standing Committee on Public Works as to the superiority of the site at Port Kembla over all others.

A deposit of stone situated about a mile south of Port Kembla appears to be suitable for the construction of a breakwater, and should much lessen the original estimated cost of the proposed work.

The Port of Wollongong has already been fully described by witnesses before the Parliamentary Standing Committee on Public Works, and after careful inspection the Sectional Committee has not been able to discover any new facts in connection therewith.

The Departmental statements furnished regarding Lake Illawarra have already made clear the general features of that place.

At the time of the Sectional Committee's inspection a sandy beach stretched from the western side of Windang Island to the point to the north of the entrance; a narrow stream of water not more than a foot and a half deep which traversed this joined the waters of the lake with the ocean.

Westwards towards the lake the entrance was shoal water.

The stone on Windang Island, although it might be used for the erection of inner training walls, does not appear suitable for breakwater purposes.

The Committee regard the construction of a port at Lake Illawarra as being impossible within the specified time, and, at best, surrounded by difficulties.

The manager of the Smelting Company of Australia, of which works the Sectional Committee made a thorough inspection, stated that the expenditure of that company up to the present time had been £70,000, that the total outlay by the time the works are completed will be £120,000, and they are capable of large extension. It is anticipated the works will be finished in about four months from the present time, and when in full operation they will be capable of treating 65,000 tons of ore per annum, so that in the near future, it was stated, the freight to the works in ore and coal will amount to something like 120,000 tons per annum. The manager estimates that about one-half of the ore brought to the works will be carried by sea and the other half by rail. The company has not fully developed the coal-mine at Dapto Creek, the coal not promising well for smelting purposes.

The main contention of the inhabitants of Nowra is that before undertaking any other expensive public works on the south coast the Government are under an obligation to complete the South Coast Railway by extending it from Bomaderry to Jervis Bay, and they strongly advocate the claims of Jervis Bay as a port.

Although Jervis Bay could be safely used for shipping, its value for this purpose depends rather on developments in its vicinity than on coal measures so far removed as is the Bulli seam. The cost of not less than 60 miles of haulage would be too great to permit of owners of the coal deposits at present being worked using Jervis Bay as a port of shipment in preference to Sydney.

During the visit of the Sectional Committee neither evidence nor personal inspection disclosed any fact materially at variance with the Departmental statements made before the Parliamentary Standing Committee on Public Works.

The Report has therefore been limited to a brief statement.

THOS. EWING,
Chairman.

28 January, 1897.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

MINUTES OF EVIDENCE.

CONSTRUCTION OF A DEEP-WATER HARBOUR AT PORT KEMBLA.

[TAKEN BEFORE THE SECTIONAL COMMITTEE.]

MONDAY, 18 JANUARY, 1897.

[The Sectional Committee met at the Council Chambers, Wollongong, at 10:30 a.m.]

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.
The Hon. CHARLES JAMES ROBERTS, C.M.G.
The Hon. DANIEL O'CONNOR.
HENRY CLARKE, Esq.
CHARLES ALFRED LEE, Esq.

JOHN LIONEL FEGAN, Esq.
THOMAS HENRY HASSALL, Esq.
GEORGE BLACK, Esq.
FRANCIS AUGUSTUS WRIGHT, Esq.
FRANK FARNELL, Esq.

The Sectional Committee proceeded to consider the proposed Construction of a Deep-water Harbour at Port Kembla.

Mr. John Archibald Beatson, Mayor of Wollongong, sworn, and examined:—

1. *Chairman.*] Are you acquainted with the harbour scheme under consideration? I am.
2. Have you a knowledge of this district? Yes; I was born in the district, and have resided here all my life.
3. Do you desire to make any statement with regard to the provision of harbour accommodation for the Illawarra district? I might say that the need for improved harbour accommodation for Illawarra has been felt for some years. During the month of April a requisition was presented to me from a number of citizens, asking me to call a public meeting to consider the best means of securing harbour accommodation for the district. I did so. A meeting was held in the Council Chambers, at which there were present representatives of Wollongong, Bellambi, and Bulli. The necessity for increased harbour accommodation was pointed out, and a motion was proposed by Mr. MacCabe to the effect that the Government should take the necessary steps, as speedily as possible, to provide harbour accommodation. This motion was duly carried, after having been supported by the representatives of Bellambi, Wollongong, and Port Kembla. The main principle which actuated the meeting was that the whole matter should be left to the Government, and whatever scheme the Government considered the best should receive the support of the whole district—that local preferences should be sunk in favour of that scheme. The meeting decided that the Government officials would be able to find out which was the best scheme, and, as far as the meeting was concerned, it was quite willing to leave the matter in their hands. Following on that, a deputation was appointed to wait upon the Minister for Works. That deputation waited upon the Minister some time in May following, and he promised that the matter should receive the attention of the Public Works Committee at as early a date as possible.
4. The district was unanimously of opinion that the best port should be chosen to give an outlet for the coal of Illawarra, and that the choice of that site should be left to the engineers of the Department? Yes. The meeting was a thoroughly representative one, and embraced interests representing the whole district.
5. The meeting was held prior to the Government deciding on Port Kembla? Yes.
6. Port Kembla having been decided upon, in your opinion is the district fairly satisfied with that selection? I may say that following on that meeting alluded to above, the south coast harbour league was formed, the object of which was to induce the Government to construct a harbour for the south coast where they might think it best to have one. The people of Wollongong have adhered to the resolution to leave the matter to the Government, and they are quite content that the Government should construct the harbour at Port Kembla or wherever else they deem best. The people of Port Kembla are also agreeable to allow the Government to have a free hand in the matter. I can state from my own knowledge, however, that meetings have been held at Bulli and I think at Bellambi for the purpose of opposing the construction of a harbour at Port Kembla, and in favour of the construction of one at Bellambi. According to the papers, another movement has been made at Dapto, but I should say that the lake scheme ought to be treated as a separate matter altogether. Wollongong has many claims, but we have allowed the matter to rest with the Government. Personally, Wollongong would suit me best, as my interests are centered here, but I am perfectly willing to suit private interests to the public good.
7. Are the people of Wollongong by a large majority favourable to the construction of a harbour at Port Kembla? Yes.
8. Is it their opinion that it is not a wise thing to agitate for a harbour at Wollongong? Yes.
9. What is the reason of that? They consider from expert evidence that the cost of construction at this port debars Wollongong from being made the principal harbour for the Illawarra trade. At Port Kembla, for a comparatively small outlay, such a harbour could be provided.
10. You speak as the representative of the people in your official position? Yes.

Mr.
J. A. Beatson.
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11. *Mr. Lee.*] When that meeting of residents was held was the Illawarra lake scheme made known to the public? Yes.
12. The public knew that that was a project which if carried out would at all events afford a port there? Yes.
13. The meeting at that time had full knowledge of the existence of that company? Yes.
14. And notwithstanding that they determined that the most suitable place for a port for the southern coast was Kembla? The meeting did not decide that; they left the whole matter to the Government.
15. Do you intend to convey the idea that the meeting wished the Government to consider the Lake Illawarra scheme alongside of any other scheme? We looked upon it that the Government should make a port at Kembla, and that if a private company wished they could make one at Lake Illawarra.
16. I presume that all that is required by the people here is to have a suitable port to carry on the coal trade of the district? Yes, coal is the principal export.
17. If the promoters of the Illawarra scheme were to make such a port would you be satisfied with it? I do not think it would answer the requirements of the district.
18. If the Illawarra Harbour and Land Corporation were to carry out their scheme in its entirety and provide a port that would accommodate vessels of as deep draught as could be accommodated at Port Kembla, would that scheme suit the requirements of the district? I should say that it would not, because the coal measures are to the north of Lake Illawarra. To my mind Kembla would be the best port of the whole lot.
19. Although at the date of that meeting there was a possibility of the Illawarra Harbour and Land Corporation carrying out their scheme, the people did not pronounce in favour of it; but they left it an open matter for the Government to decide? Yes. The Government to decide as to the most suitable place for a harbour for the coal trade of the district.
20. Are we right in assuming that that meeting looked upon the Lake Illawarra project with a certain amount of doubt or disfavour? The fact was well known to them that the Illawarra scheme had been a long time dangling before the public, and as nothing had been done, it was then thought it would be far better for the Government to step in and make a harbour.
21. If the Illawarra harbour were carried out I presume it would be detrimental to the best interests of the town of Wollongong. It would not improve Wollongong, and I do not think it would be as convenient as Port Kembla for the district generally.
22. As far as the trade of Wollongong is concerned, would it not interfere materially with the prospects of this town? Yes.
23. I understand that you personally advocate the construction of a harbour at Kembla? I consider it the best place of all the sites submitted.
24. Do you think that if that is carried out it will interfere with vested interests in Wollongong? I think not, because I understand that communication will be established between Wollongong and Kembla.
25. What sort of communication? By railway from the Port of Wollongong to that of Kembla.
26. If that were carried out, then the people of Wollongong, suppose that the interest of their town will not be interfered with? I think not; we have all the public buildings established here; Kembla would be the shipping port and Wollongong would be the commercial centre.
27. So that after all, in advocating the establishment of a port at Kembla the people of Wollongong have an eye to their own interests? Yes.
28. *Mr. Black.*] When the people decided to accept the decision of the Government with regard to the construction of a harbour on the south coast, had they any idea that Port Kembla would be the place chosen? No; I think not, because all the plans were to be submitted to the Government for them to choose. I do not think the Wollongong people knew then which place would be selected.
29. What sort of a harbour have you at Wollongong—is it a good rough weather harbour? No; I cannot say that it is.
30. Is it difficult to enter and to get out of in rough weather? It is. In rough weather vessels cannot enter or leave the port.
31. Do the inhabitants of Wollongong and district desire a port solely for the shipment of coal? That is the principal industry of the district. We send milk and other produce by rail to Sydney.
32. Do you desire a port solely for the shipment of coal, or have you any desire to have such a port as would enable you to ship and receive other produce? It is thought desirable to have a port in which the large ocean-going steamers can take in coal.
33. You would require a still-water harbour? That would be best, of course.
34. Then unless two breakwaters are built, Port Kembla will not be suitable for your requirements? I can only speak from a rough knowledge. I do not pretend to know anything about breakwaters, but I should say that the eastern breakwater would be sufficient for some time to come.
35. Do you think the water in the harbour would be sufficiently still for steamers to lie alongside the wharf and take in produce that requires delicate handling? Hardly. But even now large vessels can load there. I have seen them there in rather rough weather.
36. They load coal, but not butter and eggs? No, at present they only load coal.
37. Are you sanguine that Kembla will make a good harbour in all weathers? Yes. With two breakwaters I believe it would make a splendid harbour.
38. Were you not equally sanguine about Wollongong? We anticipated that, with the Harbour Trust operations, it would make a good harbour.
39. Have you no suspicion that your judgment may again be at fault? I do not speak as an engineer, but from what I have heard and seen I think that Kembla would be the best place for a harbour on the south coast for coal exportation.
40. Do you think that the shipping trade of the southern district would warrant the expenditure of half a million of money from the public revenue? That is another question upon which I could not speak with authority. The Committee, I presume, know as much as I do about the mines in the Illawarra district and their output.
41. Am I to understand that the people of Wollongong simply desire a port, and give no consideration to the question of expenditure? At the meeting it was pointed out by several speakers that the amount of coal shipped would bring in a sufficient revenue to defray the interest on the expenditure for a harbour.
42. *Mr. Clarke.*] You are aware that a large amount of money has been spent on the port at Wollongong? Yes.

43. From your experience, do you consider that the port is sufficient for the trade of the district? I do not.
44. Although it may be injurious to the trade of Wollongong in some respects, you think that the people would prefer to have a better harbour at Port Kembla or Lake Illawarra? The people of Wollongong do not care much where the harbour is as long as a harbour is made to meet the requirements of the south coast. At present the trade is hampered by the non-existence of a suitable port.
45. Wollongong is about the centre of the coal-fields in this district? Yes.
46. Do you consider that chiefly for the output of coal a harbour should be made at either Bellambi, Port Kembla, or Lake Illawarra? Yes.
47. Is it likely there would be any other produce shipped at Port Kembla? No; I think that most of our other produce would go by rail.
48. You consider that on the whole the interests of the people of the Illawarra district, and the interests of the coal owners will be best served by the construction of a harbour at Port Kembla? I do; because it has been taken up as a Government scheme, and everything points to the conclusion that Port Kembla will be the best place for the harbour, and the work will soon be undertaken.
49. *Mr. Roberts.*] What is the size of the vessels at present engaged in the coal trade at Wollongong? They are small schooners and sailing craft from 80 to 500 tons.
50. Do not many steamers come to Wollongong;—what would be the tonnage of the largest steamer that is in the habit of visiting Wollongong to obtain coal? 500 or 600 tons.
51. What is the depth of the water in the basin? That I could not say exactly, but I think from 12 to 16 feet.
52. Have you a number of sailing vessels plying to Wollongong for coal? Yes.
53. Do the largest steamers at present go to Kembla? Yes, and to Bellambi.
54. Do you think that if these breakwaters were constructed at Port Kembla a large sailing vessel traffic would spring up with foreign countries? I do; because even now sailing vessels go to Kembla and are loaded there.
55. Of what size? Small sailing vessels from 160 to 300 tons;—they are towed in and towed out.
56. Since the meeting to which you referred, and since the Government has referred the construction of a harbour at Port Kembla to the Committee, have you heard of any expressions of dissatisfaction from the people in the surrounding districts? I have;—at Bulli and Bellambi there have been one or two meetings. I did not attend those meetings, as I was President of the South Coast Harbour League.
57. Is the feeling amongst the Bulli and Bellambi people in favour of the harbour at Bellambi? Yes.
58. Do you know upon what grounds they advocate the Bellambi scheme? They say that a good harbour could be constructed at Bellambi, that it is the most suitable place, and that the cost would compare favourably with that of Kembla.
59. Do they regard Bellambi as occupying a more central position than Kembla? I believe that that is one of the grounds on which their claim is based.
60. Can you give us the opinions of the people south of Bellambi with regard to the Port Kembla and Lake Illawarra schemes? The opinion of the people here is that a harbour should be made at Kembla. At Dapto a meeting was called to take steps to support the Lake Illawarra scheme.
61. All things being equal, do you think that Wollongong would be a central position for the construction of a harbour, and that it would be as good a position for the harbour as Port Kembla? Wollongong would be; but there are engineering difficulties in the way of the construction of a harbour at Wollongong.
62. Engineering difficulties which would prevent the construction of a harbour as suitable as one at Port Kembla? Yes.
63. *Mr. Farnell.*] What collieries at present use the Wollongong harbour? Mount Keira, Mount Pleasant, and Corrimal.
64. You stated that it was possible to afford facilities in Wollongong harbour for vessels of only 500 or 600 tons to be loaded there? Only small vessels of the tonnage mentioned can load at Wollongong.
65. Can you tell me what collieries are likely to use the proposed new harbour at Port Kembla? I should say that nearly all the collieries in the district would use it.
66. Would the collieries which at present use Wollongong harbour use Port Kembla? I am of opinion that they would; but vessels would always be loaded in Wollongong harbour.
67. The trade carried on by small vessels in Wollongong harbour would be retained? Yes.
68. Wollongong harbour would still be used to the same extent as at present? Yes, I believe so.
69. Then that means that if the collieries are going to use the new harbour there would be a greater output of coal, and a great increase of business if coal is to be shipped at Port Kembla? Yes; a larger class of vessels will come to Port Kembla, and they will be more numerous.

Mr. Walter Evans, shipping manager, Southern Coal Company, sworn, and examined:—

70. *Chairman.*] You deal with the coal after it has come from the pit? Yes.
71. You are aware that officers in connection with your mine have already given evidence in reference to the proposed harbour at Port Kembla? Yes.
72. Is there anything that you could add to their evidence? There is a suggestion which I should like to make in reference to the route of the railway.
73. The Department proposes to go down to the Wollongong basin and turn to the south behind the gaol and the convent? How do they propose to get the coal to Wollongong?
74. They propose to go down the Kiera line and then turn round by the gaol? The suggestion I would make is in reference to the route of the railway from any mines north of Mount Pleasant. I would suggest that a similar loop-line be made at Mount Pleasant to that at Keira, in order to avoid the heavy grade on the Government railway, between Mount Pleasant and Wollongong, which is 1 in 75.
- 74½. Could they come down the present line? They could come down the Mount Pleasant line, which is a narrow-gauge line, by laying down an extra rail.
75. *Mr. Hassall.*] From your knowledge of the shipping of the coal, would you expect any considerable increase in the trade at Port Kembla if the harbour were constructed? I should.
76. To what extent? Fully 50 per cent.
77. Do you know whether any inquiries were ever made here as to whether you could load large vessels for the over-sea trade? We do it now at Port Kembla when the weather is favourable. The largest vessel we ever had here took away a total cargo of 7,600 tons.

Mr.
J. A. Beatson,
18 Jan., 1897.

Mr.
W. Evans,
18 Jan., 1897.

Mr.

Mr. Jacob Carlos Jones, mining engineer and colliery manager, South Bulli Coal Company, sworn, and examined:—

Mr.
J. C. Jones.
18 Jan., 1897.

78. *Mr. Clarke.*] What colliery do you manage? The South Bulli Coal Company's mine.

79. To whom does that colliery belong? To Mr. Ebenezer Vickery.

80. Will you give us a statement as to the coal measures from Clifton to Mount Kembla, and also further south? I have here a statement drawn up by myself, and I produce a plan showing the areas of the properties at present alienated and occupied by colliery owners. It includes the property of the Metropolitan Company.

81. The Metropolitan Company is not much interested in the proposed harbour? I am referring more particularly to Bellambi Harbour than to Port Kembla, and the Metropolitan Company becomes very important in connection with that, as it brings the port within nearly half the distance. The following is a return of the shipment at South Bulli Jetty, Bellambi, including coal from South Bulli and Bellambi collieries:—

		tons.	tons.
For the year 1892—	South Bulli Company	130,560	
	Bellambi Company	112,694	243,254
„	1893—		
	South Bulli Company	141,381	
	Bellambi Company	42,716	184,097
„	1894—		
	South Bulli Company	119,478	
	Bellambi Company	37,000	156,478
„	1895—		
	South Bulli Company	164,377	
	Bellambi Company	9,800	174,177
„	1896—		
	South Bulli Company	174,909	
	Bellambi Company about	26,000	200,909

ILLAWARRA COAL-YIELD.

Name of Colliery.	Approximate		
	Area of coal worked.	Area of coal unworked.	Total area.
Mount Kembla and Great Wollongong	1,000	7,700	8,700
Mount Keira	1,000	1,100	2,100
Mount Pleasant	1,000	1,100	2,100
Corrimal	200	150	350
South Bulli	250	2,330	2,580
Bellambi Company	200	200	400
Bulli Company	2,000	400	2,400
North Illawarra and South Clifton	560	3,000	3,560
Coalcliff and Lily Vale Estates	230	5,000	5,230
Lands about Otford (about)	.....	2,000	2,000
Metropolitan Company	1,000	17,000	18,000
Stanwell Park	.....	1,200	1,200
Totals	7,440	41,180	48,620

NOTE. The several areas here are only approximate, having been obtained by scaling off the district plans.—J.C.J.

Assuming that there are 6,000 tons to the acre, we have 247 millions of tons of coal unworked in the present mineral holdings. In addition to the area of unworked coal in the lands already alienated, which comprises almost entirely the mountain ranges, we have the unalienated coal lands to the west of the ranges. I estimate this latter to be in round numbers 50,000 acres, all of which will contain the top or Bulli seam of superior quality. There may be much more land with coal in than I have estimated, as I have included only the land immediately west of the present collieries—from Kembla to Coalcliff—and the greatest distance from Bellambi port is 9 miles west. Evidence has been given before the Committee with a view to show that most of the available coal is centred around Mount Kembla. A glance at the map which I produce will be sufficient to show that this view is quite erroneous. It may be true that parts of Bellambi and Bulli mines have been destroyed by the intrusion of basalt burning large areas of coal; but it is not right to assume that North Illawarra, South Clifton, and Coalcliff, and the vast area of Crown lands to the west of these places are so affected. I produce a return of outputs from all the southern district for the next 100 years on the basis of an annual increase of 100,000 tons. These will show you that there is ample coal available by present holders of coal-lands to last 130 years. It is possible, and indeed probable, that the annual output of coal from this district will increase at a more rapid rate than I have assumed, everything depending on the shipping facilities afforded; but if we reckon on the most liberal basis, we have coal now available in alienated lands to last about 100 years. Then sufficient coal remains in the unalienated lands to last a further period of about 100 years. It must not be forgotten that considerably more than half of the alienated land, and practically the whole of the unalienated lands referred to herein belong to the Crown, and a royalty of 6d. per ton will be paid to the Government for all coal extracted from the Crown lands.

ILLAWARRA

ILLAWARRA COAL-FIELD.

OUTPUT from 1897 to 1997, in decadal periods, commencing with 1,000,000 tons the first year:—

1897	...	...	...	...	1,000,000 tons annual output.
1907	...	...	...	...	2,000,000 " "
1917	...	...	...	...	3,000,000 " "
1927	...	...	...	...	4,000,000 " "
1937	...	...	...	...	5,000,000 " "
1947	...	...	...	...	6,000,000 " "
1957	...	...	...	...	7,000,000 " "
1967	...	...	...	...	8,000,000 " "
1977	...	...	...	...	9,000,000 " "
1987	...	...	...	...	10,000,000 " "
1997	...	...	...	...	11,000,000 " "

66,000,000 tons in 100 years.

From Return A (1) there are 247 millions of tons unworked coal in lands already alienated, or occupied by present coal-owners. Assuming, then, that half the above quantity is destroyed by basaltic disturbances and other faults, we have $\frac{247,000,000}{2} = 123,500,000$ tons, which can be considered as available coal. This quantity will last at the above rate of increase about 130 years. As to the respective ports, I should like to state that if the Government thinks fit to spend sufficient money I am willing to admit that Kemplā can be made a better harbour than Bellambi; but being one of those who were very much interested in the first movement I may say that the initiators of the movement did not expect a very large expenditure. They thought that for an outlay of £200,000 Bellambi could be made a very good port for the district. As to the cost of the harbour I do not want to say very much, but I cannot see why a breakwater at Bellambi should cost so much more than a similar breakwater would cost at Port Kemplā. The average depth of the water is not greater and there is ample stone within 2 miles of Bellambi on the Russel Vale Estate. There is a very large quantity of very good blue metal immediately fronting the South Bulli Colliery. I have heard it said that the coal south of Kemplā is very good coal. I had occasion some few years ago to report upon that coal-field for a few gentlemen who were interested in it, but I could not get hold of my report or I would have produced it here. There is only one seam of coal south of Kemplā that you could say was of any value, that is the lower seam, and for steaming purposes it is practically useless. It is on the Wongawilli property.

82. You think that south of Mount Kemplā the coal is not a good quality? The coal-field is extensive enough but the coal has not been proved to be of a marketable quality.

83. Do you think that if the Government constructed a harbour at Bellambi, Port Kemplā, or Lake Illawarra, it would increase the trade of the district? Undoubtedly. Our coal is coming into favour all over the world. There is no other coal but this which can be compared to the best steam coal of South Wales. It has had a lot of fighting to do to obtain recognition and it is only during the last few years it has come to be known by the general public as a good steam coal—the owners of every steamer would like to use it. Some gentlemen from America recently visited this district, one of whom is interested in the lake scheme and represents large shipping interests in America. That gentleman told me distinctly that if we had a good port here that would accommodate large sailing ships he could see his way to give us nearly half a million tons of trade annually. He said he knew of a hundred sailing ships which could be put into the trade, if they could get a connecting link, so as to make a round trip from Europe.

84. Do you think that in the event of a good port being made on the south coast, the jetties at present existing would still take a large portion of the trade? I do not think they would.

85. How much of the trade would continue to be done upon the present jetties? At Bulli, Coalcliff, and North Illawarra they would not use their jetties. Those jetties are so very old that they would be very glad to get rid of them.

86. Would 25 per cent. of the trade continue to be done at the existing jetties? We should do 25 per cent. at Bellambi with small steamers, but in a short time it would not pay; it is very expensive to maintain the jetties. It would be more expensive than sending to the port established by the Government.

87. If you had facilities provided by the Government for the loading of large vessels with safety, you think that the trade would go to the new harbour? Yes; and the existing jetties would be left unrepaired, and in a year or two they would be washed away.

88. What port do you consider would be the best for the district? I am bound to say that Bellambi will be the central spot for the next fifty years.

89. Are you aware of the estimated cost of the proposed breakwater at Bellambi? Yes; about £208,000.

90. Are you aware of the cost of the proposed breakwater at Port Kemplā? Yes; it is about £50,000 less. I really cannot see why it should cost so much more to erect a breakwater at Bellambi.

91. It is proposed to construct an eastern breakwater and a northern breakwater; but according to the evidence of some witnesses the eastern breakwater will be sufficient for the present? Yes; for a shelter it would be, I have no doubt.

92. What is your opinion of the proposed harbour at Lake Illawarra? They have spent a lot of money at Lake Macquarie, which is a better lake than Lake Illawarra, and they have never made a harbour of it. I am afraid that they will never make a harbour at Lake Illawarra.

93. For what reason? The silting up would necessitate constant dredging, and that would make it too costly, and making a breakwater to protect an entrance often has the effect of closing the entrance by causing it to silt up.

94. Your opinion is that Bellambi would be the best port? Yes; to suit our requirements.

95. I think that the owner of your mines said it would be more to his interest to have a port at Bellambi, but he was in favour of Port Kemplā because it was more in the public interest? You can make a more commodious harbour at Port Kemplā than at Bellambi, but I think it could be constructed at Bellambi more cheaply.

96. *Mr. Hegan.*] I see that you delivered a speech on the 4th of November on the proposed harbour schemes. Was not that after the proposal to bring this scheme before the Public Works Committee? I think so. I had been requested to deliver a speech on the subject.

Mr.
J. C. Jones.
18 Jan., 1897.

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18 Jan., 1897.
97. How is it that you did not give that speech before? The progress committee requested me to deliver an address on the subject when the matter was before Parliament. After I heard that the matter had been placed before the Public Works Committee, I asked the progress committee if they still wished me to deliver this speech and they said yes.
98. And how long have you been managing the South Bulli Colliery? Six years.
99. Have you managed any other collieries in this district? Yes; the North Illawarra Colliery.
100. As a mining engineer? Yes.
101. When did you obtain your certificate? I am a member of the Mining Institute of the North of England. I have held a certificate of competency for the last twenty years.
102. Therefore you can speak with a certain amount of confidence as to the necessity to make provision for the shipping trade of this district? Yes.
103. Have you heard any complaint in regard to the holding-ground at Bellambi? I cannot say that I have.
104. Have you heard of many vessels losing their anchors there in consequence of the bad holding-ground? I have heard of chains breaking, and the anchors being dropped.
105. You have heard of anchors being lost on account of the bad holding-ground? No; on account of the bad chains.
106. Is it not a fact that the holding-ground at Port Kembla is far superior to that at Bellambi? We have clay and sand at Bellambi, and also rock.
107. You say that you reported for some company upon the coal south of Mount Kembla—what company was it? Messrs. Biggar and Bertram.
108. We have had evidence that the coal measures down there are very valuable. You differ entirely from that? I do. It may have been proved since I was there. It is eight or nine years since I reported on the coal.
109. I suppose your knowledge of geology will give you an idea as to whether coal—a marketable quality—is to be found south of Kembla? Geology will not tell you that; you have to prove it.
110. Can you tell the Committee the reason why your output for the southern district for the last year or two has been less than it used to be? I am not aware that it was less.
111. One year it reached 900,000 tons, did it not? In 1895 it was 910,000 tons. Probably it will be more for the following year.
112. During the strike of 1890 the coal trade in the district increased considerably; then after that it diminished. Was it for want of shipping facilities? I suppose it was to a great extent. The coal trade is always fluctuating.
113. If the coal trade is on the decline here what is the use of constructing a harbour? I should look at it in another way. If the coal trade is declining it may be for the want of a harbour, but it is not declining it is increasing.
114. But was not that owing to the strike at Newcastle? No.
115. You think that Newcastle does not interfere with the southern trade, seeing that the kinds of coal from each district are entirely different? They are different kinds of coal and they do not compete much with one another. The coal of this district is essentially a steam and smelting coal. The Newcastle coal is a household coal.
116. Would you tell us the difference in cost between the constructing breakwaters and the resumptions necessary at Bellambi and Port Kembla? I cannot do that except from the Government estimate.
117. Yet in your speech you refute the statement of the Engineer-in-Chief in favour of Mount Kembla? I do not refute the whole statement; we do not know upon what basis they work out their estimates.
118. What about the resumptions? They will have to resume four times as much land at Kembla as they would at Bellambi.
119. Did you say that the jetties at Port Kembla were old? No; but they are at Bellambi.
120. Therefore, it would not cost much to resume the jetties at Bellambi? No.
121. What sum would you put down for the resumption of jetties at Bellambi? The amount for one would be about £5,000, and the amount for the other about £9,000.
122. And what would be the amount for the resumption of the jetties at Port Kembla? They are of more recent construction, and the amount would be from £15,000 to £20,000 each.
123. If Parliament sanctioned the construction of a harbour at Port Kembla would you resume the jetties there? I do not see how you could make it a Government harbour without doing so.
124. And you would resume the railways going down to the jetties? Yes; or make new ones; probably both. That is one reason why it would be expensive. You will have to make railways for the northern coal then resume jetties for the southern coal.
125. Do you know anything about the Lake Illawarra scheme? No.
126. Do you know the coal at Dapto? No; I have not seen that being worked. I have seen all the seams as far as the Macquarie Pass.
127. Then you would not say that it is equal to the coal you are getting here at present? No.
128. Neither are the lower seams equal to the top seams which you are working now? No.
129. You think there are about 220,000,000 tons of coal yet to be got out of the top seam? The top seam contains about 247,000,000 tons. Reckon about half of that waste, assuming that a quantity would be destroyed by basaltic disturbance still there would be 123,000,000 tons of coal available.
130. Can you tell us the percentage of coal left in the mine? As a mine has to exist for a number of years we leave probably about two-thirds of the coal in order to keep everything in order for ventilating for years to come. I suppose that about 10 per cent. of that would be wasted.
131. What is the area of alienated coal lands from Kembla to Helensburgh? 48,600 acres.
132. And according to your estimate that coal-field will last 200 years? The coal on the alienated land will last 100 years and that on the unalienated land another 100 years.
133. I suppose you have been taking a prominent part in the agitation for the Bellambi harbour? I did originally.
134. And you were one of those who decided to leave the selection of the site of the harbour to the Government? I was at the meeting.
135. Were you one of those who came to that conclusion? I think so.
136. What is your idea for altering your attitude after the site has been chosen? The real reason is this; that when the Departmental estimates were published the cost of the Kembla breakwater was put down
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at £158,000, and the cost of the Bellambi breakwater at £208,000 and so on. Everybody was satisfied that that was correct, but as soon as the Public Works Committee got hold of it we found that the cost of the Kembra harbour would amount to £440,000. There is nothing in the published statements to show what Bellambi would cost under the same circumstances. We thought there was something wrong. We said it was very unfair. Why did they not publish similar estimates in both cases. It had been decided that Kembra should be the site it being the cheapest; but the resolution passed at the meeting said that the site decided upon by the Government should be the most economical. The cost of construction is the thing that upset the Bulli people.

Mr.
J. C. Jones.
18 Jan., 1897.

137. Did you tell those gentlemen whom you met that you could not contain yourselves, and that you wanted the harbour at Bulli? No. I say that they could not contain themselves; they went before the Public Works Committee long before we did, and they have strenuously advocated one scheme.

138. Seeing that the cost of a harbour at Kembra would be greater than you anticipated at the time of the meeting, you thought it was not to the interest of the district to have the harbour there, when you could get one cheaper at Bellambi? That is really what we thought.

139. *Chairman.*] What is the greatest distance that coal is worked underground in any part of the world? Three and a half to 4 miles.

140. How far from the pit's mouth can it be hauled under ground? Easily from 3½ to 4 miles with our present machinery.

141. If there is coal beyond a distance of 5 miles, can it be brought out? It can be brought by relays, for which they have to sink shafts and put down relays of machinery.

142. Would it pay to haul it a distance of 5 miles? It would.

143. Would you undertake to do it? Yes.

Mr. Robert Dodd, stevedore, Wollongong, sworn, and examined:—

144. *Chairman.*] What are you? A stevedore.

145. What evidence have you got for the Committee? I have had eighteen years experience in the district, trimming coal at all the ports.

Mr. R. Dodd
18 Jan., 1897.

146. *Mr. Black.*] Do you mean all the ports on the southern coast? The ports from Bellambi to Port Kembra.

147. And which port do you favour? Port Kembra.

148. For what reason? On account of the depth of the water and the good anchorage.

149. It has a better holding-ground than Bellambi? Yes.

150. Do you think, in other respects, it is as well situated with regard to the collieries? Yes.

151. Do you think that with the construction of one breakwater it would be suitable for the unloading of ships in rough weather? Yes. I think Port Kembra will be far superior to Bellambi.

152. Putting Bellambi on one side, do you think that with one breakwater only it would be possible to load vessels with coal at Port Kembra in rough weather? That would depend upon which way the wind was blowing. If the wind was blowing from the north, I would not say that one breakwater would be sufficient. In the majority of instances they could load with one breakwater. In the summer the wind generally blows from the north-east and it does not cause such a heavy sea as the south and east winds.

153. When the wind is blowing strong from the north, would it be possible to load vessels at the jetty? In five cases out of six, they could load with a northerly wind.

154. If they could only do it in five cases out of six the harbour would not be an absolutely safe one in all weathers? My contention is that if you were at the jetties and it was blowing from the north and raising a heavy sea, the ship could go out to its anchorage.

155. But it could not load? Not if there is a very heavy sea.

156. Is Port Kembra an easy harbour to make in rough weather? It is. I have seen boats lying there in heavy gales.

157. Do you know the harbour at Newcastle? No.

158. Do you think that if Kembra were made a comparatively safe harbour for loading vessels with coal there would be any great increase in the coal trade? Yes.

159. Would it be a new trade or only a trade attracted from other ports less suitable? I think it would be a new trade carried on with foreign vessels.

Mr. William Weeks, butcher, Wollongong, sworn, and examined:—

160. *Chairman.*] What are you? A butcher at Wollongong.

161. What evidence have you to offer? I wish to state that I supply the steamers at the two ports with stores, and I have frequently heard the captains say that Kembra is a superior harbour to Bellambi. Once when I was at Bellambi the "Easby" bumped terribly. She went to Port Kembra where she had 4 feet of pure water at her stern. The "Glaucus" bumped at Bellambi several times, and she is a vessel of only 18 feet draft.

Mr.
W. Weeks.
18 Jan., 1897.

161½. *Mr. O'Connor.*] In your opinion Port Kembra is the superior harbour? Yes.

162. How long have you been in the district? About ten years.

Mr. William Henry Rees, commission agent and secretary to the Wollongong Gaslight Company, Wollongong, sworn, and examined:—

163. *Chairman.*] What are you? A commission agent and secretary to the Wollongong Gaslight Company, and secretary of the South Coast Harbour League.

164. *Mr. Lee.*] You hold an official position in some local organisation? Yes. After a deputation had waited on the Minister for Works it was considered advisable to form a league to agitate for the construction of a harbour in the district, and I was appointed secretary.

Mr.
W. H. Rees.
18 Jan., 1897.

165. What action has that league taken? It has taken but little action. As the Minister promised to enquire into the matter, and to submit the harbour scheme to the Public Works Committee, it was thought useless to do anything further for the present.

166. The result was practically to leave the matter in the hands of the Government? Yes.

Mr.
W. H. Rees.
18 Jan., 1897.

167. Of whom was your league composed? Of representatives from Bulli, Bellambi, Woonona, Wollongong, Unanderra, and the surrounding district.
168. Had you any representatives from Dapto? No; we invited them but they did not seem inclined to come. I think it was on account of the Illawarra Lake scheme.
169. Did your league look upon the construction of a harbour at Lake Illawarra as opposed to their interests? No; but the Dapto people said they would oppose anything being done on the south coast except at Lake Illawarra. The opinion of all I have consulted is that it will be too costly a matter to make a harbour at Lake Illawarra in which large ships can load.
170. To put the matter shortly I suppose that your league did not believe in the Illawarra Lake scheme? Certainly; the company have been a long time about it, and we see no result. The opinion is that they are only putting forward the harbour scheme to enable them to sell their land.
171. If your league had been of opinion that the Lake Illawarra company was going to make a harbour to admit deep ships, would they have used their influence to induce the Government to construct a harbour at Port Kembla? The general opinion is that it would not be convenient for the bulk of the coal trade to go to Lake Illawarra. All that the people want is a harbour for the south coast. They do not care whether it is at Bellambi, Wollongong, or Kembla.
172. Your league were fully acquainted with the proposal of the Lake Illawarra company? Yes.
173. If they had been satisfied that the company was going to give them a substantial harbour there would have been little necessity for them to take action to induce the Government to construct a harbour? Just so.
174. Do you consider that if a harbour were made at Lake Illawarra it would be detrimental to the interests of Wollongong? No; that was not taken into consideration at all.
175. Can you assure the Committee that the only reason that influenced your league in their advocacy of a suitable harbour for the south coast trade was purely the public interest? It was.
176. And that you were not influenced by the fact that if a harbour were constructed at Lake Illawarra vested interests would suffer? No. But the lake was not considered a suitable place.
177. You are aware that if a harbour is made at Port Kembla there will be a railway connection between Kembla and Wollongong? Yes.
178. Do you consider that is all that is required as far as Wollongong is concerned? Yes.
179. The railway will start from the Keira line, in the vicinity of the Belmore basin, and proceed along the coast between the culvert and the sea to Kembla? Yes; I believe it is all a dead level.
180. Do you think the Mount Kembla Colliery could use that line? The Kembla mine could use the main line; all the other collieries could use the new line to their own advantage.
181. You maintain that a maximum load could be carried that way? Yes.
182. Where only about two-thirds of the load could be carried over the main line? Yes.
183. Have you ever heard any expression of opinion from colliery managers or owners as to the suitability, or otherwise, of this route? I understood it was the unanimous opinion, until I saw that evidence had been given to the contrary, that that would be the best route.
184. If the harbour is made at Kembla, it will follow as a necessity that this line must be made? Yes; it will be about $3\frac{1}{2}$ miles in length.
185. If the alternative were adopted of running over the existing line? Then the trade would be hampered by the increased cost of carrying half-loads.
186. Supposing that that difficult bank on the main line could be cut out at a reasonable cost, and as good a grade formed on that line as can be got by way of the Tom Thumb Lagoon, do you not think it will be equally advantageous to use the main line? No. The line by way of the Tom Thumb Lagoon would be as cheap a line as could be made. It would cost a great deal of money to alter the grade on the main line.
187. How much? I am only telling you what I have heard.
188. If the steep grade could be cut out of the main line for less than it would cost to make the new line, would it not be advisable to cut it out and to use that line? Yes; but it would take the traffic through the railway station, and that would be inconvenient.
189. Would it make any difference to those who want to ship their coal whether the coal was sent by the main line or by the proposed new line? I do not suppose it would.
190. All the information at our command shows that if this new line were made it would be possible to haul just double the loads to Port Kembla which they can now carry over the existing lines? Yes. The opinion of the people at Wollongong is that it would be an advantage to have the proposed new line made as people could get out at the bottom of Crown-street where there would be a platform.
191. That would be a matter of small consideration would it not, as regards the earnings on the line? There would be a lot of business between Port Kembla and Wollongong. There would be the supplies for the shipping. At present Wollongong is cut off from Port Kembla and the trades-people cannot supply orders sent from the ships. There will also be a passenger traffic on the line as the majority of those working at Port Kembla would live in Wollongong. I believe the line would pay for itself from that traffic alone.
192. Did your league ascertain from the colliery proprietors whether they were prepared to pay any sum by way of shipping charges for the convenience of using that port? When it was mentioned at our meeting that the Government might spend half a million in making a harbour, it was calculated that a charge of 3d. per ton on an output of 1,000,000 tons—the output being 750,000 tons at present—3 per cent. on the outlay.
193. Not including the cost of maintenance, lighting, and other charges? It was said that it would pay 3 per cent. reckoning the increase of traffic that would take place on an outlay of half a million. According to the present estimate the cost will not be anything like half a million, especially if you only make one breakwater.
194. Did the league base their opinion upon the assumption that it would be necessary to construct only one breakwater? It was thought that for several years one breakwater would be sufficient; that is the opinion of the captains who visited that port.
195. Are they of the opinion that the erection of one breakwater would offer sufficient protection to attract large sailing vessels from other parts of the world? Yes. They reckon upon the great ocean-going ships coming here.
196. Steamers can load there at present? Yes.

197. It is said that the coal trade of the southern coast is considerably handicapped because they are unable to ship coal in large sailing vessels? Yes. One breakwater would not be sufficient for sailing ships; but if the full scheme were carried out sailing ships could load there at any time.

198. Do you know whether if the eastern breakwater were constructed large sailing vessels could load safely at Port Kembla? Yes.

199. *Mr. Black.*] I understand you to say that one breakwater would be sufficient—but that the increase of trade would make two breakwaters necessary;—how do you work that out? At present we want one breakwater for the trade for a couple of years, but when the trade increases no doubt we shall require another for the extra shipping.

200. If one ship is protected by one breakwater why should a dozen ships require two breakwaters? So as to make it still-water. Another wharf or jetty would be required and should be protected.

*Mr.
W. H. Rees*
18 Jan., 189

Mr. Charles Morton, civil and mining engineer, Bulli, sworn, and examined:—

201-3. *Chairman.*] What are you? Civil and mining engineer.

204. Have you a knowledge of the south coast? I have been here eleven or twelve years. I came here to lay out works for the North Illawarra Company, and then laid out works for Bellambi.

205. Have you a written statement? I have.

206. Will you read it and hand it in? Yes. It is as follows:—

*Mr.
C. Morton.*
18 Jan., 1897

I appear here to advocate the just claims of Bellambi as the most suitable and proper site, under all existing circumstances, for the deep-water harbour for the Illawarra district, and more especially its coal trade. The Committee have a perfect right, in investigating a question of this sort, whether there should be a certain work carried out at Port Kembla, to take evidence and consider whether it would not be better to put that work somewhere else. I hope, first, to satisfy this Committee by evidence, by plans, and by figures, that such a work as a deep-water harbour for the Illawarra district, of the southern coast, is absolutely necessary, secondly, that Port Kembla is not the best place for it, and thirdly, that some other place is the best place for the deep-water harbour, and that under all existing circumstances I hope to prove to the Committee that such place is Bellambi. I do not appear before them with the slightest intention of deriding the claims and facilities that Port Kembla offers as a harbour, but I will admit at once that a good deep-water harbour can be constructed there, and excellent accommodation can be made for the shipment of coal and the landing of goods. To accomplish all this in an effectual manner is a mere matter of £ s. d. No one can doubt, that if this Committee recommend it, and Parliament elects to spend the money in sufficient quantity a grand harbour can be made at Port Kembla, the necessary area of land can be resumed, railways can be purchased and built, roads of access constructed, and the owners of jetties compensated. But when all this is provided for, I am convinced that your Committee will agree with me, that the cost of the work, if carried out in the substantial manner proposed and necessary, will prove to be fully three times the amount which the maximum estimated revenue of the complete port is capable of paying interest upon. The Minister for Works in speaking of the grant of £10,000 which was voted for the improvement of Bellambi harbour, and allowed to lapse many years ago, remarked that if the district members at that time had displayed any active interest in their work, that Bellambi to-day would have been a good harbour.

Revenue from District.

The people of this district have always been a large revenue-paying class, and have contributed large sums to the exchequer of the Colony. Only small sums of this money have been disbursed in useful works throughout the district. Therefore justice should now be done in carrying out the all-important work of a deep-sea harbour. It is a national work as well as a local one.

Mr. Copeland tells us that "we spent a lot of money on the Illawarra railway, and we were told that they were going to use that to carry the coal." I reply, that this is another engineering difficulty, which the people of this district are not to be held responsible for. The Illawarra railway, owing to the heavy grades on the line, can only carry coal from the Metropolitan Mine, at Helensburgh, at a payable rate. *Mr. Eddy* has advocated the establishment of a central harbour for Illawarra, and the adoption of a zone system around such harbour. This equitable system could be put in force from Bellambi, where an 8-mile zone would embrace all mines from North Clifton to South Kembla.

Large sums have been spent all over the Colony, even in the inland rivers for the shipping of wool and other produce so as to enable it to be taken to a market, yet in this district, and for one trade alone, private enterprise has been compelled to spend upwards of £100,000 upon the construction of jetties at open roadsteads, which costly property is constantly more or less at the mercy of wind and wave.

Early in the year 1892, *Mr. Cecil W. Darley*, Engineer-in-Chief for Harbours and Rivers, was called upon to furnish a report upon *Sir John Coode's* monumental scheme for a deep-water harbour at Wollongong, the total cost of which, as estimated by *Sir John Coode*, was a fraction over £1,653,000. It will be found that *Mr. Darley* apologised for the elaborate amount of *Sir John's* total, by stating that it was never intended that the whole of this large scheme for internal works should be proceeded with at once. He then proceeds to deal with *Sir John's* scheme in a business manner, and asks will the probable future trade of the port pay the interest on this debt. To do so would require a net annual revenue of £70,000, to collect which would require an output of 4,200,000 tons per annum.

After carefully reviewing the coal trade of the district, *Mr. Darley* reports,—“I, therefore, think that the utmost trade likely to be drawn to Wollongong for many years to come will not exceed 750,000 tons, the port charges on which would amount to £9,375, which would represent 4 per cent. interest on £234,375. Therefore, this is the greatest amount of capital which could be expended with any prospect of a return of interest.” *Mr. Darley* also considered in what way can the proposed works (*Sir John's*) at Wollongong be constructed so as to keep down the first expenditure, to enable the revenue of the port to pay 4 per cent. interest on the outlay? *Mr. Darley* finally brought down the estimated expenditure at Wollongong to £447,200. This, he said, was the lowest sum to which the cost of the work, if carried out in a substantial manner, could be reduced, and even this capital charge remains nearly double what the maximum estimated revenue is capable of paying interest upon. Basing his reasons upon these calculations, he concludes by saying,—“I regret, therefore, to have to conclude with the opinion that there is no prospect whatever of the trade of the port of Wollongong ever being able to pay interest on such an expenditure, viz. £447,200.” Then what do we learn from these deductions? That any scheme to meet with the approbation of the Engineer-in-Chief for Harbours and Rivers must involve an expenditure of not more than £250,000.

Private Jetties.

It is pointed out that if a really safe harbour were made on the south coast, that it would not draw all the southern trade. Some would go direct to Sydney by rail, and some would continue to be shipped from the private jetties. Therefore, the money expended on the port would be wasted. Following this reasoning out logically, we must conclude that a great deal of money has been wasted in Newcastle, as in that port hundreds of thousands of tons are shipped annually from private wharfs. The A. A. Company, Waratah Company, and Alex. Brown & Company,—three of the largest companies in the north,—ship almost their entire output on their own wharfs. These companies have their wharfs protected by Government work. In Illawarra it will be only the port chosen which will be protected by Government work. All other jetties will be just as they are now. Jetties, moorings, chains, and ropes are very costly things to maintain. They entail a heavy annual outlay, especially in unprotected shipping-places. The cost of shipping, for labour only, is great for an individual colliery, as compared with the charges at a Government port, where a number of collieries would be sending their collective shipments. Furthermore, each colliery owner must send and ship his coal where the ships are berthed, and it is absurd to say that they will ship at their own jetties, when the ships will not go to them if there is a protected port in the vicinity. Sending coal by rail, will, for the reasons already stated, be out of all question when a sheltered port is constructed.

The Lake Scheme.

Mr.
C. Morton.
18 Jan., 1897.

The Illawarra Harbour and Land Corporation obtained an Act under power of which they proposed to open the Illawarra Lake as a harbour. The Act provided for the construction of breakwaters and training-walls at the entrance, the dredging of a long deepwater channel across the lake, and forming a large dock and shipping place on the western shore of the lake. But what is the use of all this elaborate work when the Act only provides for a depth of 15 feet of water at the entrance. This company by scooping out a bit of a ditch can now hold the lake against all comers. Mr. Andrew Armstrong, managing director of the company tells us that the contract for these harbour works was let to Mr. Amos fifteen months ago. The contractor had been asked to suspend operations until the company had made satisfactory financial arrangements in London. The managing director of this company is of opinion that the people of the south coast district had no right to move in the direction of obtaining a harbour, because by doing so they materially interfered with his company's chances of raising capital in London. Mr. Darley, I am sorry to notice, writes in his report of 16th May, 1896, and states:—"I have had several interviews with the engineer for the Illawarra Lake company and the managing director, and I have been informed from time to time that they are daily expecting word from London that the required capital has been provided, and to receive instructions to proceed with the works."

This puts me in mind of a man who once took a ticket in Adams' Melbourne Cup Sweep. He has been expecting a fortune ever since. The completion of this lake harbour will be of no benefit to the trade of the existing coal-mines. And if it is constructed it must stand upon its own merits. We are told by some enthusiastic adventurers that they have grand marketable coal south of Kembla. If so, so much the better for them. Let them work it and supply the smelting works with it if they can, or let them ship it at the lake harbour. This lake harbour must be completed if the smelting company are to have a cheap and useful shipping place. No other district harbour can be of much service to them. A harbour to be of much real advantage to the smelting company should be so situated that the cargoes could be discharged from the ships direct into the works, and thus save two handlings. Mr. Darley has something to say in his report upon this matter. He states that he interviewed Mr. John Howell, the manager, on the subject, and he gave him to understand that while a good harbour would unquestionably be of great benefit to his company, he has made such terms with the Railway Commissioners for the carriage of his ore, &c., that he could profitably carry on without access to a local harbour. From a statement made in a public meeting by a Mr. W. R. Atkinson, who is an authority on the lake harbour and land corporation affairs, there would seem to be some doubt as to the power of the smelting company obtaining access to any local harbour but the lake. Mr. Atkinson states,—"Evidence has been given before the Public Works Committee to the effect that Kembla had no possible means of getting on to their works without permission of the Illawarra Harbour and Land Corporation." Under these circumstances we can dismiss the idea of making harbour provision for the smelting company from our minds, leaving them to the tender mercies of the Illawarra Harbour and Land Corporation, who, no doubt, are bound to make a harbour for the smelting company; and if for them why not accommodate the new coal-fields of the south? Then having the lake harbour, could not Dr. Robertson be persuaded to use that harbour for shipping Kembla coal; it is only a few miles farther south, so he could not object, seeing that he wants all other coal-owners to travel out of their way to ship at Port Kembla. Then since the Engineer-in-Chief for Harbours and Rivers has such a high opinion of the lake as a harbour there can be no reason why, if when the present company forfeit their right, it cannot then be carried out by the Government or the smelting company.

Port Kembla.

I shall content myself with a very few remarks in dealing with this place. I have already stated that I agree with Mr. Darley that a fine useful harbour can be made at Kembla, but it will cost too much money to complete it; more than that, it is not centrally situated. Therefore, if completed regardless of cost, it will then not be so serviceable or beneficial as Bellambi Harbour, which is central. A design and estimate for the Port Kembla Harbour has been submitted by the Harbours and Rivers Department which I accept, because I cannot see how to better it, when all things are carefully reviewed. It stands as follows:—

Eastern breakwater	£158,300
Northern do	121,120
Sidings and coal-lines	4,000
Coal shipping jetty	35,000
Cranes, lighthouse, &c.	42,580
Timber wharf, 1 mile	44,000
Ballast wall at back	10,000
Dredging	25,000
Total	£440,000

Let us now analyse this schedule and retain that which is absolutely necessary and expunge all that is not of immediate use. I have not seen the detail plan and specification of the proposed Kembla Harbour, therefore, until I obtain a little more information on this point some of the items seem to me inconsistent one with another. For instance, the northern breakwater which is 3,530 feet long, is estimated to cost £121,120. The eastern breakwater is to be 2,800 feet, and its cost is to amount to £158,300. Thus showing that although the northern breakwater is 730 feet longer and in deeper water it is to cost £37,180 less than the eastern breakwater. Then again, in a newspaper report of Mr. Hickson's evidence I read, "This harbour, if constructed, would contain an area of 260 acres, with 24 feet depth at low water." Then in the following day's paper I find in the report of Mr. Darley's evidence that "the enclosed area at low-water would be 223 acres." This area agrees with that published in the schedules relating to all the harbour schemes, but is absolutely 37 acres less than that named by Mr. Hickson as having a depth of 24 feet at low-water. No doubt all this may bear explanation; but if it does, I anticipate that it will mean placing the sea end of the northern breakwater greatly in advance, or to the north, of the eastern breakwater, which would leave the northern breakwater exposed to the violence of the south-easterly gales, and to a great extent would cancel the utility of the eastern breakwater. Instead of being so placed the eastern breakwater should overlap the sea end of the northern breakwater—this would increase the length and cost of that structure,—or the northern breakwater would have to be brought back within bounds, and thus curtail the area of the harbour, which would then have an area of 88½ acres, with a depth of 24 feet and over, instead of 126, as returned in the schedule, and would be 171 acres less than the area stated by Mr. Hickson as affording a depth of 24 feet and more at low spring tides.

The first item on the schedule for the Kembla Harbour is the eastern breakwater, £158,300. This item is undisputed, therefore unless, for reasons which I have given, the advocates for Kembla wish to lengthen it—a most costly proceeding,—we will let it stand. Item No. 2, northern breakwater: Some evidence has been given in which the opinion was ventured that the eastern breakwater would suffice for all purposes; but I think your Committee will not only require most emphatic evidence upon that point, but you will also require and call for statistics proving that at no time have vessels been unable to load owing to the north-east gales. Then, if this cannot be proved, and I know it cannot, we may be assured that after the eastern breakwater is constructed it will confine the force of the north-east sea, which will in consequence gain power, and become more destructive than it is now. Therefore the item must stand. Sidings and coal-lines, £4,000, is too little for a place like Kembla, and will have to be increased. Coal shipping jetty, £35,000, must stand: not knowing the site proposed I cannot comment upon it. Crane, lighthouse, signal station and quarters, engineering and supervision, is a big order and seems to be a very big price. This is perhaps excusable when the last item is thought over. Sometimes people like to be liberal to others, others like to be liberal to themselves. So let it pass. Timber wharf 1 mile long, ballast wall and dredging. These items can be struck out for some time to come, but should be included in calculating the cost of a complete harbour. These items, as given by Mr. Darley for a complete harbour, amount to £440,000, to which sum must be added the construction of a new line from Wollongong by way of Tom Thumb Lagoon, resumption of lands and railways, extinction of harbour rights and compensation for same, purchase of jetties, making roads, &c., which will bring the total up to £600,000. Strike out the items which are not immediately necessary, viz., £79,000, leaving a capital expenditure of £361,000. To this sum must be added the cost of construction of 4½ miles of railway including a bridge over Tom Thumb Lagoon for connecting Port Kembla with the main South Coast Railway from the North. The cost of this line has been set down at £14,613, exclusive of land. This, I venture to say, is a most ridiculous estimate, and must be the result of some misunderstanding. A suitable railway could

could not be made over this line of country for less than double that amount. The Keira line from the Government railway to Wollongong Harbour would also have to be relaid with new rails, which would bring the total cost of that connection to at least £30,000. This, added to the £361,000, gives a total of (say) £390,000, which shows a cost of £4,383 per acre, having 24 feet of water, without resumptions, instead of £1,256 per acre as per Government schedule of prices.

This shows a necessary expenditure of £390,000, exclusive of purchase of land and private rights to existing jetties and lines. Upon this point Mr. Darley has something to say. In his report of 16th May, 1896, he states: "I quite concur with all that has been said in favour of selecting Port Kembla as a harbour site, but the fact that Port Kembla site is situated wholly on private property does not appear to have been brought forward prominently. There is not, as far as I can ascertain, even a public road approaching, or near to it. The large resumption of land that will be required, not only in connection with the harbour, but to gain access thereto, and the purchase of existing rights to railways and jetties, to abolish any monopoly, will be a very costly matter, and must be taken into consideration when estimating the probable cost."

Seeing that the two jetties at Kembla are the most costly of any on the coast, and considering that the colliery owners have a right to the foreshore and to maintain these jetties for all time, they are not likely to part with such rights for a trifle.

But why waste time speculating upon the cost of these resumptions, which must bring the total cost of Port Kembla Harbour, as a coaling port for the south coast, to at least £500,000, which is more than double the amount—without the costly resumptions—which the Engineer-in-Chief states is the greatest amount of capital which could be expended with any prospect of a return of interest. Then why does he recommend this scheme? And in a former report, when he brought down the cost of Sir John Coode's scheme, for Wollongong, to £447,200, he said even this capital charge remains nearly double what the maximum estimated revenue is capable of paying interest upon. Therefore he declined to recommend that scheme.

Wollongong Harbour.

Yet of the two places Wollongong would be far and away ahead of Kembla as a revenue-earning port. It is more central, and the vested and mercantile interests of the town and district would be a guarantee of a certain revenue which Kembla could not, and never would, command. A complete harbour, with all its necessary adjuncts, can be constructed at Wollongong far more cheaply than it can at Kembla. There the railways and lands belong to the Government, and there is a certain amount of accommodation in the port which now suits trading steamers and a class of small boats which carry cargoes of coal to the northern rivers and other places. This can be greatly improved by judicious management and proper dealing with the port.

On the 18th March, 1892, I offered to place a rough sketch plan of a harbour scheme for the port of Wollongong for the consideration of the Trust, which in my opinion would have answered all the requirements of the district and would have cost about £150,000 without approaches, which would not have been an extravagant item. This plan could have been added to, and in course of years to come the port would have become a large, useful, and creditable harbour to the Colony. At any rate by this time facilities would have been given for the shipment of about 5,000 tons per day. Even now I see by the estimates prepared by the Government engineers that the cost given for the two breakwaters at Wollongong amounts to £224,215 as against £279,420 for Kembla, showing a balance in favour of Wollongong of £55,000. Take from this the same amount as charged against Kembla for a coal-shipping jetty, £35,000, there will then remain £20,000 to the credit of the port for the construction of siding accommodation, &c., &c. The recent structure dignified with the name of a breakwater might with some additions be utilised as a jetty whereat two vessels could load at one time, in 24 feet of water. Coal sidings would have to be constructed at a cost of about £5,000. A railway line from off the main South Coast line to come into the port south of the town about 2½ miles, £6,000. We may, therefore, conclude that, taking the Government estimates for the breakwaters at Wollongong as being correct, the total cost of Wollongong Harbour would not greatly exceed the £280,000 set down for Kembla breakwaters alone.

Now comes the feasibility of the scheme, and the question must be asked, and caution must be used in giving an answer—Can a breakwater be constructed from off this point—Pulpit Rock? To be successful, must the work be favoured with exceptional weather?—or, will some extra costly principles have to be adopted, so as to enable such work to be carried out from the foreshore to deep water? I am of opinion that it will, because this is, undoubtedly, for reasons which I cannot give, the roughest spot on the coast between Clifton and Kembla. Therefore, I now leave the recommendation or the condemnation of this scheme to those who should have a better and closer knowledge of the place than I possess.

Bellambi Harbour.

The only official documents having any bearing upon Bellambi Harbour in connection with this inquiry *re* the proposed harbour for the south coast, are the reports of Mr. H. R. Carleton, Principal Assistant Engineer for Harbours and Rivers, dated 26th November, 1895, and that of Mr. Robert R. P. Hickson, Engineer-in-Chief for Public Works, dated 29th November, 1895. I will now review these reports, so far as they go. They are most meagre, and utterly destitute of much necessary and reliable information, which I would certainly expect to find in high official reports. The second paragraph in Mr. Carleton's report speaks about the facilities for obtaining suitable stone for the breakwaters. In this particular point nature and private enterprise have given Bellambi a great advantage, as an unlimited supply of the best quality of blue metal or basaltic rock at the foot of South Bulli incline, within a few yards of the South Bulli Company's railway. Therefore, the cost of obtaining and delivering the rock is, in the case of Bellambi, reduced to a minimum.

The next paragraph professes to deal with the cost of each harbour (a) per acre, having a depth of 24 feet and over at low water. This is a most incomplete statement, and one which should not have been put forward, based as it is upon one item of cost only. I am glad that the author states in brackets that it is only comparative at this stage. Bellambi scheme, paragraph 4, states that the surveys show that the anchorage at Port Kembla is the best. That I admit. At the same time, I state that the anchorage at Bellambi has never, to my knowledge, been found wanting. It states that Port Kembla is also sheltered from the south and south-east by the Five Islands. This is a very moot question. Personally, I am of opinion that the site chosen for the harbour would be better off, as regards steady water, without the Five Islands. I believe that it is the concentration of the sea-force through the island channels that causes the tremendous roll in the port, and prevents shipping for so long a time. It then states that Bellambi is also sheltered by the outer reef, but not to the same extent as Port Kembla. This statement I emphatically deny, and upon investigation I find that the opening at Port Kembla, between Red Point and Big Island, measures 1,500 feet. That the opening between Red Point and the Big Rock, which is awash at high water, is 600 feet, and from Big Rock to the Big Island, is 800 feet, and that these openings are distant 1½ mile from the root of the proposed breakwater. While at Bellambi the opening in the big reef is 600 feet only, and distant 1,200 feet from the breakwater. For these reasons I contend, and properly so, that Bellambi is better sheltered, naturally, as a harbour than Kembla. This is borne out by the fact that vessels can load offener in a southerly gale at Bellambi than they do at Kembla. It is also patent to everyone who will look at the plan that Big Island is too far away from its work to be of any immediate shelter to the present shipping-place at Port Kembla. So, also, will the plan convince any impartial judge that the big reef at Bellambi is close up to its work, and when dealt with, as I propose, will form the principal feature in the construction of a safe, useful, and commodious coal-shipping harbour at Bellambi.

Clause 6 of Mr. Carleton's report alludes to perhaps the most important features of the whole inquiry. It is one which presents a most gigantic stumbling block for your Committee to overcome in dealing with Port Kembla as the harbour for the south coast. It is a vast question. It is one in which the rights of the Colony have been alienated to private individuals without any value received. To abolish this private monopoly and to regain the public rights, a large amount will have to be paid. The clause states that "Two jetties have been erected at Bellambi, and two at Kembla. The jetties at Port Kembla have been constructed under special Acts of Parliament, and are the properties of the Southern Coal Mining Co. and the Mount Kembla Coal and Oil Co. respectively, and the Acts of Parliament give the companies power to construct such other piers or jetties as they may think necessary, so that before anything is done at Port Kembla some arrangement should be come to with these companies whereby they would be placed upon the same plane as all other shippers at the port, and pay the same shipping rates, harbour dues, &c., &c." This much of clause 6 virtually tells us in plain English that we, the people, by our Government, have no right to land in Port Kembla. That we cannot improve the port because we are trespassers. Then it seeks to deprive these individuals of their rights to use and to monopolise the port, and to compel these people to pay shipping rates, harbour dues, taxes, &c., for what they now hold free. Do not we wish we may get it? So much for Kembla. Let us now see how this point affects Bellambi. Mr. Carleton's report states that "Those

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"Those (the two jetties) at Bellambi are constructed under a lease for the Crown, terminable in October, 1899. Therefore Bellambi is free and the Government can enter upon its work of improvement there with a free hand, unfettered by monopoly, and with any liability to costly actions at law or to expensive never terminating arbitration. This is a most all important point in favour of Bellambi, and had all other points been equal this one and this only would cause you to accept Bellambi as the site for the deep water harbour of the South Coast."

Clause 7 states, "From an engineering point of view Wollongong does not work out economically, as no shallow site can be selected to place a breakwater on. I fully agree with this, and I with the people of Wollongong lament over this melancholy fact. If the want of a shallow site for a breakwater at Wollongong prevented its economical construction, why should the shallow site at Bellambi be ignored. What became of the engineering eyes which could perceive the want of the shallow site at Wollongong and could overlook the shallow site at Bellambi. It must have been a shallow site of the eye, not only has the shallow site at Bellambi been overlooked, but the most useful water in the whole harbour has been monopolised by the site of the proposed breakwater as planned by the Government officials. Thus a grievous mistake has occurred and one which should not have happened, had inquiries been made of local people whose daily calling keeps them in constant knowledge of all these important facts regarding the requirements of the harbour at Bellambi."

I will now compare the depth of water as shown by the soundings given at the site of the Government breakwater, and that at the site which I propose.

It shows thus, the Government breakwaters would for—

	400 feet in 15 feet of water and under		
then	400	"	20
"	200	"	35
"	1,600	"	48

Against this the site chosen by me gives—

	for 1,000 feet 20 feet and under		
then	600	"	25
"	400	"	35
"	200	"	42

Showing nearly 60 per cent. in favour of the latter. So much for an oversight.

Clause 8 propounds a question which to my taste seems rather unsavoury. It reads thus, "Which of the three ports is situated nearest to the centre of the whole of the remaining marketable coal in the southern district?" I am very glad to see that Mr. Carleton places this question within inverted commas, showing that someone has lent it to him. I thought this question was too deep for an engineer who generally simplifies matters so that they can be understood by all. This cute and designing question has emanated from a deep and plodding mind, and is characteristic of the man who lent it out. Mr. Carleton fairly admits that this is one of those questions upon which he is unable to express an opinion. Then why place it in the report? Let me revise this question, so that it may have a practical bearing upon this inquiry. It will then read thus,—which of the three ports is situated nearest to the centre of the whole of the collieries that have been opened and are now working in the Illawarra district? The answer to this would have been quite easy to arrive at, and would have been one upon which Mr. Carleton would have been an authority. It would read thus—taking the distance along the main South Coast Railway, and thence either by existing line or proposed new line to each port. Thus, Mount Keira and all northern mines would go by new line over Tom Thumb to Port Kembla. Showing that:—

From	To Bellambi Jetty.	To Kembla Jetty.	To Lake Illawarra.
Kembla	8 miles.	4½ miles.	13½ miles.
Keira	5 "	5 "	14 "
Pleasant	4½ "	5½ "	14½ "
Corrimal.....	2½ "	7½ "	10½ "
South Balli	1 "	9½ "	18½ "
Bellambi.....	1 "	10 "	19 "
Bulli	3 "	12 "	21 "
North Illawarra	5 "	14 "	23 "
South Clifton	8½ "	17 "	26 "
Coalcliff	10 "	18½ "	27½ "
Helensburgh	18 "	26 "	35 "
	67 miles.	129 miles.	228 miles.

Leaving out Helensburgh, the average mileage to Bellambi new jetty would be 4.9 miles,—to Kembla, by way of Tom Thumb, 10.3 miles, and to Lake Illawarra shipping place, 19.3 miles. This table of railway distances to the ports demonstrates that to Bellambi seven collieries would come within the 5 mile zone system and the ten within the 10 mile zone. Applied to Kembla port two collieries come within the 5 mile zone, three within the 10 mile zone, four are excluded, but would come within a 20 mile zone. To the lake three are within 15 miles, three within 20 miles, and four within 30 miles. Helensburgh would save 10 miles by shipping at Bellambi, with grades in its favour, 43 feet to the mile for 4 miles, as against 85 to the mile for 3 miles, and 55 feet to the mile also for 3 miles. Therefore coal from Helensburgh could be more economically shipped at Bellambi than at Darling Harbour. Helensburgh could ship more cheaply at Darling Harbour than at Kembla, because, although it would save one mile its headquarters are in Sydney and the difference would not pay supervision at Kembla.

Clause 9 of Mr. Carleton's report informs us that Dr. Robertson is a recognised authority on the southern coalfield, but for all that Mr. Carleton doubts the doctor's statement and says it will require fuller consideration. I agree with Mr. Carleton.

Clause 10 instructs us that the total cost of any scheme for the South Coast Harbour must not exceed £234,375 or say in round figures £235,000.

Clause 11 I will allude to when I explain my scheme for improvements at Bellambi harbour.

Clause 12 gives a comparative statement of cost but, "as the details have not been carefully considered", it should not have been written.

Clause 13 mentions the question of land resumption for harbour purposes which are necessary at either Bellambi or Kembla.

At Bellambi I recommend the resumption of about 370 acres for which I allow £7 10s. per acre. This I believe to be full value. Your Committee will see that this land or rather a great portion of it was at one time laid out as a village, three allotments were sold or given away; this sale binds the survey and the several roads, therefore in all probability £5 per acre might buy the land at Bellambi.

Of the land at Kembla I cannot speak. But I am informed that on this item also the resumption will favour Bellambi.

I will now in the simplest manner possible explain what I think is necessary by way of improvements to make Bellambi a harbour in every way suitable to the coal trade of the south coast. At the same time I will give my reasons for what I advocate. I can assure you that I have spent much time and thought over the matter, every item has been carefully considered, and I place this my statement before you with all integrity of purpose and I can now assure you that my statements are the result of full conviction arrived at after careful thought and full investigation. They are not the result of prejudice, nor are they promoted with any idea of ulterior gain. This work has been a laborious one, which has entailed a great loss of time to me, and more than that I know full well that to a certain extent my professional reputation is at stake, therefore I have all to lose and nothing to gain. In the first place I wish to point out to your Committee that for a coaling station Bellambi requires no artificial shelter from the north-east; this has been the experience of all those who have watched the effect of the wind and sea and who have day by day been at their post of work shipping coal at the jetties. Such being the case no attempt has been made by me in designing work which my own experience and my honest convictions tell me would be a useless and wasteful expenditure.

I advise and provide for, in the first place, the filling in of the channel that divides the main or Bellambi reef. This channel is 700 feet wide about 100 feet of which is about 16 feet deep. It has been contended by some people who have examined this place that the completion of this work alone will have a very beneficial effect on the shipping at the present jetties. I am of that opinion, but that is not the work which I expect it to do. The object of constructing this breakwater, which we will now call breakwater No. 1, is to complete this big reef, which will then form a solid break to the sea, extending 2,500 feet due east. By means of this breakwater which will be constructed with heavy rugged masses of blue metal or basalt to a height of 8 feet above low water, the great destructive force of the heavy southerly seas will be broken and the wave force, which is greatest at low water, will be nearly exhausted when it reaches the deep water on the northern side of this breakwater and reef. The estimated cost of this structure is £16,000.

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Breakwater No. 2.

To the north of the main reef and distant about 1,300 feet I propose to construct what may be termed the harbour breakwater which can be called breakwater No. 2. It will start from a hole in the rock on the east of Bellambi Point, and will follow thence along the shallow water, for a distance of 2,200 feet, in a semi-circular form, what is generally known as part of the inner reef. This structure will be constructed as specified by the Engineer-in-Chief for Harbours and Rivers, and will cost at Government schedule prices £116,880. This breakwater will not be called upon to resist the heavy sea that the proposed Government breakwater would have to contend with. It will, as it were, meet the broken sea from No. 1 breakwater and guide it harmlessly well to the east and north of Bellambi Point, leaving the water within the harbour comparatively free from range or swell. This desired effect would and could not be accomplished by one breakwater alone. This can be easily understood by anyone who has studied the action and movements of the storm waves on this coast. They rush up, as it were, in successive threes, or one, two, and three, the third being the heaviest and most destructive of the three, this is always followed by an extended period of time before the next series, and these waves, unless their form, order, or force is broken before they reach a point on the coast or a breakwater, they, as it were, expend their violence against the point or breakwater; but the bodies of accumulated water run still separated inside of the breakwater or point and take the form of long rollers or a deep heavy swell, which would cause great trouble at times. Hence, the great service expected from breakwater No. 1. It would be the means of ensuring comparatively smooth water inside and to the north-west of breakwater No. 2. The next work would be the erection of No. 1 jetty, 1,050 feet long, and fitted up so as to land a vessel on each side in from 28 to 32 feet of water at low spring tides. It would be a low level top structure from which the coal would be shipped by means of steam or hydraulic cranes two on each side. Waggon on jetty to be worked by endless rope. Estimated cost of jetty has been fixed by that given by the Government for coal shipping jetty at Kempl, would be £24,465; cost of cranes, &c., £4,000; fixing same, £2,000; with roads on jetty, £1,000.

I would advise that 2 miles of siding accommodation be provided at £2,500 per mile. One mile would do for the one jetty at first. A wharfinger's house and light, £1,000; resumption of 370 acres of land, £2,775; resuming South Bulli railway lines, £5,000. I propose the construction of a railway line from the north end of Corral railway station to Bellambi Point, and the resumption of land for same. Also the construction of a loop line from off the main south coast line north of the South Bulli line to join that line, and land for same. These, with due allowance for engineer and supervision, conclude the whole expenditure that would be required for some years. When necessary the No. 2 or outer jetty could be constructed with all appliances. This jetty would be 1,400 feet long and would be able to accommodate four vessels at one time. It would cost £32,620; this, with the second mile of siding, would complete the coal harbour.

The Dock.

Should it at any time be found necessary, and the trade of the district required it, a splendid inner dock could be constructed at Bellambi Creek. I would recommend that a 10-acre dock should be constructed, there is room for one 20 acres, the length of channel from high-water mark would be 1,000 feet. This dock would provide wharf accommodation to the extent of 2,400 feet at its sides, which would have to be timbered, with ballast wall at back.

I will now lay before the Sectional Committee the following estimates of the proposed works:—

BELLAMBI HARBOUR—Breakwater No. 1.

Construction—1st class blue metal or basalt rubble blocks, placed at a batter of $1\frac{1}{2}$ to 1 on the outer slope, and $1\frac{1}{2}$ to 1 on the inner slope; width on top, 30 feet; height of top, 8 feet above low-water mark.

Calculation—2 tons to cubic yard, less $\frac{1}{2}$ for voids; price, 6s. per ton.

Section.	Length.	Depth water low spring tide.	Contents in cubic feet.
1	600 feet	2 feet	270,000
2	500 "	6 "	502,500
3	100 "	16 "	171,000
4	100 "	10 "	129,000
			1,072,500

1,072,500 cubic feet = 40,000 cubic yards @ 2 tons per cubic yard = 80,000 tons - $\frac{1}{2}$ voids = 64,000 @ 5s. £16,000.

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BELLAMBI HARBOUR—Breakwater No. 2.

Construction—1st class rubble sandstone, placed at a batter of $1\frac{1}{2}$ to 1 on the outer slope, and $1\frac{1}{2}$ to 1 on the inner slope; width on top, 16 feet; height of top, 20 feet above low-water mark.

Calculation—1.75 tons to cubic yard, less $\frac{1}{2}$ voids.

Section.	Length.	Depth water low spring tide.	Contents in cubic feet.
1	200 feet	7 feet	286,200
2	700 "	18 "	1,808,800
3	400 "	15 "	896,000
4	300 "	21 "	825,600
5	200 "	22 $\frac{1}{2}$ "	638,400
6	200 "	27 "	760,400
7	200 "	33 "	943,400
8	100 "	42 "	682,000
9	100 "	42 "	731,600
[10	Slope at end	42 "	416,710
			7,889,100

7,889,100 cubic feet = 292,200 cubic yards @ 1.75 tons per cubic yard = 511,350 tons - $\frac{1}{2}$ voids = 408,675 tons @ 5s. = £102,169.

If calculated @ 2 tons per cubic yard would equal 467,520 tons @ 5s. = £116,880.

Note.—Section 8 averages 24 feet on top, section 9 averages 32 feet on top.

New Zealand prices from 2s. 2d. to 4s. 8d.

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BELLAMBI

BELLAMBI HARBOUR.

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Estimated cost of complete harbour affording loading accommodation for four of the largest cargo vessels in from 28 to 45 feet of water at low-water spring tides, and also for vessels of smaller draught at the same time.

<i>First expenditure.</i>		£
Breakwater No. 1		16,000
" No. 2		116,880
Jetty No. 1, 1,050 feet		24,465
Four 20-ton steam cranes		4,000
Fixing		2,000
Roads on jetty		1,000
Wharfinger's house and light		1,000
1 mile siding		2,500
Resumming 370 acres		2,775
" South Bulli railway lines		5,000
" land for loop north side of South Bulli		100
" land for line, Corrimal to Bellambi		100
Construction of loop-line		750
" Corrimal line		2,500
Engineer and supervision		2,000

To which must be added—

<i>Second expenditure.</i>		
Jetty No. 2, 1,400 feet		32,620
Four 20-ton steam cranes		4,000
Fixing steam cranes		2,000
Roads on jetty		1,000
1 mile siding		2,500
		£223,190

Construction of Inner Dock, to be formed 30 feet deep at low-water spring tides; area, 10 acres; channel, from high-water mark, 1,000 feet by 200 feet:—

<i>Cost of excavation.</i>		
10 acres, at £1,452 per acre		14,520
Channel		726
2,400-feet timber wharf		20,016
Entrance, from 30 feet soundings to high water		14,738
Ballast wall		5,000
		55,000
Total cost of dock		55,000
" coal harbour		223,190
		£278,190

207. Your plan shows that you intend to connect the outlying reef at Bellambi with the mainland by means of breakwater No. 1? Yes.
208. You believe that that is necessary for the protection of the Bellambi jetty which lies north-west of it? I believe it will be beneficial to the shipping.
209. Would it be beneficial in easterly weather? There is no easterly weather of any importance. We have north-easterly winds and south-easterly winds; but we have no easterly weather that interferes with our shipping.
210. You say that the northern end of your proposed main breakwater lies approximately east of the seaward end of the Bellambi jetty? Yes.
211. Do you consider that sufficient protection from easterly weather? Yes, for the whole bay.
212. Although the entrance of your proposed dock is north-west of the end of your breakwater, you consider that the breakwater is sufficient protection for easterly weather? I do.
213. In the event of the construction of the breakwater in a position different from that shown by the Department, will there be sufficient shelter for large vessels coming there to load coal? It would not be safe for a great number; it would be for a few such as we expect the trade of the district to bring.
214. How many? Half a dozen sailing vessels could lie safely within the breakwater as proposed by us.
215. But no sailing vessel could lie safely behind an eastern breakwater at Port Kembla? I do not say that at all. I believe Kembla to have a better holding ground, and it will no doubt be a good port; but it will cost a great deal, and one breakwater will not make still water. It will not be perfectly still water even with both breakwaters, but it will be better than it would be with only one breakwater.
216. Would Bellambi be a better port than Kembla? Yes; my reason for saying so is that the water will be broken up by the southern breakwater.
217. What experience have you had in coal-mining? None until I came into this district.
218. What experience have you had since? I have had experience in several mines.
219. Have you been in charge of the mines? No; I have been visiting engineer and surveyor.
220. What evidence have you about coal-mines? There is a prospect of the Kiera, the Mount Pleasant, and the Kembla Companies amalgamating to work their properties as one mine, coming out near the mouth of the Mount Pleasant pit.
221. Where did you hear that? I have had papers through my hands in connection with it. If it is carried out that will bring them nearer to Bellambi.

Mr. Michael O'Brien, Wollongong, sworn, and examined:—

Mr.
M. O'Brien.
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222. *Chairman.*] Are you a resident of Wollongong? Yes; I have been here about nineteen years.
223. *Mr. Hassall.*] Have you any knowledge of this proposal now under consideration? Yes. My interest lies in Wollongong, but I cannot get away from the fact that Kembla is the place for a harbour. It is well protected. It is protected from the northerly winds, and it is equally protected from the south-westerly winds. It is protected from the southerly winds. The south-easterly wind interferes with it, but if a harbour were formed it would be broken water. Outside there is a reef which runs from the big island—it is called the Bomborah. It runs north to the little island, and is between 700 and 800 yards long. Then there is another island outside that—one is north and the other north-east from Port Kembla. A little island runs about north and south-east, and all the north-east wind is broken by it.

224. That is what you call the little island? Yes; the big reef runs from the south-east point of that which is under water.

225. Does that run across to the big island? It runs to the outer island, then from that island outside there is another reef which runs west-north-west. But the sea that comes down from the north-east expends itself pretty well upon Tom Thumb Creek, and that is a mile away from Kemplā. The actual sea which they have to put up with at Kemplā from the south-east is not a heavy sea at the jetties; it is broken when it comes in. I suppose there is no better anchorage than they have at Port Kemplā: the bottom is composed of clay, black sand, and gravel. Of course it is a very good place for ships which go there now for protection. Some years ago a steamer called the "Hunter" came to the islands for refuge, and she lay there until the gale was over. It is a great drawback to the Illawarra district not having a good harbour, because under the existing state of things the insurance companies will not allow shipowners to send their vessels here.

226. Have any of the residents in this district taken shares in the Illawarra company's venture? I could not say.

227. Do you think there is any prospect of that work being carried out? It is doubtful.

228. Do you think it will necessitate a very large expenditure? Yes; no doubt it would. I think it would be a great mistake to lease an inch of water frontage at Kemplā: it will be very valuable by-and-bye. A breakwater could be carried from the Flat Rock to the reef, and from the reef to the island in an average of about 4 fathoms of water.

229. What is the distance from the shore to the reef? To the Flat Rock it is about half a mile.

230. Then from the Flat Rock, when you get on to the reef, how far is it from the island? About a mile, with 4 fathoms of water.

231. Have you any knowledge of Bellambi Harbour? Not much.

232. Do you know how many days in twelve months it would be impossible to load coal at Port Kemplā jetties under present conditions? Very few days. I have seen them loading there in very heavy weather.

233. Practically, they can load there all the year round? Yes; except when the weather is very bad.

234. I suppose on the average they would be able to load there 350 days out of the 365? They load pretty regularly. It is very seldom that they are unable to load there.

235. So that a little additional protection would be sufficient to enable them to load there in any weather? Yes.

236. Judging from your remarks you think there is no necessity for the northern breakwater? It is not required.

237. Is the land about there private or Government land? There is some Government land.

238. If the Government propose to spend money there to make a harbour, will it not be advisable to resume the land before commencing operations? I think they should. It will become very valuable there, because as soon as the breakwater is built foreign companies will come in and bring smelting works there.

239. Alongside of Port Kemplā? Yes; they have the coal there.

240. Do you think, in view of the smelting works already erected at Lake Illawarra, that others will be erected at Port Kemplā? Decidedly.

241. Supposing that the supply of ore ran out? There are millions of tons at Noumea.

242. In the event of land being resumed at Port Kemplā, do you think the Government could recoup themselves by the sale of that land for any large portion of the outlay incurred in constructing a harbour? It would be a good investment no doubt.

243. Do you think the Government would be justified under present circumstances in spending £300,000 or £400,000 in this work? I do.

244. Do you think that the trade of the district warrants it? I do, because there is a great demand here for coal for coking and smelting works.

245. But in the event of the colliery proprietors using their own jetties to save shipping charges or harbour dues, do you think that the money expended in constructing a harbour at Port Kemplā would return interest on the amount? I think so.

246. You think that the colliery proprietors would use the harbour instead of their present jetty? Yes.

247. In any weather? In all weathers. It is very expensive to keep those jetties going.

248. Do you expect an increase in the over-sea trade if the harbour is constructed? Yes. Vessels would come here if there were sufficient protection for them.

249. *Chairman.*] Did you ever see any easterly seas here? Yes; the easterly seas are our heavy seas.

250. Will an easterly sea go into Bellambi Bay? It must go in there; there is nothing to keep it out.

251. *Mr. Lee*] Do you know Kemplā Point and Bellambi Point? Yes.

252. Does Kemplā Point lie east or west of Bellambi Point, or which projects furthest towards the east? I think Bellambi Point does, but there is very little difference.

253. Then if an easterly sea would run in and come round the proposed Kemplā breakwater, would it not do exactly the same with a breakwater made at Bellambi? Decidedly it would.

Mr. Samuel Kemish, Wollongong, sworn, and examined:—

254. *Chairman.*] What are you? A retired teacher, resident at Wollongong.

255. What information have you to give the Committee? What I have seen from Berkely Heights during thirteen years' residence there.

256. *Mr. Farnell.*] Will you explain what you refer to? I lived there from November, 1878, to April, 1892, as a teacher. The position of Berkely Public School is about the most favourable for viewing Port Kemplā Harbour of any point in the whole district of Illawarra. It is within 2 miles of the coast and affords a full view of the bay.

257. You have had an opportunity of judging of the effects of the weather on the coast? Yes. I was there in some severe storms. I saw six steamers come to Port Kemplā through stress of weather. They dropped anchor and were there for many hours.

258. From what weather does that point afford protection? From south-east weather chiefly, but also from easterly weather. It is only exposed to the north-east wind, but I have never seen the north-east winds really dangerous.

259. You have had an opportunity of investigating the proposal to construct a harbour at Port Kemplā as well as the rival proposals? Yes.

Mr.
M. O'Brien.

18 Jan., 1897.

Mr.
S. Kemish.

18 Jan., 1897.

Mr.
S. Kemish.
18 Jan., 1897.

260. What is the conclusion you have come to? That the Port Kembla scheme is by far the best. I think it would be best to confine the expenditure to the eastern breakwater and not to resume any more land than would be absolutely necessary for the railway.
261. Do you think that by the establishment of a new harbour at Port Kembla the trade of the Port of Wollongong would be interfered with? Yes. In my opinion Wollongong could not be a port for large steamers.
262. Do you think that the trade which is done at Wollongong will be diverted? Not the present trade.
263. Do you think it is likely that the output of coal will be increased and that some of the collieries that are at present using Wollongong harbour will use Port Kembla? I do. When going to England on the "Ormuz" I asked the officers why they did not come to Port Kembla and load there where there is 46 feet of water at the end of the jetty. The answer was that they would be only too glad to do so but that there were no appliances there to do the work. They said that by loading there they would save ten days. I became acquainted with the Japanese Commissioners to the Exhibition of 1878, and they said, "You come from Wollongong; we are told that there are two sorts of coal in New South Wales—the Newcastle coal and the Wollongong coal; which is the best?" I said for household purposes Newcastle coal is the best, but for steam purposes Wollongong coal is the best. They said, "That is what we want. We want to bring out a cargo of our goods, and take back your coal." That was before the Japanese had learnt to work their own mines scientifically.
264. Supposing that the harbour was constructed at Lake Illawarra by private enterprise which would afford the same facilities as could be afforded at Port Kembla, would you be prepared to support a scheme like that instead of the expenditure of £400,000 at Port Kembla? Certainly not. I do not think that that scheme can be carried out. What is wanted is a harbour for large steamers, one which they could come into in any weather. Such a harbour could be made at Port Kembla, but not at Lake Illawarra. I have been all over the district many times, and I do not see how they could make an entrance to that lake which would admit large steamers.
265. Do you think there is any probability of the Illawarra company proceeding with the work at an early date? I do not.
266. Is that the general impression of the district? It is. When I first heard of that scheme I put it down to a desire to sell a certain amount of land. If that land had been sold they would not have cared for anything else.
267. You think their idea was a speculative one? I do.
268. Considering the whole question from a national standpoint, do you think that the country would be justified in constructing a harbour at Port Kembla? I do.

Mr. William Osborne, auctioneer, Wollongong, sworn, and examined:—

Mr.
W. Osborne.
18 Jan., 1897.

269. *Mr. Roberts.*] How long have you resided at Wollongong? All my life.
270. Have you any interest in the coal trade? None.
271. Are you familiar with the different schemes that have been put forward for providing harbour accommodation? No.
272. Do you feel qualified to give an opinion upon the scheme now under consideration? I believe Port Kembla to be the best site for a harbour on this coast. Over forty years ago an English sailing vessel lay for over a week in Port Kembla in a south-east storm, and I have seen other vessels lie under the lee at one of the islands for days in bad weather. I think there is no other place between Sydney and Jervis Bay where a vessel could lie during a south-easterly storm.
273. Even in its present state you regard it as a safe harbour of refuge which could be greatly improved by the construction of that eastern breakwater? Yes.
274. Have you ever visited Kembla? Yes.
275. Are you acquainted with Bellambi Bay? Yes.
276. Having a knowledge of those places you think that Port Kembla would be the best for a harbour? I do.

Mr. David John Stewart, journalist, Wollongong, sworn, and examined:—

Mr. D. J.
Stewart.
18 Jan., 1897.

277. *Mr. Fegan.*] What do you wish to tell the Committee? Only that while following my vocation I have frequently visited Port Kembla on the occasions of the visits of unusually large vessels, such as the "Indrani," the "Ormidale," and the "Sonnesbergh," vessels of from 5,000 to 8,000 tons burden. I have interviewed the captains and officers of those vessels, and in every instance I have been assured of their entire satisfaction with Port Kembla as far as the depth of the water and the anchorage are concerned. They stated that the natural features of Port Kembla were excellent, and they believe that by the construction of breakwaters the harbour could be made into a first-class port of refuge.
278. Easy of access? Yes. It is believed that the construction of a suitable harbour there would lead to a great increase in the export trade, and in support of that statement I may mention that about two years ago I received from Egypt a letter, which came addressed to the *Mercury* Office from a firm of shipping merchants named Souter & Co., who stated that they had seen some reference to Illawarra coal in an extract from the *Illawarra Mercury*, and that they believed there was a splendid market for coal of that quality in Egypt if it could be landed at Suez.
279. Did they know anything about the port? They asked if we would lay that letter before some of the coal-shipping authorities here. I handed it to the Southern Coal-owners' Association. Two of the members of that association thought that the freight would be too great a handicap to allow them to take advantage of that market. The construction of a harbour at Port Kembla, however, will enable them to place the coal in the markets of the world at a substantial reduction.
280. It is believed that the cost of shipping and transshipping amounts to something like 3s. 6d. a ton at present, besides heavy insurance? Yes.
281. Do you think that the construction of the northern breakwater would be an impediment to vessels leaving the port? I would rather not express an opinion on that.
282. Do you know anything about Bellambi? Yes.
283. Have you heard any remarks made by captains of ships in reference to that harbour? Yes; I have heard some of the captains say that Port Kembla was infinitely superior to Bellambi.

284. I understand that you have taken notes of the expressions of those officers? I went to Port Kembla when vessels arrived of unusually large size. I never went to Bellambi to interview captains.

285. But if there were vessels there you would have a chat with the officers? Not at Bellambi, but I have met some of them at Kembla. Mr. D. J. Stewart.
18 Jan., 1897.

286. You would hear their opinion of the place whether favourable or otherwise? I have never heard any of the captains express the opinion that Bellambi was as good a harbour as Port Kembla.

287. But you have heard them say that Port Kembla was a superior harbour to Bellambi? Yes.

WEDNESDAY, 20 JANUARY, 1897.

[The Sectional Committee met at Lake Illawarra.]

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.
The Hon. CHARLES JAMES ROBERTS, C.M.G.
The Hon. DANIEL O'CONNOR.
HENRY CLARKE, Esq.
CHARLES ALFRED LEE, Esq.

JOHN LIONEL FEGAN, Esq.
THOMAS HENRY HASSALL, Esq.
GEORGE BLACK, Esq.
FRANCIS AUGUSTUS WRIGHT, Esq.
FRANK FARNELL, Esq.

The Sectional Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

Mr. Austin Joseph O'Grady, commission agent and auctioneer, Dapto, sworn, and examined:—

288. *Chairman.*] You have a statement to make? Yes. North of Dapto certain people held a meeting, and those people professed to represent the whole of the Illawarra district. I desire, as representing Dapto, to emphasise the fact that the people at that meeting did not represent the whole of the Illawarra district. I am informed that there is not the name of one person who resides south of Unanderra on the committee which was formed. The names of certain persons at Unanderra were placed on the list by accident because they happened to be at Wollongong when the deputation was going to Sydney. Furthermore, it was thought by a majority of those present at the meeting that Lake Illawarra was the natural and the best site for a harbour for the southern coast. Resolutions were carried confirming that a number of witnesses were appointed to give evidence before the Public Works Committee in favour of the construction of a harbour at Lake Illawarra instead of at Port Kembla, and claiming that this is the most central port on the south coast. I will not detain the Committee by trying to describe the advantages which the lake possesses. You have seen them all to-day. Anybody who has ever seen the lake will consider that nature has intended it for a harbour. Mr. A. J. O'Grady.
20 Jan., 1897.

Mr. William R. Atkinson, Dapto, sworn, and examined:—

289. *Chairman.*] What are you? I am a resident of Dapto.

290. Have you been long a resident of Dapto? Yes; ever since I was a boy.

291. What information do you desire to lay before the Committee? I desire to describe Lake Illawarra as it really is, not as it is represented by some of the witnesses. I happened to be employed by the first surveyor that took sections of Lake Illawarra seven or eight years ago. I was employed with Mr. Baber who, I think, was working for Harper and Harper. We took soundings from Tallawera Point down to the entrance to the channel, and we found the average depth of the water to be from 10 feet 6 inches to 11 feet 6 inches. For about 3 miles in the centre it hardly varied at all. We also took soundings from Tallawera Point to Kanahooka Point and found the soundings to be the same. From Kanahooka Point to the eastern entrance it was the same. Afterwards, we sounded the mud, and immediately off the point, I suppose half a dozen boat lengths, we sounded with a pole, but we could not find the bottom of the mud. I cannot say exactly the depth which we went on that side. We crossed to the western entrance to the channel, near Codgerie Island, and we found the depth there to be 30 feet and we put a bar down 30 feet in the mud. Mr. W. R. Atkinson.
20 Jan., 1897.

292. There are a few feet of water and then mud? Yes. The depth that we went down through water and mud opposite Tallawera Point was certainly not less than 20 feet. I desire also to emphasise the evidence given by the previous witness to the effect that the agitation in favour of Port Kembla was not an agitation from the whole of the Illawarra district. The people to the south of Unanderra still believe that Lake Illawarra is the proper place at which to make a harbour. Speaking as a non-professional man, I do not feel qualified to give an opinion in reference to the coal south of Kembla; but it is quite clear that if coal is discovered south of Kembla, Lake Illawarra will be the most central situation for a harbour for the coal trade.

293. Is there any other point to which you wish to refer? I desire to inform the Committee that I have seen the coal got south of Kembla burning satisfactorily in various places. It is used in local factories for generating steam. They use it at the creameries.

Mr. George Henry Blakemore, Manager, Smelting Company of Australia (Limited), sworn, and examined:—

293½. *Chairman.*] What has been your expenditure here up to date? About £70,000.

294. What do you anticipate expending before completing your plant? About £120,000.

295. How long will it be before the scheme is completed? About four months longer.

296. We will say from four to six months? Yes.

297. What amount of coal is it reasonable to suppose you would use when the works are in full swing? Between 50,000 and 60,000 tons a year. With our present smelting plant about 65,000 tons of ore.

298. Then it appears probable that these works, in the near future, will bring 120,000 tons of freight in ore and coal per annum? Yes.

- Mr. G. H. Blakemore.
10 Jan., 1897.
299. You say that you have expended £70,000 up to the present time;—within what period has that amount been expended? We commenced in November, 1895.
300. Then your expenditure has been within the last twelve months? Yes.
301. Your railway freight from here to Sydney will be how much? 2s. 4½d. per ton on ore.
302. Approximately, from the estimate, the cost of all—coal and ore—is at ½d. per ton per mile? Yes, for ore.
303. Well, what is it for coal? The coal costs 1s. 4½d. per ton to Dapto station from Corrimal. We deal with the Southern Coal-owners' Association; but I believe it is from Corrimal that the coal comes.
304. What is the distance? About 10 miles. If we carry up to 200,000 tons of coal a year the Railway Commissioners will give us a reduction of 25 per cent. Our present rate is 1½d. per ton per mile for coal.
305. If it is possible to have your ore delivered in one instance from vessels close to your works, and in another instance at a distance more remote, it would cost you ½d. a ton for every extra mile of haulage? Yes.
306. What portion of that ore will come by sea, and what portion will come by rail? About 50 per cent. of it will come by sea.
307. And 30,000 tons would come by land? Yes.
308. Therefore any error in the location of your work means 30,000 half-pennies per ton per mile on the ore? Yes.
309. Mr. Lee.] Do you intend to treat ore for the public? Yes; ours are public smelting works.
310. It is a question for the producer as to how he will send the ore. He can send it by any route he thinks proper? Yes, if he pays the rates.
311. Mr. Wright.] I suppose that ore coming from the north or from the west the journey would not be broken? No; I do not think it would pay us to load it into ships at Sydney. It would be quicker for us to get it by rail.
312. Mr. Roberts.] Do you get your coal from Dapto Creek? I think it comes from Corrimal. We deal with the Southern Coalowners' Association.
313. Mr. Wright.] Have you any contract with them? Only a verbal agreement with Mr. Evans.
314. Chairman.] You get your coal where it pays you the best? Yes.
315. Mr. Lee.] Then you have no coal mines of your own? We hold a lease of the Ocean colliery which belongs to the Illawarra Harbour and Land Corporation.
316. Mr. Wright.] How far is that from your works? By rail it is 6 miles from here.
317. Mr. Roberts.] Would not the Dapto Creek coal be nearer for you? The Ocean colliery is closest to us.
318. Have you formed any opinion of the quality of the Ocean colliery coal for smelting purposes? We have not opened up the colliery in the way in which a colliery ought to be opened up. From what we have seen of the coal up to the present it is not satisfactory. We want to get further into the coal before we open it up to any great extent.
319. Do you consider that the coal north of the Ocean colliery is better adapted for smelting purposes? The coal of this district resolves itself into a question of ash. If we had a coal here which carried as low a percentage of ash as the coal in the northern part of the district it would be satisfactory. It depends upon the amount of fixed carbon as against the quantity of ash. This coal averages about 16 per cent. of ash.
320. Chairman.] Unless the quality of the coal improves you will not use it? Not if it cost the same as the northern coal.
321. Mr. Wright.] It must have 50 per cent. of fixed carbon, and not more than 12 per cent. of ash to be suitable? It is a matter of price against ash.
322. But the prices being equal, would you use coal having more than 12 per cent. of ash and less than a certain percentage of fixed carbon to save a shilling a ton? No.

THURSDAY, 21 JANUARY, 1897.

[The Sectional Committee met at the Council Chambers, Nowra, at 1 p.m.]

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. CHARLES JAMES ROBERTS, C.M.G.

The Hon. DANIEL O'CONNOR.

HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.

JOHN LIONEL FEGAN, Esq.

THOMAS HENRY HASSALL, Esq.

GEORGE BLACK, Esq.

FRANCIS AUGUSTUS WRIGHT, Esq.

FRANK FARNELL, Esq.

The Sectional Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

Mr. James Wilson, storekeeper and grazier, Bellawangarah, sworn, and examined:—

- Mr. J. Wilson.
21 Jan., 1897.
323. Chairman.] What are you? Storekeeper and grazier.
324. Where do you live? At Bellawangarah.
325. You are virtually a Berry man? Yes.
326. What have you to tell us that you believe would induce the Committee to come to the conclusion that we ought to make a port at Jervis Bay? First, there is a quantity of coal up Broger's Creek.
327. There is a quantity of coal that lies on the other side of the mountain from Berry? Yes; there is a seam 8 feet thick. Then there is a band of ironstone or sandstone, and another seam about 7 feet thick. The place is called "Madman's Gully." I went to view this coal. Unfortunately heavy rain came on, and it got dark, and we were unable to get from the gully that night. On the occasion to which I refer there were out about 7 tons of coal. We put 2 or 3 tons of it on the fire, and in the morning we found that the coal had burnt to a beautiful white ash, which made it clear to me that the coal was suitable for commercial purposes.

purposes. Professor Taylor, and Mr. Scott, an expert, were with me. I am of opinion that probably shale will be found in that vicinity. On one occasion I visited the site in company with an expert, and found a seam some 6 feet thick, which unfortunately, on being tested, did not prove quite good enough for commercial purposes. I also visited Broughton Vale and Wood Hill with Mr. Wilkinson, Geological Surveyor, and Mr. Martin, and we found seams of coal 7 feet or 8 feet thick, which appeared to have bands in them. The experts expressed the opinion that a couple of hundred feet back the seams to which I have referred would probably contain good coal. There is also in that vicinity a kind of clay suitable for making pottery. A sample of this clay has obtained Departmental approval. I am also of opinion that lime would be found in quantities at Wood Hill. In Broger's Creek there are large quantities of ironstone which must have come from the higher level. But I have not been able to locate the place of their origin. Professor Taylor told me that the seams to which I have referred in Broger's Creek cropped up also in Kangaroo Valley, from which I infer that the seam is continuous. There is in existence some igneous rock and also some intrusion of porphyry. The coal shows again on the south side of Kangaroo Valley, right under the sandstone cap; then it shows again in the Cambewarra Mountains and west from Jervis Bay towards Braidwood.

Mr.
J. Wilson.
21 Jan., 1897.

328. *Mr. Wright.*] How far away is Madman's Gully? I suppose it will be about 18 miles.

329. That is where the coal outcrop is? Yes.

330. Due west? North-west.

331. *Chairman.*] In general terms west from the bay and approximately between there and Braidwood? Yes. Some of this last information is to some extent hearsay. Some of the outcrops I have never seen myself but I have seen some coal which I have no reason to doubt comes from them.

332. You desire to inform the Committee there that the presence of coal, shale, clay, limestone, and iron, contiguous to Berry and westward of the bay gives it importance, and it would be a valuable thing to have these deposits worked, and you think that if a port were made up the bay there is a probability of this being done? Yes.

333. Have you anything further to say? I think further that with opportunities of access the attractions of Jervis Bay and St. George's Basin would bring many tourists to those places.

334. You say that you regard St. George's Basin and Jervis Bay as being unrivalled as pleasure resorts? Yes. If I had £20,000 and a railway was made to Jervis Bay I would speculate at St. George's Basin.

335. *Mr. Lee.*] How long have you been residing in the district? Forty years.

336. On which side of the river is Broger's Creek? On the northern side.

337. And Madman's Gully? On the northern side.

338. Is Madman's Gully any distance from the creek? It is one and the same.

339. Have you any assays of the coal that you obtained? I think that Mr. Wilkinson gives them in his report.

340. Are you aware that within the last month samples of coal have been obtained in these localities and analysed, and that the coal has been found quite unfit for commercial purposes? I am not.

341. Are you aware that the coal out of the 2-ft. 9-in. seam in Broger's Creek contains nearly 43½ per cent. of ash? I am not aware of it.

342. You know only of the existence of coal there? And professional men have reported to that effect.

343. You have no technical information to give to the Committee as to the quality of the coal? Nothing but the white ash.

344. Supposing that the coal beds did continue so far south, and there was a large quantity for exportation, why are you so desirous of having it exported from Jervis Bay? I have no interests whatever in Jervis Bay.

345. I want to know why you are so anxious to have Jervis Bay improved to make it a port of exportation? It is closer to the Melbourne market for one thing.

346. Is not Jervis Bay a good harbour at present? Yes, a good natural harbour.

347. Does it not admit the men-o-war? Yes.

348. And would it not admit steam and sailing vessels? Yes.

348½. What would support it unless something were done to make it a commercial port? The general trade of the district.

349. Is there not sufficient water and a good entrance in all weathers? Yes; it is a harbour of refuge.

350. And the only one on the southern coast after leaving Sydney? Yes.

351. Could Jervis Bay in its natural state be used as a port for the export of coal? Yes.

352. What improvements are required there? The railway should be extended to Jervis Bay.

353. You do not suggest that anything should be done to the entrance? I think not. What you would require would be a jetty to ship coal from.

354. If there were jetties at Jervis Bay vessels of ordinary size could lie there in any weather? Yes.

355. What you wish to impress upon the Committee is that no improvement is required at the port of Jervis Bay? Nothing more than jetties.

356. If the coal were conveyed to Jervis Bay it could be shipped from there? Yes.

357. Before you could get the coal there a railway would have to be made from those alleged coalfields to the bay? If the main line were continued to the bay then the coal companies would make feeders to join the main line.

358. Is not the bay south of Bomaderry? Yes.

359. Would it not require a railway then? We should want a bridge across the river first.

360. You mean that it would require a connection between any coalfields with the main line, and that that must be extended to Jervis Bay? Yes.

361. The line must of necessity cross the Shoalhaven River. I believe that money has been granted to make a line to Jervis Bay.

362. When you say that money was voted for the construction of a line to the bay you mean that it was included in a general scheme passed by Parliament some years ago? Yes.

363. Are you of opinion that the coal-beds in the localities you have alluded to are of sufficient importance to justify the country in going to the great cost of extending the railway to Jervis Bay? I should think so, but I am not an expert.

364. But not one of those coal-beds has been worked? No; it would be impossible to work them without a line of railways. There is no road to get the stuff away.

365. How far is Broger's Creek from the main line? About 3½ miles.

366.

- Mr. J. Wilson.
21 Jan., 1897.
366. If these coal-beds were of any commercial value, do you not think that they would be of sufficient local demand to keep one pit going? We have too much firewood at present.
367. But do not steamers come here? They get their coal in Sydney.
368. Would they not get the bulk of the coal for steaming purposes from a pit near the line? It would take a lot of money to get it. No doubt if a line were made to Jervis Bay mails would be landed there, and ships would get coal there.
369. Do you think it would be wise on the part of the State to make a railway to Jervis Bay before those coal beds had been proved? I should not like to see the State lose by it.
370. Would you do it? I would to a certain extent.
371. Would you make a railway to Jervis Bay? I should say the State should make all these railways.
372. Do you think it would be wise on the part of the State to construct a railway to Jervis Bay and carry out improvements there before those coal measures have been proved? They will not be worked until there is a line to the bay.
373. But it must be proved? Professor Taylor believes in the coal.
374. You think that a railway should be made to Jervis Bay, and that certain improvements should be carried out there to facilitate shipping; but you are not prepared to say that there would be anything to carry if the line was made? Nothing except from the development of the mines.
375. Would it not be wiser to see whether the coal really exists there? The thing is quite feasible.
376. Would you be surprised to hear that the Government Geologist differs entirely from you? I should not wonder.
377. Are you of the opinion that coal of a commercial value does not exist south of Kembla? There are some fine seams between Kembla and Jamberoo.
378. But it is of such inferior quality that it would not find a market? I do not think that the Kangaroo Valley coal has been submitted to analysis.
379. If a railway were made to Jervis Bay, and coal of commercial value were proved not to exist there, what would be the position of that extension? There is a good deal of splendid timber-ironbark, which would be useful for piles, &c.
380. Is there anything else that would tend to make it a paying line? There is a kind of sandstone. You can cut pillars out of it 10 or 15 feet long. You can get as much out of a round boulder as would build a house.
381. Do you think that the whole of the local trade would go by Jervis Bay? I think it would.
382. What does the local trade consist of? At present butter is the principal thing.
383. How many tons a week would be exported from this district? About 35 tons from one of the creameries, and from some of the others, 10 or 15 tons.
384. How many tons of butter a week do you think would be sent from the creamery? I do not know which way they would send it.
385. Would there be 100 tons? No, there would be 50 or 60 tons.
386. What else would go? If improvements were carried out, there is no doubt many people from Sydney would visit St. George's Basin.
387. You are not prepared to say what would be the traffic from the district to the bay? No.
388. You do not know whether a railway would pay anything on the outlay? No.
389. The question is whether there should be a port on the southern coast, principally for the transport of coal? Yes.
390. If Jervis Bay were adopted, do you think it would be practicable for the coal-owners, between Kembla and Clifton, to send their coal to Jervis Bay to be shipped? That would depend upon the cost of haulage.
391. Your view is purely a local one? Yes.
392. You think that if the work were carried out, it would be a good thing to look for the coal afterwards? Yes.
393. *Mr. Roberts.*] What is the distance from Sydney to Nowra? I think it would be about 92 miles by railway.
394. What is the distance from the present terminus to Jervis Bay? I think about 12 miles.
395. The distance from Wollongong to Sydney is 48 miles by railway, and the distance from Wollongong to Jervis Bay would therefore be 56 miles, would it not? Yes.
396. Do you think it likely that the coal-owners at Wollongong will send their coal to Jervis Bay for shipment to Sydney when they are within 48 miles of the metropolis? If the coal was going to Melbourne it would save a considerable distance;—it would save seamen's wages and the time of the ship.
397. What advantage would accrue to the general community by the construction of a railway to Jervis Bay to make that a port of shipment for coal? We have timber, fishing, oyster-gathering, and a great many other things. It is a splendid harbour for fish and oysters.
398. You know the country well between here and Sydney? Yes.
399. What are the wants of the coal-trading community? They want a better harbour.
400. Do you approve of a harbour being made at Port Kembla? Yes.
401. You do not appear here as an opponent to that scheme? No; I am not opposed to it.
402. You do not appear here to prove to the Committee that instead of spending money at Port Kembla, it would be better to spend money in making a railway from the present terminus to Jervis Bay? That is a necessity, and as the money has been voted the Government are breaking their word with the public in not carrying out the work; they ought to extend the line to Jervis Bay.
403. *Mr. Black.*] You do not think that if the railway were extended to Jervis Bay and coal staiths were erected there, the coal-owners north of Wollongong would bring their coal to Jervis Bay for shipment? I think they would if they were sending it to Melbourne. They would probably send their coal to Sydney.
404. If Jervis Bay is to have any coal trade it must be from the development of coal as yet unworked in its vicinity? Yes. And the coal from Mount Kembla now going to Melbourne would go to Jervis Bay.
405. Do not you think that knowing of the existence of such a splendid natural port as Jervis Bay, men who have developed the coal in the north, where the harbours are dangerous in rough weather would lay out their capital in the vicinity of Jervis Bay if the coal there was as good as the coal further north? Yes; but these seams further south have been found out lately.
406. You still adhere to the idea that the coal recently discovered here is equal to that further north? Yes; but I am not an expert.

407. The question is one as to providing a port which will be easy of access for minerals which will not bear long land carriage? Well, how is it in Canada; there they ship coal thousands of miles and across lakes for 10s. a ton.
408. A charge of 10s. a ton would be prohibitory;—I gather from your answers to Mr. Roberts that there is no desire to prevent the improvement of other harbours elsewhere? Not as far as I am concerned.
409. But you desire to bring Jervis Bay into notice? Decidedly.
410. It would be essential, before the Committee could report favourably on Jervis Bay, to be in possession of such definite evidence that we should be sure that the money spent at Jervis Bay would not be thrown away? I do not think it would be.
411. *Mr. Fegan.*] I think your great object in giving evidence here is to get a railway to Jervis Bay? Yes.
412. If you got the railway you would not trouble about wharfs or jetties? No.
413. Therefore the great point in your evidence to-day is that if you were to make a harbour at Jervis Bay you must get a railway there? Yes.
414. How many years is it since you and Professor Taylor went to examine that coalfield? Ten or twelve years.
415. At that time some of the mines had been opened up, had they not? Yes.
416. What is the thickness of the seams at Broger's Creek? 8 feet and 7 feet. There is a band between them. One is steam coal and the other is household coal.
417. What is the thickness of the band? About 15 inches.
418. Is there only one band dividing those two seams? There are some very small bands.
419. Who owns that property? It is Crown land.
420. Have you heard of anyone trying to get hold of that property? No; but I heard that Sir Henry Parkes intended to secure it. I believe he had some explorers out.
421. Have you any property there? No.
422. Therefore you came here as a witness, believing that certain facilities can be given at Jervis Bay at a small cost? Yes.
423. The chief object of your evidence is to get a railway made from the terminus to Jervis Bay? Yes.
424. *Mr. Clarke.*] Independent of any probability of coal being shipped, do you consider that any other produce in the district would go to Jervis Bay? Yes; if maize was a good price in Melbourne it would go there, and Ulladulla people would come and ship there. There is a district north of Milton which would send live stock and other perishable goods for shipment.
425. You think that some 60 tons of butter a week would be exported? I said that about that quantity was manufactured in that district, but I do not know where it would be sent to.
426. Do you think it probable that produce would go from the Shoalhaven district to Jervis Bay when you have a railway at your door and two steamers on the river? I do not think it would.
427. Is it not a fact that all the heavy goods going to Sydney go by steamer? A great deal of heavy stuff goes by train. There is very little maize grown in the district; it is a dairying district.
428. Do goods from Sydney come by rail or by steamer? A good deal comes by rail as well as by steamer.
429. You state that about half of the heavy goods come by steamer? Yes.
430. Then what inducement is there to extend the railway to Jervis Bay? Only the Melbourne market.
431. What kind of country is it between Nowra and the bay? Timber country and grazing country.
432. You have stated that there is not likely to be much freight besides the dairy produce, and that it is not likely to increase much? The district grows good fruit, and the production of fruit will increase.

Mr. Louis M'Intyre, farmer, Nowra, sworn, and examined:—

433. *Chairman.*] What are you? A farmer.
434. *Mr. Lee.*] How long have you been living in the district? Forty-two years.
435. How far from Nowra do you reside? About 8 miles.
436. Have you got a general knowledge of the whole country round? I have seen a very large portion of it.
437. What reasons would you like to give in support of the adoption of Jervis Bay as a port for the southern district? The reasons which I would give have been well stated by Mr. Wilson. We want a shipping-port for coal and other produce.
438. For what coal? The coal from the mountains; there are large deposits of coal here, which I believe are a continuation of the Bulli seam.
439. But if scientific men say that it is not so? They have a better knowledge of it than I have.
440. It is generally known that coal does exist? We can see it.
441. In the event of payable coal being found in this locality it could be shipped from Jervis Bay if a short railway were made to the bay? That would hardly be complete unless it was connected with the present main line at Bomaderry.
442. Supposing that coal were found on the southern side of the river, what necessity would there be to continue the main line? No coal is found on the southern side of the river. A seam has been found at Jervis Bay.
443. If coal is found here, and it has to be shipped, that can be done by extending the main line to Jervis Bay? I could not favour anything but the extension of the present line; nothing else would be satisfactory. The land between here and Jervis Bay is well suited for growing fruit.
444. Does Jervis Bay require any improvement upon it? I am not prepared to say what improvement Jervis Bay would require. It does require improvement, but it is one of the best harbours in the Colony.
445. Would it require a breakwater? I believe it would.
446. For what purpose? I could not go into that.
447. Cannot the shipping enter at any time? Yes.
448. Then why would it require a breakwater? It might require one to improve it. I have seen vessels come in there during a great storm in perfect safety and anchor there. My reason for advocating Jervis Bay is that it is one of the best natural harbours you could find, and it would open up a large trade with the other colonies.

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Mr.
L. M'Intyre.
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- Mr. L. McIntyre.
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449. Your evidence is that if a railway were made to Jervis Bay, and wharfs and jetties were erected, it would be used as a harbour? Yes.
450. You do not mean to say that coal from Illawarra would be taken to Jervis Bay? I do not know whether it would be. I believe that some coal from Illawarra would be taken to Jervis Bay.
451. Do not you see that the distance from Illawarra to Sydney is shorter by rail? In sending the coal to Sydney they have to deal with a much steeper grade than they would have from Illawarra to Jervis Bay.
452. Do you think it probable that they would send the coal a longer distance by rail to Jervis Bay, tranship it to steamers, and then send it round to Sydney? Sydney does not consume the whole of the coal. Jervis Bay would be nearer to Sydney than Melbourne.
453. The greater portion of the southern coal trade appears to be done by colliers, the coal being transhipped at Sydney, where there are conveniences which we could not have at Jervis Bay;—under those circumstances do you consider that the coal would be brought to Jervis Bay to be sent to Sydney? I do not.
454. You are aware that the great ocean-going steamers make Sydney their port of destination, and whilst they are taking in cargo they are being coaled by colliers alongside? Yes.
455. I suppose that the extension of the railway across the river would be a very expensive matter? Of course getting across the river would be an expensive item, but it would not be a very expensive line to make between the river and Jervis Bay.
456. If the railway were extended to Jervis Bay I suppose the residents of this district would feel pretty well satisfied? Yes. I am well aware that they are very dissatisfied with the present state of things.
457. Under these conditions they have no objection to offer to Port Kembla being made their harbour? I do not think they have.
458. Have you any thing else to say? I believe that if a harbour were made at Jervis Bay, and the railway extended to it, it would open up a large trade with the other colonies, and it would become a very important port. If the seams of coal in the vicinity of Jervis Bay prove as valuable as we hope they are we may make it a second Newcastle.
459. Do you not think it would be as well to test those coal-seams first of all? Yes; I was not aware that the coal was of an inferior quality.
460. I suppose it is the general wish here to see the railway extended to the bay? Yes; I think that all the people in the district believe that we ought to open a harbour at the bay.

Mr. John Maclean, newspaper proprietor, Nowra, sworn, and examined:—

- Mr. J. Maclean.
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461. *Chairman.*] What are you? Newspaper proprietor.
462. How long have you been resident in the district? Eighteen years.
463. You are conversant with the resources of the district? Yes.
464. Have you any knowledge of the proposal to construct a deep-water harbour at Port Kembla? Only from what I have seen in the newspapers.
465. Are you of opinion that Jervis Bay would be a more suitable place for a harbour than Port Kembla? I am of opinion that Jervis Bay would be the most economical for us as taxpayers.
466. Will you give the reasons for your opinion? I have read that the complete scheme for a deep-water harbour at Port Kembla will cost £440,000. I am under the impression however that a complete scheme would exceed a cost of £1,000,000.
467. The scheme under the consideration at present is not to cost more than £440,000? I put it in this way. The distance from the present terminus of the railway at Bomaderry, as sworn to by engineers of Departments before your Committee, is 1 mile and 70 chains, and that it would cost to make the line, including the bridge across the Shoalhaven River, £75,000. Then there is a distance of 14 miles from Nowra to Jervis Bay at £3,000 per mile; that makes £117,000, not speaking of the piers or anything of that kind which would possibly be the work of the company that would get the foreshore from the Government. I put that against the £400,000, and I say that, in round numbers, there is a saving to the taxpayers of £200,000. Then I look at this fact—that the line from Sydney to Nowra is already £52,000 a year in debit, as regards interest. I disavow any personal interest whatever in the matter. I have no land at Jervis Bay. Looking at the relative cost of the two schemes, and especially at the loss of £52,000 a year on the existing railways, I ask whether the construction of parallel competing lines of traffic, by making ports in the Illawarra district, will not involve the taxpayers in further loss, instead of helping to reduce the deficit. Will not creating greater facilities for shipping between Jervis Bay and Sydney decrease the traffic on the railway between here and Sydney, and increase that debit instead of reducing it;—is it the business of the State to spend money to increase the value of private property while decreasing the value of the State property. I say, although I am not an expert, that the increase of harbour accommodation between here and Sydney must decrease the traffic upon the railway. Ships come down here loaded below their Plimsoll mark now owing to our having the river. If it was not for the river the railway would have the whole of the traffic. I am told that the same thing occurs at Wollongong. The railway gets only the up freight. I see that there would be an area of about 260 acres in the harbour of Port Kembla for an expenditure of £400,000, but in Jervis Bay, the natural inheritance not only of this district but of the State, there is an area of 26,000 acres. At Jervis Bay there is that area of absolutely safe harbour, which has been testified to by Admiralty officers. I say further it is a statutory obligation on the part of the Crown both to the taxpayers here and to our bond-holders in London to complete the railway to Jervis Bay. The very first petition for this came from Wollongong, at the very inception of the movement in favour of the south coast railway in 1876. There was a great deal of contention about the matter in the Assembly when the first Bill was brought in by the late S. W. Gray to provide for the connection of the "deep waters of Port Jackson with the deep waters of Jervis Bay". The proposed line as first submitted to the Assembly in Sydney and to the stockholders was to be a line from Sydney to Jervis Bay. When a few of us from here asked for some deviation which it was thought necessary, when the people of Wollongong asked that the line might be deviated into Wollongong, they were informed that this was not a line of railway for Wollongong, Kiama, or Nowra, but a line from Sydney to Jervis Bay. I have no doubt that if the Appropriation Act was looked into it would

would be found that the line provided for was a line from Kiama to Jervis Bay, and there is a further instalment of £800,000 put on the estimates of 1891 for this line. I believe that on that occasion the phraseology used in the Appropriation Act was Sydney to Jervis Bay. The Sydney to Kiama line was passed in March, 1879, and it was in 1891 that the subsequent portion was agreed to. I pointed out that there is an obligation on the part of the Government to complete the line to Jervis Bay. Not long ago the proposed extension across the river was submitted to the Public Works Committee, who recommended the extension of the line into Nowra. It is the bogie of the bridge that has scared the Commissioners into leaving the line 2 miles out of town and putting an additional charge of 5 per cent. on freights from Bomaderry to the township. The construction of this extension has been submitted to four Committees and approved, and when money was borrowed it was contemplated that a connection would be made between Port Jackson and Jervis Bay. That is the scheme as originally submitted. Some of the coal-owners have stated that if the line were extended to Jervis Bay the coal-owners about Wollongong would decline to ship their coal at Jervis Bay. I take it that the objection to Jervis Bay is a freight objection, the Commissioners charges being 2d. per ton per mile for loads of not less than 150 tons. 468. The charge for minerals is $\frac{3}{4}$ d. per ton per mile? I have here a copy of the *Sydney Morning Herald*, dated 4th June, 1894, which gives several particulars of an interview with Sir Thomas McIlwraith after his visit to America. According to Sir Thomas McIlwraith there has been a revolution in railway management in America, and if his statement is correct they manage to make mineral traffic pay at very much lower rates than are charged in this country. Under the heading of "Canadian Railway Management," Sir Thomas McIlwraith says:—

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On being informed that a recent cable message had conveyed the news that he had been able to do nothing with respect to land-grant railways, and also that there was some divergence of opinion in the Ministerial party, and even among Ministers themselves, as to the railway policy of the future, Sir Thomas said that it was true that he had declined to give his London interviewers information on the subject, but he had nevertheless been actively engaged in prosecuting inquiries in both America and London. His conferences with the leading Canadian railway men had been a revelation even to him. He found that on one line goods were profitably carried long distances at the rate of a farthing, and a profit of one-eighth of a penny per ton per mile; while on another the accounts showed a profit of 25 per cent. with a rate of a farthing per ton per mile. The secret he found to be the avoidance of steep gradients. On the Great Trunk line the ruling gradient even across the Rocky Mountains was 1 in 120, while the curves were not by any means sharp. Level roads meant big loads with a minimum expenditure of power, while low rates meant a big business. In one case mineral ore was moved in large quantities over 1,000 miles of railway, then transhipped into steamers and carried across the lake, and finally sold at its destination for 10s. 6d. per ton.

Sir Thomas McIlwraith makes this significant remark:—

The railway managers never doubt the possibility of so developing the traffic as to make a line pay, for every district or section of the country possesses the potentialities of profitable traffic, and only needs development by skilful management, influenced by enlightened self-interest

There is a probability of Jervis Bay being a more suitable coal harbour in the end than Wollongong. Then they have Crenorne, Moorfield, and other places where coal exists. Moorbank, which is the property of the Church of England, has a 6-ft. seam. These properties are going to be developed, so that the northern districts will fairly supply the metropolis, and Wollongong will have to look southwards for a market. In the race for the Melbourne market by the utilisation of Jervis Bay there would be a saving of 360 miles at sea, comparing the distances between Newcastle and Wollongong. I say that there is a probability that Sydney will cease to be a market for Illawarra coal, considering the possibilities of the metropolitan district. The gradient on the railway from Wollongong to Sydney is 1 in 40, and on that grade the hauling power of a locomotive would be from 360 to 80 tons. A number of people who have discussed the matter in the *Sydney Morning Herald* have shown that freights similar to those mentioned by Sir Thomas McIlwraith are common in the United States, and that the lines are paying.

469. Do you think it probable that ocean-going ships would come and load coal at Jervis Bay when they can bring out a cargo to this country and take in coal at Newcastle? I have given that slight consideration. The distance from Point Perpendicular to Sydney Heads is 60 miles, and I think it is the same distance from Sydney to Nobbys. It would therefore become a question of the quality of the coal. If a ship came from Frisco with wheat or flour she would discharge at Sydney, and in returning to Frisco she would be on her way back on going to Jervis Bay, and she could be sailed into the bay, where she could take her coal if there is not a preference to Newcastle coal. If I were a skipper and could get my cargo 60 miles nearer my destination in a safe harbour, I should give that harbour the preference.

470. You are aware that the colliers load at the various jetties and take their coal south? Yes.

471. The question arises whether the colliery proprietors of the Illawarra district would make use of a railway and port so far distant from their present scene of operations, when they possess facilities for shipping which can always be availed of in fairly good weather? That involves the question whether any expenditure at all is necessary in providing further harbour accommodation. I admit that if there is not the contemplation of a large extra traffic there would be no necessity for further accommodation. I would not say that a profit would result immediately from the construction of a harbour at Jervis Bay. I only take it as the lesser of two evils—the spending of £440,000 at Port Kembla or the spending of a certain sum in railway extension—which has become a statutory obligation. Some years ago I went to Melbourne, entrusted by certain trustees with the sale of the Coalcliff property. I met leading Victorian coal-owners and I found that there was a very serious objection to purchasing a coal property at Wollongong, owing to the want of a harbour. Owing to that I did not succeed in disposing of the Coalcliff property at the time. From what I understand from the boring which has taken place and the prospectuses which have gone out, developments of the coal supply must take place which will shut out the southern coal trade from the Sydney market. I say that they must go southward. It is to a great extent a question of grades. To-morrow there will be a gentleman here who will show that between here and Jervis Bay the gradients will be such that they will not be so expensive in haulage as the grades on other portions of the railway. Therefore the question of cost of traction to the Wollongong coal-owners ought not to be so serious a matter after all.

472. With regard to the collieries in the southern district, do you think that the distance from those collieries will prevent a very large trade from being done? I do not think that the Wollongong coal-owners could send their coal at the existing rates. The existing trade is an intermittent one, and I would not contend that it would be transferred to Jervis Bay.

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473. The Bellambi people want a harbour, and they say that if the harbour is constructed at Kembla they will not use it. The Port Kembla people might say that they would not use a harbour at Jervis Bay; therefore, any attempt to concentrate the coal trade to Jervis Bay might not be a very profitable undertaking? I do not think that the present trade can be got away from where it is. The steamers suit the trade, and they are Wollongong people who are carrying on the business. If large vessels are coming in, the answer of the taxpayer ought to be that we have a harbour ready, and that we can freight the coal at a rate that will pay, and that instead of spending £440,000 in making a harbour in the Illawarra district we will spend £150,000 in making a line to Jervis Bay.

474. Then your opinion is that if the Government intend to spend a large sum of money in the construction of a harbour on the south coast, the requirements of the trade can be met by the extension of the railway to Jervis Bay? That is it.

475. At a less cost to the taxpayer, and at a reasonable profit? Yes; and with a reasonable probability of decreasing the enormous loss upon the existing south coast railway. I should like to emphasise the fact that the more harbours we make parallel with the railway, the more we shall increase the debit in connection with the existing lines. We ought to look to that, especially in the face of the fact that it is said that private enterprise will open up Lake Illawarra.

476. Would your knowledge of Jervis Bay enable you to say that it will not be necessary to spend money on it to make a harbour? There is an average depth of 10 fathoms of water. I have been there in all weathers, and I think you can get the officers in charge of the naval station to give their opinion upon it. I believe that they will report favourably with regard to Jervis Bay as a harbour. It is looked upon as a harbour of refuge, and vessels are constantly going there in bad weather.

477. Is there any difficulty in getting out? There is an opening of 2 miles in width. There is no fear of missing stays.

478. The only expenditure necessary to make it a valuable harbour would be in the construction of the proposed railway? Yes.

479. *Mr. Black.*] One of your arguments was that all the coal-owners north of Kembla might send their coal as cheaply by rail or by small steamers to Jervis Bay as to Sydney to coal ocean-going steamers? I said that if the line was extended to Jervis Bay, vessels could come in light ballast to the bay and take in coal there instead of going to Newcastle. I referred to the grain boats which are now carrying corn to Sydney from San Francisco and elsewhere.

480. You say that if these ocean-going steamers go to Jervis Bay for coal, they would have the advantage of being further on their way; but would they not have the expenses of double pilotage and double harbour dues? It costs 3s. 6d. a ton to lighter coal to Sydney. I have not said I would lighter it, but it would be preferable to carry it by rail if we could get the freights which Sir Thomas M'Ilwraith spoke of.

481. Do you think they could carry the coal cheaper to Jervis Bay than to Sydney? In the case to which I have referred they have to go into decimal fractions to find out the freight. If we have got to an irreducible minimum in freight there is no more to be said.

482. The southern coal trade is not now done with large ocean steamers, and the desire of the coal-owners is to provide a harbour which would not be objected to by the insurance companies? I undertake to say that not one of those vessels would leave their berths in Sydney if you had any number of harbours.

483. Do you think that those boats would come and coal at Jervis Bay or that the coal-owners north of Port Kembla would send their coal to Jervis Bay to load the vessels? At one hatch they are discharging and at another they are taking in coal at the same time. Time is money, and they cannot go to two harbours.

484. Do you not see that if the improvement of Port Kembla or Jervis Bay will not attract those boats any expenditure by Government would be thrown away? If those boats did the whole of the coal-carrying that theory would be correct, but there is a large number of ships carrying merchandise from all parts of the world which do not go back in ballast, but, in preference, go back in coal. There is plenty of coal on the south coast, and we often see that the collieries are only working half-time, or even less.

485. If the colliery proprietors declared that they could not use Port Kembla as a harbour, and preferred to continue to use their present jetties, is it not obvious that such a harbour as you desire at Jervis Bay would not supply the wants of the coal-owners? I have only contended for Jervis Bay line as part of a contemplated scheme. We could not expect 120 miles of railway to carry more cheaply to Sydney than a harbour alongside of it.

486. We are considering whether Jervis Bay would be a better harbour than Port Kembla? I have never contended that the Orient boats should not go to Port Kembla.

487. Your argument is that the grades being better between Port Kembla and Jervis Bay the coal-owners would prefer to send their coal to Jervis Bay than to lighter it to Sydney? The Orient boats and all the large ships cannot afford, on account of the great cost, to go anywhere for coal except where they are discharging and receiving cargo.

488. You say that the grades on the railway between Sydney and Kembla being very steep coal-owners would prefer to send their coal to Jervis Bay rather than send it to Sydney? I did not say that. Wollongong people say we want a deep-water harbour for the shipping. I say that as taxpayers we cannot entertain that. I say that if we are going to have a traffic which is not at present in existence we ought to complete the 17 miles of railway to Jervis Bay at a cost of £117,000 instead of spending £440,000 to make a fresh harbour at Port Kembla.

489. I want you to show that those people will use the harbour at Jervis Bay? I do not say that they will use it; we have their evidence that they will not because their harbours already are sufficient for their present shipping.

490. If they will not use it, why should the Government spend money in connection with Jervis Bay? We do not desire that the Government should spend money at Jervis Bay. Wollongong says we cannot let our coal trade expand for want of a deep-water harbour, and the Government say it will cost £410,000 to make such a harbour. Then the Public Works Committee is asked to say whether it is desirable to spend that amount of money, and whether a harbour could be provided at a less cost, and we are here to say that if it is true that a deep-water harbour is required such a harbour can be provided at Jervis Bay for half the proposed cost of Port Kembla.

491. *Mr. Farnell.*] You think that the Government would be as much justified in spending money at Jervis Bay as at Wollongong? Yes.

492. Until that development which they speak about takes place, you say that there is no justification for the expenditure of the great amount of money which the proposed new harbour will cost? That is it in a nutshell.

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493. As regards Jervis Bay, can you tell us during what portion of the year Jervis Bay would be available for shipping coal? It is available at all seasons and in all weathers. There is no sea there that would cause inconvenience to a ship of large tonnage, but there might be sufficient to give you a wetting in a small boat.

494. During three-quarters of the year you think that Jervis Bay would be available for shipping? Oh, yes; right through the year. There is a distance of 9 miles from the offing, which is sheltered by Bowen Island, to the west side of the bay. It contains from 8 to 10 fathoms of water, and has good holding-ground.

Mr. O. J. Beckett, orchardist, Falls Creek, sworn, and examined:—

495. *Chairman.*] What are you? Fruitgrower. I live at Falls Creek, 7 miles from here, on the road to Jervis Bay.

Mr.
O. J. Beckett.
21 Jan., 1897.

496. How long have you been there? Ten years.

497. *Mr. Clarke.*] Can you give any statement as to how the public would benefit by the construction of a railway from Bomaderry to Jervis Bay? I wish to corroborate what has been said by Mr. Maclean; and I wish to add that there are thousands of acres of land in the Jervis Bay district suitable for growing fruit and for vineyards. It is some of the best land in the Colony for that purpose. The Government in 1882 sent Mr. Bernard to the Bordeaux Wine Exhibition, and his advice was that no large vineyards should be planted in the Colony outside the sea air. There are thousands of acres of land there that will produce as fine a fruit as I now produce here. That fruit has been grown on land which ten years ago was standing forests. The Minister for Agriculture is trying to develop an export trade. Why should not the Government encourage the occupation of all these thousands of acres of land. You can grow very fine fruit out there, but it is impossible to send it to market. According to Mr. Bernard, large vineyards should not be planted outside the influence of the sea air, and to give a light wine the vines should be planted in a soil containing 60 per cent. of sand, and you need never fear the phylloxera. There are thousands of acres of Crown lands of that kind in the Jervis Bay district for anybody to occupy. They ought to make a railway down there, reserve the Crown lands, and then gradually sell them out, taking care not to let syndicates get the best of it. It would not take a great amount of money to clear the land, and in a few years' time we should have hundreds and hundreds of people employed there. That would make Jervis Bay go ahead as a shipping-port.

498. Is the land between here and Jervis Bay suitable for any other purpose than fruit-growing? Principally for fruit-growing and vineyards.

499. What sort of a grazing country is it? It is a fair grazing country, but I look forward to seeing it an immense fruit and wine-growing district.

500. You say that you are only about 7 miles from Nowra? Yes; 7 miles from Nowra, and 5 miles from Jervis Bay.

501. Could you not avail yourself of the present modes of communication with Sydney? If fruit is carried 7 or 8 miles over a rough road it would be destroyed.

Mr. George Underwood Alley, farmer and grazier, Sassafras, sworn, and examined:—

502. *Chairman.*] What are you? Farmer and grazier.

503. Where do you live? Thirty miles south-west of Nowra.

504. *Mr. Earnell.*] Have you considered the proposal placed before the Committee to construct a harbour on the south coast? Yes, I have given it some consideration.

505. Have you a knowledge of Jervis Bay? Yes.

506. How have you gained that knowledge? I have been at the bay several times, and I can see it from my own door. From my own place I can see war-vessels there at practice.

507. Did you hear the evidence of Mr. Maclean? Yes.

508. Do you agree with that in the main? Yes; I quite agree that Jervis Bay is a good harbour, and could be made a great help to the district.

509. Is there any additional information which you would care to give the Committee in reference to the construction of a harbour on the south coast? I cannot give any evidence as to the necessity for a harbour on the south coast, but I can say that if Jervis Bay was a harbour for ocean-going vessels it is very likely that the coal-measures in our district would be developed. There are large coal-seams about 3 miles from my house.

510. Do you not think that the best course would be to ascertain the permanence of those deposits before constructing a railway and forming a harbour? They have been tested. Shafts have been put down, and the coal has been analysed, and I understand that it is a very good coal. There is a large deposit of shale as well. I have not tested it all the way down, but I have tested it over half-a-mile.

511. Your contention is then that a natural harbour exists at Jervis Bay, and that there is no necessity to spend a large amount of money in making a harbour at Port Kembla? Yes.

512. *Mr. Lee.*] How far would that coal be from Jervis Bay in a direct line? About 20 miles.

513. Will you explain how the expense of the railway from Nowra to Jervis Bay would develop the coal properties you have spoken of? If there was wharfage accommodation, and vessels came into Jervis Bay, there is no doubt that the parties owning the coal-land would make a railway from the coal-field to the bay, so as to ship the coal there.

514. Could it not be done at present? There is no wharfage accommodation where vessels could be loaded. You have Jervis Bay, the finest harbour on the coast.

515. Is it not the custom for all colliery proprietors, when they have payable seams of coal, to construct their own railways and erect their own jetties? Possibly.

516. Have they not done so in many cases? I dare say they have where the mines were very close to the water's edge, but these coal-seams were some distance away.

517. If there was a payable seam of coal at Jervis Bay, do you not think that private enterprise would make a railway for shipping purposes? I can hardly say whether it would or not.

Mr.
G. U. Alley.
21 Jan., 1897.

Mr. Jacob Elmoose, fisherman, Sussex Inlet, sworn, and examined:—

- Mr. J. Elmoose.
21 Jan., 1897.
518. *Chairman.*] What are you? I am a fisherman, residing at Sussex Inlet, about 25 miles from here, and south of Jervis Bay about 10 miles.
519. *Mr. Wright.*] Can you point out any benefits that would result from the construction of a railway to Jervis Bay? It would benefit the fishing industry, which it is impossible to carry on in the summer time. That would go a long way towards paying the interest on the outlay.
520. How many tons of fish would you send to Sydney in a day? I could not send many; but the railway coming there would develop the industry. Jervis Bay has the best fishing-grounds about there.
521. Do you think that if a railway was made more fish would be caught? Yes; they cannot get their fish to market in the summer time.
522. Can you give us any idea how many tons of fish would be sent away in a year? During the last six months I have sent away 700 boxes.
523. What is the weight of a box? Three-quarters of a hundredweight.
524. Where do you catch them? I catch them in St. George's Basin.
525. Can you tell us of any other benefit that is likely to accrue from the construction of a railway to Jervis Bay? No.
526. Do you think the country would be taken up by settlers? Yes, it would. It is all Government land at the back of where I live.
527. You think that a railway would induce a large population to settle there? Yes.

Mr. James Thomas Jones, cattle-dealer, Nowra, sworn, and examined:—

- Mr. J. T. Jones.
21 Jan., 1897.
528. *Chairman.*] What are you? A cattle-dealer.
529. Where do you live? At Nowra. I desire to inform the Committee why Nowra people ask them to come here. Their motive is a patriotic one. It was thought that if a large sum of money was to be spent in the construction of a harbour we ought to advocate the making of a railway between Bomaderry and Jervis Bay. That would be a better thing than to make a harbour at Port Kembla.
530. *Mr. Roberts.*] Have you any further statement to make? Yes; I consider that if a south-coast harbour is required, nature has provided one at Jervis Bay already. The cost of making a harbour at Port Kembla would be very great, and the thing might ultimately prove to be a white elephant. The harbour at Port Kembla will be constructed for the coal proprietors—one class of the community. I consider that it is wrong to spend money on a class. We want a harbour at Jervis Bay for the export of coal and for many other purposes as well. We want it to open up the country for miles around Jervis Bay. A gentleman has stated in his evidence that the district in the vicinity of Jervis Bay is a fruit-growing district. I have been living in the Jervis Bay district for nine years. I took up land there on the understanding that the Government were going to construct a railway right through to Jervis Bay; but they deceived me. I tried fruit-growing, and I proved that the land is very suitable, especially for grapes. There is a large tract of country south of Jervis Bay—between there and Berryherrie River. It is on a short neck between the lake and the sea. That country would more than pay the Government for all the cost of constructing a railway from Bomaderry to Jervis Bay. I think there are over 40,000 acres there of the best land to be found in Australia for growing fruit, especially grapes. If a railway was constructed I do not mean to say that the trade would go by the railway; there is no doubt that the produce would be shipped away, but the railway would have the effect of settling people on the land, and the Government would gain by that. The Crown would be able to sell the land at a good price and it would bring in more money than it would cost to construct the railway from the present terminus to Jervis Bay. As you have already been told we have coal-measures in the district all the way from Jamberoo to the Sassafras Mountain. The Jamberoo coal has been tested and according to reports it is one of the best seams in the Colony. I heard a gentleman remark that there was no coal of any commercial value south of Port Kembla. I spent nearly eighteen years of my life in coal-mines. I have prospected a good deal in New South Wales, and I was proprietor of the Singleton coal-mine at one time. I prospected that coal, and I sent a truck to the Government to try, the result being that it was 5 per cent. better than any other coal in New South Wales. I got a contract to supply the railways, and since then I have come and settled in this district. I find that there is an exactly corresponding seam of coal, as regards quality, close to Jervis Bay. A seam of coal, the like of which they have not got at Wollongong and Kembla. They have nothing that could stand alongside of it. I have a knowledge of coal, and I say that that coal is better than the Wollongong coal. I do not want you to make the railway line because we have got coal, if you have not the money to spend; but you should not go and build an artificial harbour on the coast when we have such a magnificent natural harbour at Jervis Bay, close at hand. We have in the neighbourhood of Jervis Bay a tract of land which has been crying out for a railway from Nerriga to Braidwood. The people of that district have long been wanting a railway for the carriage of their produce. It is 132 miles from Sydney to Goulburn. It is 51 miles from Goulburn into the town of Braidwood. That makes 183 miles. By taking a railway from Jervis Bay to Braidwood, you reach Braidwood by going a distance of 67 miles, therefore you save 116 miles in reaching a shipping port. You save 116 miles of a haulage by railway, which should be a great consideration for both the Government and the people of this country. That country is offering the Government a very fair thing for making a line. The principal part of that country, right through from Nerriga to Braidwood, is Crown lands. That land would all be taken up by settlers if they had a railway connecting Jervis Bay with the deep-waters of Port Jackson.
531. *Chairman.*] Are you aware that the coal-owners will have to pay so much a ton at Port Kembla in shipping coal? They can ship the coal at their own jetties, and if you make a harbour at Port Kembla, I do not know that there is any guarantee that they would give you the whole of the coal trade. From a national point of view we want a railway connection with Jervis Bay. It is required for defence purposes. It is important to New South Wales, and to Australia at large, to have Jervis Bay connected with Sydney by railway. Another reason is this, that we know that Jervis Bay will be a permanent harbour. Science is going ahead by leaps and bounds, and at present there are ships building that would not be able, with safety, to enter Sydney Harbour. A railway to Jervis Bay would improve the fishing business. We would urge you, whether you build a railway to Jervis Bay or not, not to make a harbour at Port Kembla.

SATURDAY, 23 JANUARY, 1897.

[The Sectional Committee met at the Council Chambers, Nowra, at 10 a.m.]

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).	
The Hon. CHARLES JAMES ROBERTS, C.M.G.	JOHN LIONEL FEGAN, Esq.
The Hon. DANIEL O'CONNOR.	THOMAS HENRY HASSALL, Esq.
HENRY CLARKE, Esq.	GEORGE BLACK, Esq.
CHARLES ALFRED LEE, Esq.	FRANK FARNELL, Esq.

The Sectional Committee further considered the proposed Construction of a Deep-water Harbour at Port Kembla.

Mr. Christopher Graham, Mayor of Nowra, sworn, and examined:—

532. *Chairman.*] What are you? Mayor of Nowra.

533. Do you desire to make a statement? Yes. Having heard that the Government had been requested to construct a deep-water harbour at Port Kembla, and that the matter had been referred to this Committee for report, it occurred to certain taxpayers of this town, myself amongst the number, that it would be well to direct your attention to the fact that we have a good harbour at Jervis Bay, and that the Government had already constructed a railway for the purpose of promoting the coal trade at an enormous cost to the taxpayers of the Colony, and I believe at a loss, too. Such being the case, it is my opinion that the better way to promote the coal trade, and the safest way for the taxpayers, would be to complete the railway from the deep-water at Port Jackson to Jervis Bay; that it would be better in the interests of all concerned for the Government to carry the coal at a low freight to Jervis Bay or Port Jackson than to go to the great cost of constructing a harbour at Port Kembla, with the off-chance of being able to collect sufficient harbour dues to pay the interest on the outlay. It is my opinion that coal delivered at Port Jackson would command a much higher price than at Port Kembla,—that in point of fact coal delivered either at Jervis Bay or Port Jackson would command a higher price and would pay the producer and the Government better than it would be likely to do at Port Kembla. The Government would have no guarantee from the mine-owners at Port Kembla that they would receive sufficient in harbour dues to pay the interest on the expenditure. Although you may tell me that the harbour will cost, to start with, £200,000 or £300,000, my opinion is that if you spend that amount you will end by spending half a million, or perhaps more, before the scheme is complete. I cannot see that you have any guarantee that that scheme will pay better than the one already started, that is the railway scheme which was commenced at the instigation of those coalmine-owners on the understanding that they would support it and that it would pay. Now they want to drop the railway, and they want the Government to construct a harbour at Port Kembla to promote the coal trade. I do not know what they will want next; but I say that I think it will be an injury to the country to undertake the construction of that harbour. I do not think it will ever be a safe harbour, even if you go to an expenditure upon it of £440,000. I do not think it will ever be equal to Port Jackson or Jervis Bay. If the railway is extended to Jervis Bay there is a prospect of increased freight from the line. At the present time the people of this town are bringing metal from Kiama, but we have to pay more for carting it from Bomaderry than we have to pay for getting it from Kiama to Bomaderry. If the railway were constructed the whole of the distance there would be a better chance for the line to pay than there is at present.

534. *Mr. Roberts.*] Have you an intimate knowledge of the coal trade? Not beyond this, that large steamers, such as the mail steamers, would not be likely to put into Port Kembla for coal if they could get it at Port Jackson.

535. Are you not aware that large steamers up to 7,000 tons burden occasionally call in at Port Kembla? I am not aware of that. I think it would have to be very calm weather.

536. You will admit that if a breakwater were constructed to protect Port Kembla visits of large ships from foreign ports would be more frequent? Such a thing might be; but I cannot see why those large seagoing vessels which bring cargo to Sydney should not prefer to coal in Sydney harbour even if they had to pay a higher price for the coal.

537. Would it not be a great advantage for these steamers to be able to get the coal almost at the pit's mouth instead of having it put into colliers and taken to Sydney to be transhipped? The better way would be to have it delivered from the railway on to the vessel—to have it carried to Sydney in a collier and then transhipped is an expensive process.

538. Will not the construction of a harbour at Port Kembla facilitate the shipment of coal and tend to still further develop the resources of the district? I have very great doubt about it. I have no great confidence in the progress of the coal-mines in that direction. The coal-owners are divided amongst themselves as to where they will ship the coal. Some advocate Bellambi, and others Port Kembla.

539. Do you think the best place to bring the coal to would be to Jervis Bay? I think it would be as good for the company to deliver the coal at either Jervis Bay or Port Jackson. If the Port Kembla scheme is carried out it will cost the Government about £17,000 a year, and that money would be better spent in conveying the coal by railway to Sydney. I am not an interested person except as a taxpayer.

540. You will admit that it would be better to take the coal to Port Jackson than to Jervis Bay? Yes; and I think it could be taken by railway, and that that would be better than incurring this large outlay at Port Kembla.

541. Have you ever been to Newcastle? No.

542. Do you not think that similar assistance ought to be given to the coal-owners in the south to that which has been given to the coal-owners in the north? I think that when they have got the railways they have got a very large item in the way of assistance; they have not been neglected.

543. You have heard of the great improvements which have been made at Newcastle? I am aware that a great deal has been spent there, and I would not mind if the Government spent a little here too, to promote trade; but I do not want them to do anything that will not pay.

544. Are you aware that the coal that is obtained from the southern collieries is different from that got from the Newcastle collieries;—the southern coal being steam coal, and the northern coal household coal? I have heard so.

545.

Mr.
C. Graham.
23 Jan., 1897.

Mr.
C. Graham.
23 Jan., 1897.

545. And there will be a considerable demand for southern coal if it can be delivered at a lower price, which the Committee are told can be done if a breakwater is constructed at Port Kembla. In view of that do you think it would be a wise thing to provide a harbour there? I will admit that there should be a harbour on the south coast if the harbour dues would not make the coal almost as dear as it would be at Port Jackson. I think I am safe in saying that the coal commands a higher price at Port Jackson than it would at Port Kembla and it could be delivered there more cheaply.

546. If you are shown that the probable revenue from the shipping at Port Kembla would pay the interest on the expenditure would you take a more favourable view of the proposal? If it would pay the interest on the outlay and at the same time the coal could be delivered as cheaply as it can be delivered now there would be something in your contention. In an undertaking of this kind I think everyone must see that the coal-mines depend a great deal upon the whims of the men employed in working them. The men may strike at any time and leave the mines idle for six months; how would your harbour pay then.

547. We expect that there would be an increase in the trade, but as a taxpayer you seem to regard the proposed expenditure as a waste of public money? I look upon it as a very risky undertaking. The Government have been constructing harbour works at Wollongong and other places on the coast during the last thirty years and the whole of the outlay has been to a great extent a failure.

548. Do you urge upon the Committee the desirableness of constructing a railway to Jervis Bay? I do.

549. Upon what grounds? Because it will give the proprietors of the coal-mines along the coast further south than Kembla a chance to ship their coal. I believe that there is good coal to be found south of Kembla.

550. In view of the possibility of the discovery of coal in this district, do you think the railway should be extended to Jervis Bay? The Government should complete their railway scheme before they enter on any new undertaking.

551. Would it be a great advantage if the railway came into the town of Nowra? It would give a better return.

552. Do you think that the Government lose a large amount of revenue through the terminus remaining where it is? I do think so; it costs a great deal to carry goods by water, which, if the railway came into the town, would probably be carried by rail.

553. Can you send your goods to Sydney at a lower rate by steamer than you can by rail? I am not sure that I can. I am paying in many cases on goods coming from Sydney 5 per cent. on the amount of the invoice. That is very high, and I think the railway should be able to carry the goods for that figure.

554. You would, of course, send your goods by the cheaper route? If we had a railway into the town, I do not think that the steamers would continue to come here.

555. Would they not lower their freight? I do not think so.

556. Do you think that no time ought to be lost in bringing the railway into the centre of the town? Yes, if the railway is to pay.

557. *Mr. Black.*] You said the Government have no guarantee that sufficient harbour dues will be received at Port Kembla to pay interest on the outlay in the construction of the harbour? That is my opinion.

558. What guarantee would the Government have, if they went to the expense of constructing a harbour at Jervis Bay and connecting it with the railway, that the returns would compensate for that expenditure? The extension of the railway to Jervis Bay would involve a cost to the Government of £3,000 or £3,500 a year.

559. Interest on the money expended? Yes. I think I am safe in saying that the Government would probably receive half that amount from the business people of this town, and that they would get still more revenue from Tomerong and other places further south.

560. Do you think that the construction of a harbour at Jervis Bay would meet the requirements of the coal owners north of Nowra? I think that coal would be opened up in the vicinity of Berry.

561. Do you think that the work we desire to have done at Jervis Bay would meet the alleged necessities of the coal owners north of Nowra who are asking for a harbour on the south coast? I think it is what they are justly entitled to.

562. Would they use it? I think they would.

563. Do you tell me that anyone who could send coal from Wollongong to Sydney, 42 miles, having it then alongside of the vessel, would prefer to send it to Jervis Bay where it would have to be transhipped to go to Sydney? I do not think that.

564. Then you cannot contend that the mine owners on the southern coast would use Jervis Bay as a harbour at all? No, except in some cases. There would be no certainty that they would.

565. If they wanted to get coal sent to Sydney they would not send it to Jervis Bay to be transhipped to Sydney and have the cost of double handling? I cannot say that mine-owners at Port Kembla would send coal to Jervis Bay. It is my opinion that vessels coming from Melbourne would be likely to get their coal at Jervis Bay at the same price as in Sydney.

566. Are there any such vessels? I should say there would be, if the Government wished to increase the coal trade with the colony of Victoria.

567. To what vessels do you refer? I refer to vessels that come specially from Victoria.

568. Are they colliers? Yes.

569. Then your claim is, that if there should be a coal trade between Melbourne and the southern coast,—Jervis Bay being nearer than Kembla to Melbourne,—that port would be more advantageous to the coal trade than Port Kembla? Yes.

Phillip Henry Morton, Esq., M.P., sworn, and examined:—

P. H. Morton,
Esq., M.P.
23 Jan., 1897.

570. *Chairman.*] You represent the Electorate of Shoalhaven in Parliament? Yes.

571. And you have an intimate knowledge of the district? Yes.

572. Are you acquainted with the schemes which have been submitted to the Committee? Yes; it is proposed to make a deep-water harbour at Port Kembla at a considerable cost.

573. The eastern breakwater is to cost £160,000? Is that the complete scheme.

574. That is for the eastern breakwater? But there is a proposal to spend £450,000.

575. It is proposed to expend £270,000 in the construction of two breakwaters? The proposal is to spend £270,000 in making a port.

576. Yes. Is it reasonable to suppose that the eastern breakwater could be made for about £133,000? That expenditure would be to give accommodation to the people who take coal from that port.
577. Yes? That alters the thing very considerably as compared with the first idea that I had. Speaking generally the first objection that I have is not confined to Port Kembla, but applies generally to harbours that are made in the open sea. From my experience, and I have had to go closely into such matters in New Zealand, such harbours have cost an enormous amount of money beyond what the engineers thought they would cost, and they have not been a success, owing to the great difficulties with which the engineers have to contend in the open sea. That is why I have objected to a harbour being constructed in an open roadstead. Having for business purposes to investigate the cost, the returns, and the prospects of most of the New Zealand open harbours, such as those of Oamaru, New Plymouth, and Napier, I find that the amount of money that has been expended in excess of the engineer's estimate was very large, and when the works were partially complete they were broken down by the sea. At Napier when the harbour was completed a big sea washed through the breakwater, and the same thing will have to be contended with in this case. If it were a question of getting some accommodation at the port already made at Jervis Bay as against the other, I would favour connecting the coal-fields with the port already made if the people will use it. The other question whether the Illawarra people will use it is for the Committee to go into. If a harbour is made at Port Kembla, and the Government charge reasonable harbour dues to get some return, will the people who already have private jetties use the harbour at Port Kembla except when there is some urgent necessity for them to do so. Except during heavy seas when they cannot use the private jetties, or when they have a greater demand for coal and have shipping which they have not accommodation for. Will they not use their own jetties when they can, and only go to the Government jetties (where they will have to pay heavy dues) when they are forced to go there. Unless there is some guarantee from the coal-mine owners that they will use Port Kembla harbour I cannot see that there will be any reasonable return on the outlay. These are the only two objections that I have to the Government spending money at Port Kembla. There is great danger in constructing breakwaters in an open sea. It is difficult to find out what will be their cost and also the cost of keeping them up after they have been made.
578. What do you say to justify the proposed extension of the railway to Jervis Bay? The Illawarra coal-fields can be connected with Jervis Bay at a cost of £120,000; but the question is, would the coal-owners use that line. I am not prepared to say that they would. The distance I believe from Wollongong to Jervis Bay is not very much different from the distance to Sydney. Another question is, is there coal to be opened up north of Jervis Bay, and is there any likelihood of its being opened up.
579. These are your main points? Yes.
580. Do you express an opinion with regard to the coal-fields? I can give no certain information as to where the coal is; there are rumours that it is everywhere, and I know that there is coal within a reasonable distance north of Shoalhaven River, in the Jamberoo Ranges.
581. Whether it has any commercial value you do not know? No; I am not an expert.
582. You desire to advertise the superiority of Jervis Bay over Port Kembla? Yes; over Port Kembla or any other port south of Port Jackson. Coal could be carried more cheaply to the southern ports of Australia from Jervis Bay than from any other port. I believe that wharfs could be provided much more cheaply in a smooth water port than in the open sea. The cost of wharfs at Jervis Bay would be as nothing compared with the cost of wharfs at Kembla or any other open sea port.
583. Another thing in favour of Port Kembla is that to reach Jervis Bay you have 50 miles of land carriage? Yes, from the mines that are now opened; but there may be coal much nearer.
584. Therefore it is in one instance interest upon the cost of construction and maintenance as against the charge for freight? Exactly. The line which one would advocate to be built at Jervis Bay to carry coal could be used from Bomaderry and there would be an increased traffic. There would be a small increased passenger traffic and a large increased goods traffic into Nowra.
585. Would there be any traffic in timber? No; if any timber is sent from Jervis Bay it will go to other parts of the world. There is a proposal to construct a light line of railway to Jervis Bay from the ranges far back, where there is magnificent timber. The timber is to be shipped to London. That is to be an accomplished fact—the shipping of hardwood timber. That would not do anything for the railway line; it would only assist to repay the Government any expense in constructing wharfs there. The extension of the railway would not benefit by the timber trade, because timber from Jervis Bay would not come this way.
586. Is there no timber between here and Jervis Bay? Yes, and that would go down by the extension of the line, which would only be a matter of 10 miles.
587. *Mr. Black.*] You base your assumption that Jervis Bay would be a cheaper harbour than Port Kembla on your opinion that it is more secure in rough weather? It is more secure in rough weather than the proposed harbour in Port Kembla will be after this expenditure.
588. Do you consider that all that would be required for the shipping trade in Jervis Bay will be wharfs? I think so.
589. You do not think it will be necessary to construct a harbour within the harbour? I do not think so.
590. Have you been there in rough weather? I have been there in all sorts of weathers and I have never been kept on shore.
591. Have you been there when a south-easterly was blowing? Yes. The bay is so large that you can get safe anchorage in some part of the bay in any gale. Behind the Hole in the Wall it is as safe as Sydney Harbour and there are portions of the bay that are always smooth.
592. And are there portions where it would be possible to construct a wharf alongside of which vessels of large tonnage could lie? Certainly.
593. And you think they could lie there in the roughest weather? Yes; there are places where in any weather at all the largest vessels in the world could lie.
594. Supposing there was a number of vessels waiting their turn at the wharf, would there be good anchorage for them? Yes, on both sides. The worst place is in the open mouth.
595. There would be no danger of their anchors dragging? I do not think there is the slightest danger.
596. What is the bottom composed of? I cannot say.
597. Then you only assume that there is good anchorage? I know from warships going there continually and making no complaints, and other ships going in for shelter.
598. Your argument is that coal could be carried more cheaply from Jervis Bay to any southern port than from any other port? I believe so. Cheaper because the distance is shorter, and cheaper because the vessels could wait there with more safety.

P. H. Morton,
Esq., M.P.
23 Jan., 1897.

P. H. Morton, Esq., M.P.
23 Jan., 1897.

599. *Mr. Hassall.*] Do you think that if there were shipping facilities at Jervis Bay there would be any prospect of wool coming there from Braidwood? I would not like to say that—wool used to come there for many years. It is as good a route and shorter than that from the New England district to Grafton and the Clarence where wool does go.

600. There is a possibility of wool going to Jervis Bay? I do not think there is. I am of opinion that less wool every year will go to other places than Sydney. The tendency is to get the whole of the wool to Sydney. There is a desire to have the sale of wool in Sydney instead of sending it home. New South Wales people want to keep Sydney a market for wool, and try to stop the wool from being sent anywhere else. I believe that if once wool was carried down to Jervis Bay the Railway Commissioners would reduce freights and equalise cost to get it to Sydney.

601. *Mr. Farnell.*] Do you know the depth of the water in and near the Hole in the Wall? No.

602. Would it be shallow water as far as a jetty would extend (say) 200 or 300 feet? No; I do not think it is very shallow.

603. Would it be any shallower than the water in the proposed harbour at Port Kembla? I should say that Port Kembla would be the deepest.

604. *Mr. Lee.*] Your contention is that to admit of the southern coal trade being carried on by large sailing vessels it would be cheaper to continue the railway to Jervis Bay than to construct costly breakwaters at Port Kembla? Yes; it depends on the cost.

605. You have already said that the coal trade would go on at Port Kembla and Bellambi even if a harbour was made at Port Kembla or Jervis Bay? I believe so.

606. Therefore your remarks are confined more to the sailing trade? Yes; the coal that goes out to the world.

607. What the colliery owners say it is necessary to compete for? Yes.

608. If the railway were extended to Jervis Bay do you think the coal business would go up there? I am positive that mines would be opened up. Melbourne is the chief place at present to look to. If coal can be got within a reasonable distance of Jervis Bay, say 20 miles, they would open up mines.

609. You are assuming that the mines would be on the northern side of the Shoalhaven River? Yes; I do not know enough about any other place to say whether coal could be got elsewhere.

610. To get to the bay a bridge would have to be constructed over the Shoalhaven River? Yes; and the cost of that would certainly be over £60,000.

611. If those mines were on the southern side of the river it would be easier? The coal would be more expensive to get at because it must be at a lower level. It is a different seam. I believe what is on the northern side is the Bulli seam, and on the southern side it is the Greta seam at a lower level altogether.

612. During your term of the representation of this district have the Public Works Committee reported in favour of the extension of the line from Bomaderry into Nowra? Yes.

613. If that recommendation were carried out, do you not think it would very largely meet the difficulty of getting to Jervis Bay? Certainly it would, because the extension to Jervis Bay would be a very small matter. The distance is only 14 miles, and it is easy country to get over. There are not many hills, and there is no low land. Therefore the cost of the expense of the line from Nowra once the railway was across the river would be comparatively small.

614. As a matter of fact it would then be within the reach of companies to construct coal lines to the bay if they had the advantage of a Government line into Nowra? Certainly. When you consider that the Government has an enormous area of Crown lands around Jervis bay which is now useless because it cannot be used to any advantage, it will be seen that the increased value given to that land by the extension of the line would afford the Government large returns.

615. Do you think those lands would be settled upon? I believe that a large area of them would be used to advantage, and there would be a good deal of settlement around the bay.

616. You are of opinion that it is advisable to extend the railway to Nowra, with the ultimate idea of taking it to Jervis Bay? Yes.

617. *Mr. Fegan.*] Have the owners of the land power to construct a line from their coal-measures? If it is private land they have.

618. Is the land fronting the shores of the bay private land? Much of the frontage is Crown land, and the matter of getting wharfs would have to be arranged with the Government.

619. Will legislation be needed? No; the matter will have to be dealt with by the Land Board.

620. Will there have to be legislation before they can construct a railway? Not unless they propose to cross land which does not belong to them. The Government would be asked for their consent to the erection of the wharf.

621. What about the passenger traffic? They cannot carry passengers.

622. So that if they are to utilise that line for passenger traffic, or if they have to ask the Government for land, legislation will be necessary? Yes; but I have never heard of any private proposal to construct a line from Nowra to Jervis Bay.

623. Was it not once intended to construct the railway from Bomaderry to Nowra? I do not know whether it was ever intended. I know that the Government submitted the matter to the Public Works Committee, but I am always doubtful of what a Government intend to do in such a case.

624. Do you remember when the present line was before Parliament and a certain sum of money was voted? Yes.

625. Was there any talk then of bringing the railway into the town of Nowra? Some people objected to it leaving Kiama unless it came into Nowra. My idea was to take as much as we could get if we could not get the whole.

626. I suppose you thought that if you asked for a line to Nowra you would get nothing? I believed so, because the Commissioners did not favour it.

627. Have many petitions been presented to Parliament in reference to the extension of the railway to Nowra or Jervis Bay? A great many petitions have been presented asking that the line should be extended to Nowra.

628. Have you made any representations on the subject? Yes; I have made representations to every Minister for Works.

629. What was the answer? The answer—that the matter would be considered and sent on to the Public Works Committee.

Mr. T. R. Peak, Secretary, Jervis Bay Railway Extension Committee, sworn, and examined:—

630. *Chairman.*] What are you? I am Secretary to the Jervis Bay Railway Extension Committee.

631. *Mr. Fegan.*] Have you any statement to make to the Committee that has not already been given? I will state my view of the Port Kembla scheme, but I would say that if we here are asked to provide a deepwater harbour to suit the colliery proprietors at Port Kembla our case is knocked on the head. The Government is asked to commit itself to the expenditure of £443,000 on the construction of an artificial harbour at Port Kembla for the convenience of eleven colliery proprietors, practically creating a monopoly for these people. There is no guarantee that the estimated amount will not be largely exceeded—indeed, the history of this class of artificial work shows that it nearly always is, that it is costly to maintain, and that it is liable at any time to be damaged or destroyed by coastal hurricanes or tidal waves. There is no evidence that the colliery proprietors interested will guarantee interest on capital expended; the strongest statement in this direction having been made to this Committee within the past week, to the effect that although the owners of private jetties would continue to use those jetties as long as practicable, they would eventually become too costly to maintain, and thereafter the port of Kembla only would be used. There are no unalienated Crown lands that this costly work would bring into the market, and instead of bringing extra freights to the Government railway, it would detract from that already non-paying line the very freights it was constructed to catch and cater for. The development of Jervis Bay, by continuing the line from Bomaderry to the deep waters of the Bay, would give the country an all time valuable national asset; would develop fishing, shipbuilding, timber, mining and other industries; would rapidly bring into the market over 400,000 acres of Crown lands that have hitherto gone begging at nominal prices, nearly the whole being offered at £1 per acre; would develop the good coal-seams known to exist at Jamberoo, Broger's Creek, Cambewarra, Sassafras, and Conjola; would rapidly sell thousands of acres of land between Nowra and Jervis Bay for fruit-growing purposes, for which it is eminently suitable, provided there was a quick get-away to market. The fact of the line crossing the river into the town of Nowra would immediately increase the returns, as the fact of the present terminus being over a mile and a half from the town, and the river wharfs being three quarters of a mile nearer, loses to the railway many hundred tons of freight annually, which it would otherwise carry. The fact that iron ore, limestone and coal are all to be found in close proximity to the Bay, makes it pre-eminently the natural home for iron and smelting works, and the fact that it is the most southern suitable port gives it an advantage over all other ports for ores coming from Adelaide, Port Pirie, &c. These briefly are our views in support of the Jervis Bay scheme. I have left a good many matters out because they have already been spoken of by other witnesses. There are 423,000 acres of unalienated Crown lands in the Jervis Bay district, exclusive of 22,000 acres reserved for timber, and 50,000 acres for other purposes. There are half a million acres of land which would rapidly come into the market if the railway were made. That would more than recoup the Government for any expenditure on the railway.

632. Would you mind telling the Committee why you make the assertion that the proposed harbour at Port Kembla is simply to suit the coal trade. On Thursday, Mr. Maclean was urging that the railway to Jervis Bay would develop the coal-fields when Mr. Black said, "Do you think that in the event of Jervis Bay being opened up the people of Kembla will send their coal there?" We do not know, and we do not care.

633. On what do you found the assertion that the harbour at Port Kembla is to suit the convenience of all colliery proprietors down there? I said, if you have come to the conclusion that a deep-sea harbour is to be provided for those colliery owners, my case is done.

634. *Mr. Black.*] Do you think the Committee would be justified in disregarding existing interests because of some prospective interest which might afterwards pay? Certainly not. Mr. Maclean spoke of the very low freights on easy grades in Canada, and so on, and in working the question out as to what it would cost the Port Kembla people to ship at Jervis Bay. I find that a freight of one sixth of a penny per ton per mile might induce people even at Port Kembla to ship at Jervis Bay.

635. Do you not know that the Railway Commissioners will not carry coal at less than $\frac{1}{2}$ d. per ton per mile? I do not know why they should not; it is done in other places.

636. Do you know that the Commissioners were offered a million tons if they carried at a lower rate, and they refused? I do not know anything about that. That might be on a line where the grades were too heavy.

637. Mr. Maclean forgot to tell us that they have a larger population in Canada than we have here; a great deal depends upon that? Where there is a greater population there must be a greater traffic. But we should be shipping coal for the trade of the world, and there would be a great increase in smelting, and it is very likely that Jervis Bay will be a natural home for these works and that there will be a great demand there.

638. You say that there are extensive coal-fields at Jamberoo and other places? Yes.

639. And you quote Professor Taylor and others, coupling with those men the name of Mr. Jones? Yes; he is a practical man and has seen the coal.

640. Will you give us any idea of the seams of coal there? I cannot from my own knowledge.

641. As far as the coal measures are concerned, we must look upon your evidence as second-hand? Yes.

642. In reference to the price of land in this district, will you give us the ruling price per acre about Jervis Bay? The price varies very little. Some of the land on the banks of the creek is arable land, and fetches £14 or £15 an acre. The Government land which has been taken up brings from £1 to £4 per acre. People want £4 an acre for it.

643. Have there been any recent sales? About 100 acres have been taken up during the last two years at £1 an acre.

644. Has there been notice of auction sales, but no buyers? Yes; I have seen advertisements of sales which did not come off.

645. Have you been on the bay in all kinds of weather? I have been on it in fairly rough weather.

646. You have taken care when a storm was brewing to get away? I cannot say there is any danger in that bay.

647. The first question of importance to you is the extension of the railway from Bomaderry to Nowra? No; I cannot say that it is. The objection to the proposed harbour that struck us was this wanton waste of £440,000 in the construction of an artificial harbour when we know that there is a perfect harbour at Jervis Bay. We should not have agitated for this railway but for that.

648. The terminus is of very little importance as against the great object in pointing out Jervis Bay? Very little.

Mr.
T. R. Peak.
23 Jan., 1897.

- Mr. T. R. Peak.
23 Jan., 1897.
649. *Mr. Lee.*] What return would there be to the Commissioners to pay interest on the capital expended in extending the line to Jervis Bay? Nothing much but the coal until the bay develops a general trade. Then there will be the whole produce of the district.
650. Do you think the Government Geologist should know whether the coal to be found here is a marketable commodity? Certainly.
651. If he told you that the coal south of Port Kembla was much inferior to the coal at Bulli or Kembla, what would you think of that? I should believe it if I knew nothing about it; but knowing what I do I doubt it.
652. Perhaps you will give us what knowledge you possess on the subject? Other experts have given a contrary opinion. I have lived amongst coal for many years. I have seen the coal here, and I agree with Professor Taylor and others in saying that it is a good commercial coal.
653. What is the thickness of the seam? At Conjola and Sassafras there are seams about 4 feet thick, and those referred to by Mr. Mackenzie, late Examiner of Coal-fields, range from 39 feet downwards.
654. Would you take his opinion before that of Professor David and Mr. Pittman? I should take the opinion of an expert, and I suppose that Mr. Mackenzie is one.
655. What would it cost to make a railway to Jervis Bay? £120,000.
656. Would you expend that on the authority of Mr. Mackenzie when Mr. Pittman is against his opinion? I would take Mr. Mackenzie's opinion. There is a prospectus before the country of a scheme to raise £250,000 to proceed with works including the building of a railway.
657. Have you ever been in any company for buying or selling minerals? I have not.
658. Have you read the prospectus? Yes.
659. Have you found that to be correct? They give a glowing account of things.
660. What are you referring to? I am referring to the prospectus of the Proprietary Land and Smelting Company for whom a report was written by Mr. John Mackenzie, late Examiner of Coal-fields.
661. And you produce it here? Yes; I also quote from Mr. Norman Taylor's report.
662. I suppose you are acquainted with the coal-fields at Kembla? Yes.
663. On account of the quality of the coal, a number of companies have opened up collieries there? Yes.
664. You say that Jervis Bay is a first-class harbour? Yes.
665. Without any improvements? Yes.
666. If the coal that goes to Jervis Bay is of such a good quality, and shipping facilities will be so favourable there, do you not think that companies would open up those properties? I do not think it is difficult to understand why they have not. They have to get over 20 miles of rough country with a railway.
667. I understand that the construction of a line to Jervis Bay would not cost much;—where is the rough country? From Broger's Creek, Sassafras, and Jamberoo.
668. It would not cost much to open a main-trunk railway from Jamberoo? No.
669. Have you any idea how much coal has been got from there? No.
670. Do you not think that if there are such valuable seams of coal there a greater development would have taken place before now? No; I consider that the 10 miles carriage on the railway and the 5 or 6 miles from the mouth of the pit kills it.
671. At Kembla they had a number of obstacles to contend with, yet they built their own piers and railway lines, and could not the same thing be done at these other places? In the other cases it is the freight. The position at present without facilities for shipping has prevented the development of those seams.
672. Or in other words those seams will never be developed until there is a railway to Jervis Bay? No.
673. How far is it from Jervis Bay to those seams? I should say from 25 to 28 miles to Jamberoo and Broger's Creek.
674. And to the next? The next to Nowra is in the Cambewarra Ranges.
675. And it is equal to any coal that you can get in the southern district? Yes, as far as I can find from the reports.
676. What about the timber? I am told that there is an immense field for timber; huge contracts have been let and arrangements have been made with the Government for the shipment of vast quantities of timber from Jervis Bay. This is all going to the European markets.
677. This is by a private company and the Government is going to give them facilities? Yes, at Jervis Bay. We are told that they intend to ship 1,000,000 feet per month.
678. They are constructing their own jetties and railway to carry out the work? Yes.
679. Have the people made any representations to the Government? No; they have no objection to it.
680. If it is decided to construct a harbour at Port Kembla, do you think it would be of any benefit to the people at Jervis Bay? Not the slightest.
681. Do you not think it would be a harbour for discharging cargo? I do not think so.
682. A vessel will not come empty and it will decrease the distance of carriage for the people here if cargo is landed at Port Kembla? I do not see what class of goods they would bring in.
683. You take stores here, and if goods were landed at Port Kembla you would have only half the distance to Sydney to carry them? We should still have to go to Sydney for all that we want here.
684. Do you not think that if goods are landed at Port Kembla it will induce people to open up a trade which they have not been able to open up yet? I do not think that these goods will ever be landed at Port Kembla; it is not a suitable place for a harbour.
685. Your patriotism will not let you go to Sydney if you can get goods cheaper from there? Port Kembla can never compete with Sydney, and merchants will not go to Kembla and establish warehouses.
686. But it divides the distance between here and Sydney? Yes.
687. Therefore, that will make it much better for the people here? I cannot see how it would benefit people here at all.
688. Should a railway be made from here to Jervis Bay, what shipping would you expect there;—would you expect goods to be landed there? Not in the first place; but we should afterwards, because I think it would compete with Newcastle, and to some extent with Sydney. The trade will be initiated by vessels from Adelaide bringing vast quantities of ore.
689. You expect a goods trade to develop ultimately? Yes; and merchants would erect warehouses here.
690. But they would not at Port Kembla? No.

691. You think the cost of constructing a line to Jervis Bay small compared with the amount of money that would be required to make a harbour at Port Kembla? Yes. Then there is the other great fact; that whereas Port Kembla would bring in no more revenue than would be required to pay the interest on the outlay, a railway to Jervis Bay would cause the sale of 400,000 acres of Crown land. It would pay the Government to make the railway for that, if for nothing else.

Mr.
T. R. Peak.
23 Jan., 1897.

692. *Mr. Black.*] Do you think that the land at Jervis Bay is of any value at all? Not on the foreshore, except for smelting works, and so on.

693. What can the bulk of the land between here and Jervis Bay be used for? Fruit-growing; it will grow excellent oranges and grapes.

694. Do you anticipate that if a harbour were constructed there there would be a sufficient quantity of fruit-growing to provide any large amount of freight? I think that within the next fifteen or twenty years there will be 100,000 acres under fruit.

695. Do you not think that there is land equally good for fruit-growing nearer to the market? Not of the same quality; that land is specially adapted for fruit-growing.

696. Do you think it is good for fruit-growing because it is bad for other purposes? No. It contains ingredients which enables us to raise good oranges and grapes.

Mr. John Maclean, newspaper proprietor, Nowra, sworn, and further examined:—

697. *Chairman*] Have you anything further to say? I produce two exhibits of coal taken from a coal-seam west of Jervis Bay in some 20,000 acres of Government land. I also produce a photograph of the personal extract of the coal, and showing the depth of the seam. The coal comes from the vicinity of Wandandian Creek. This, on the evidence of Professor David and Mr. C. S. Wilkinson, is one of the lower beds of the coal systems of New South Wales—the Greta coal. If necessary, I can lay before the Committee an analysis of that coal by Professor Taylor, late Government Geologist in Melbourne, in which he remarked that it is better than Newcastle coal for general purposes. A bore was made in 1891 by the Government, 7 miles north-west of Jervis Bay and 13 miles south of Nowra, at a spot called Tianjera Creek. This coal was struck at a depth of 1,300 feet. There are 10 feet of coal in bands, the thickest seam being 2 ft. 8 in. Mr. David, who examined the core, said the drill had not struck upon the true thickness of the coal. We had the misfortune of cutting the coal at a place which did not represent the true section of the seam.

Mr.
J. Maclean.
23 Jan., 1897.

Mr. James Thomas Jones, cattle dealer, Nowra, sworn, and further examined:—

698. *Chairman.*] Have you something further to say? As regards the extension of the railway to Jervis Bay, I wish to mention that I believe it would be one of the finest undertakings that the Government of New South Wales could enter upon in the way of bringing in value for the work done. If the Government would adopt a scheme of leasing the land near Jervis Bay for a term of years, there is no doubt it would be a grand paying speculation.

Mr.
J. T. Jones.
23 Jan., 1897.

699. *Mr. Farnell.*] What would you consider a reasonable rate at which to lease these lands? From 1s. to 5s. an acre.

700. *Mr. Black.*] Would you like to lease it at that? If you make a railway through it, I will lease a few thousand acres.

701. *Chairman.*] The utilisation of the Crown lands is your first point? Yes. And to show that it is well adapted for a site for a city, I may mention that the quantity of fresh water about Jervis Bay surpasses anything that we have in Australia. Lake Windermere, which is a fresh water lake, has an area of 640 acres, and a depth of from 80 to 90 feet in the centre.

702. Your second point is that there is abundance of fresh water naturally stored? Yes; and it could be brought in without the use of machinery, because it stands about 80 feet above the level of the bay.

703. It would come in by gravitation? Yes. There are four or five creeks of good water emptying into the bay—permanent streams. A question has been asked as to what the Crown lands had been sold at. At the last sale Crown land was sold at the rate of £40 an acre.

704. *Mr. Farnell.*] Was it water frontage? No; it was back from the Public School.

705. *Mr. Hassall.*] I suppose that the man who bought it would take less for it to-day? No; he would not sell it for that money.

706. *Mr. Farnell.*] Was it bought for grazing purposes? No, for a building site. The best part the Government have cut up in lots of half an acre each at £10 an acre.

707. Is that within the limits of a surveyed township? Yes, close on the road to the terminus of the proposed railway line. Another great thing to my mind is that federation is fast approaching, and if there is a port in Australia suitable for a federal city it is Jervis Bay. It would be ridiculous to expect that the federal city would be either Melbourne or Sydney. Jervis Bay is the very spot for it. I have brought a sample of iron ore from Jervis Bay.

708. *Mr. Fegan.*] Can you tell the Committee where these pieces of coal came from? I have an idea: I know the locality. I have no doubt that Mr. Maclean told you the truth about it.

709. Has any of this coal been analysed? Yes; you will find a report in some of the Government offices on Rix's Creek seam.

710. Then that is Rix's Creek coal? Rix's Creek seam.

711. What seam is Rix's Creek coal? It is the bottom seam.

712. Similar to the Greta seam? Yes, it is similar.

713. Is it not the Greta seam then? I believe it is.

714. What is the seam like? I take it to be exactly the same coal as Rix's Creek: There is a little over 30 feet of coal in bands.

715. Can you give the Committee an idea of how many bands are found there? I could not from memory.

716. Is Rix's seam coal as good as the Greta coal? Yes; I think it is a little better.

717. What is the difference in the price? They never met in the market in my days.

718. Do you not know that Greta coal was from 7s. to 10s. a ton whilst Rix's seam was selling at 4s. or 5s.? I do not.

- Mr. J. T. Jones.
23 Jan., 1897.
719. Was it not always looked upon as inferior to the Greta coal? The tests of my coal showed it to be so superior to the Greta coal that I took the contract from them.
720. At the same charge? No; I think we were a few pence under.
721. You took the contract on account of making the lowest tender? No; we took it on account of the quality.
722. When was that tender? About 1876.
723. Do you know any other coal seams about here? There are outcrops of seams. There is one cropping out near Berrewherri River.
724. What seam is that? It is the lowest seam. It has never been examined.
725. Do you know of any iron ore in the district? I got the sample which I have here about 8 miles from Jervis Bay.
726. How far from the coal? Close to it.
727. Do you know of any deposits of limestone? No.

Mr. Thomas Charles Kennedy, newspaper proprietor, Nowra, sworn, and examined:—

- Mr. T. C. Kennedy.
23 Jan., 1897.
728. *Chairman*] What are you? Newspaper proprietor, residing in Nowra.
729. Do you desire to make a statement? I am aware that the Public Works Committee are inquiring into the question of the establishment of a deep-water harbour at Port Kembla. I am satisfied that to meet the requirements of the Illawarra district it is necessary to have a harbour in the vicinity. The amount which it is proposed to expend in the construction of the harbour is large, and I do not think in the face of what has already occurred in harbour experiments in Illawarra the expenditure of such a large sum of money is just now warranted for a harbour at Port Kembla. Jervis Bay is a harbour requiring practically no works to make it a port of refuge, and the money spent on the construction of a line of railway would give advantages to Jervis Bay that would meet the requirements of the coal deposits that are admitted, according to expert opinions, to exist further south. I say nothing of the commercial value of the coal, as I am not an expert in the matter. The danger of expending such a large sum of money at Port Kembla at present is that in the event of the discovery and working of good commercial coal in the vicinity of Jervis Bay it must detract from the usefulness of Illawarra, because the principal coal-trade with the southern provinces of Australia will be carried on at Jervis Bay. According to the information supplied by the Railway Commissioners 2s. 3d. a ton would be the cost of hauling coal from Woodhill in the event of the coal there proving commercial coal; then the less amount that it would be necessary to charge for harbour dues at Jervis Bay would compensate for the extra charge of haulage from Woodhill to Jervis Bay. I have not any more to say, except that as a taxpayer I consider that it would not be wise to spend such a large sum of money at Port Kembla, because of the probability of competition opening up further south, and of shipping being done on more advantageous terms at Jervis Bay.
730. *Mr. Fegan.*] What is the land being leased for about there? Private land is as high as 20s. per acre per annum.
731. Is some as high as £2? Not that I am aware of.
732. Do you think that Crown land should be leased at from 1s. to 5s. an acre? I do not.
733. What do you think the Crown should get for the leasing of land here? Crown land has been leased between here and Pillara north of Jervis Bay—some 2,000 acres—at £2 yearly for the lot.
734. Is it very inferior land? Yes.
735. Is there any Crown land equal to that which is being leased by private owners at 30s. an acre? Not that I am aware of.
736. You would not like to lease from the Crown 1,000 acres of land at 5s. an acre between here and Jervis Bay? Not for grazing.
737. Would you for fruit-growing? No, not for fruit-growing.
738. Under what circumstances would you lease it at 5s. an acre? I might give that for land that would carry stock, but if Jervis Bay were opened up and an export trade were carried on from there, and coal-measures were developed within the vicinity I would buy or lease the land.
739. You would rather buy it to sell again under those circumstances? Those are the circumstances which make the value of land.
740. Under present circumstances you would not lease the land at 1s. an acre? I would not say that. There are certain portions of the land which you might rent at 1s. 6d. or 2s. an acre, but they would be small pieces.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

Construction of a Deep-water Harbour at Port Kembla.

SECTIONAL COMMITTEE.

APPENDIX.

A.

[To Evidence of Mr. W. Evans.]

PROPOSED LOOP-LINE TO MOUNT PLEASANT RAILWAY.

Southern Coal Company of New South Wales (Limited),

Colliery Office, Unanderra, 21 January, 1897.

Dear Sir,

As stated verbally, my proposal for a loop-line coming on to the Mount Pleasant railway, instead of the present one at Mount Keira, is to avoid the heavy grade now existing between Mount Pleasant, Mount Keira, and Wollongong, whereby a locomotive could deliver 100 per cent. heavier a load at Wollongong wharf than by the present route. In my opinion it is impossible to attain satisfactory results by attempting to alter the present grade, and it would be far more costly than the proposed new loop, including cost of resumption, &c.

My experience in working coal traffic is that the less mileage over the Government railway, contending with passenger and other traffic, the more satisfactory are the results.

If Port Kembla should be decided upon I think the above suggestion would be worthy of consideration, and, if adopted, I am confident would facilitate the traffic to a very large extent.

Yours, &c.,

WALTER EVANS.

To the Secretary of the Public Works Committee.

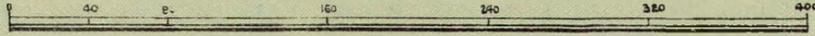
[Four Plans.]

PLAN I.

PORT KEMBLA

Showing the Proposed Deep water Harbour.

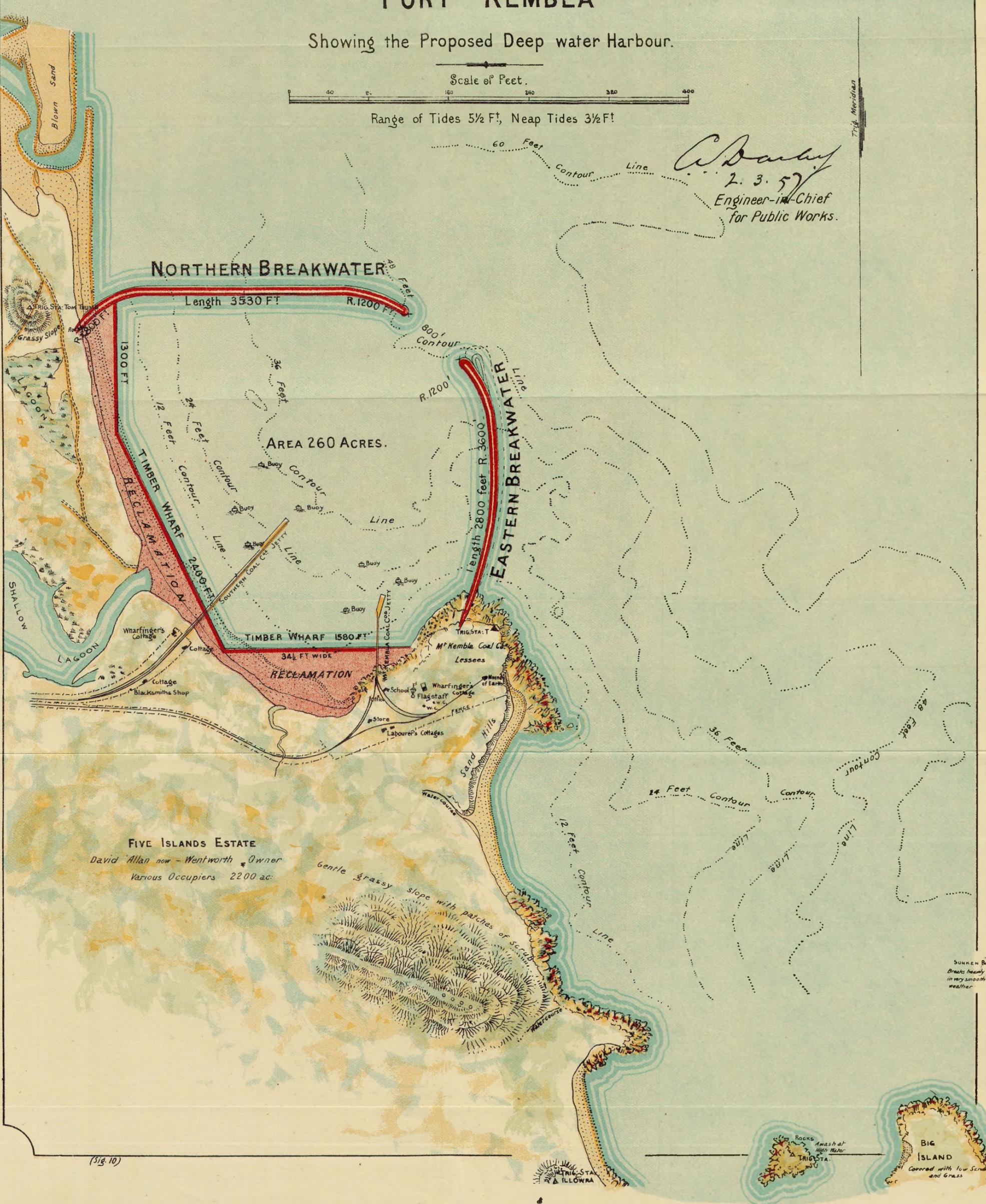
Scale of Feet.



Range of Tides 5½ Ft, Neap Tides 3½ Ft

A. Darby
2. 3. 57
Engineer-in-Chief
for Public Works.

True Meridian



FIVE ISLANDS ESTATE
David Allan now - Wentworth Owner
Various Occupiers 2200 ac.

(Sig. 10)

PLAN II.

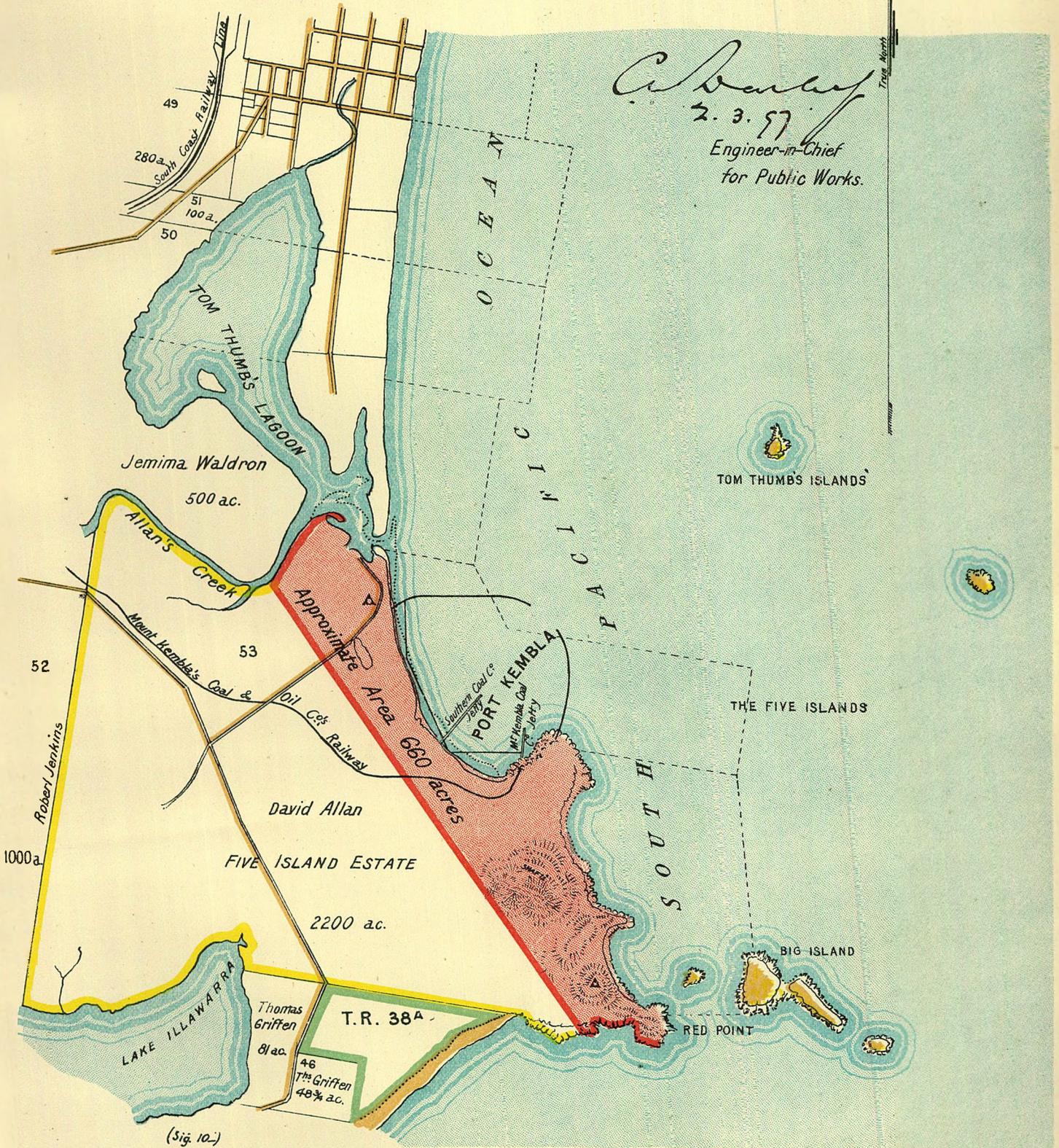
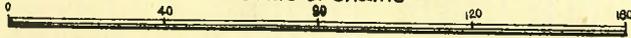
PORT KEMBLA

APPROXIMATE AREA OF LAND PROPOSED TO BE RESUMED.

(TINTED RED)

Subject to any necessary alteration.

Scale of Chains



PLAN III.

PART OF

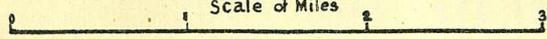
SOUTH COAST OF N. S. W.

Showing

SITES OF PROPOSED HARBOURS.

C. B. Bailey
2.3.57
Engineer-in-Chief
for Public Works.

Scale of Miles

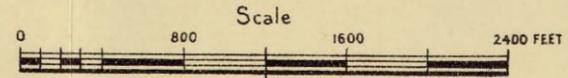


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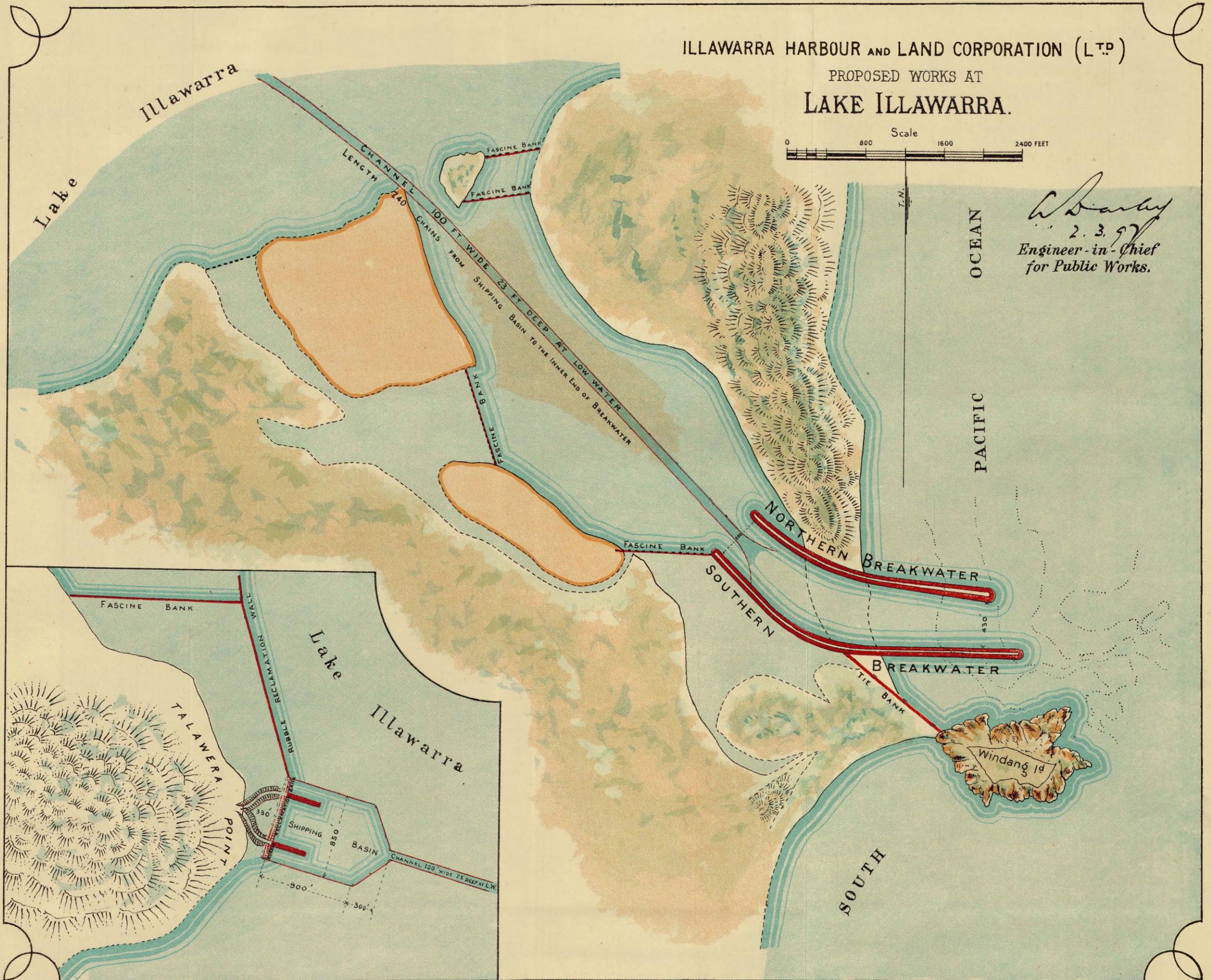
PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,
SYDNEY, NEW SOUTH WALES.

ILLAWARRA HARBOUR AND LAND CORPORATION (LTD)

PROPOSED WORKS AT LAKE ILLAWARRA.



A. Barby
2.3.97
Engineer-in-Chief
for Public Works.



(10-)

1897.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

CONSTRUCTION OF DEEP-WATER HARBOUR AT PORT KEMBLA.

(PETITION FROM THE ILLAWARRA HARBOUR AND LAND CORPORATION (LIMITED), PRAYING TO BE HEARD BY COUNSEL AT THE BAR OF THE HOUSE, IN REFERENCE TO.)

Received by the Legislative Assembly, 7 July, 1897.

To the Honorable the Speaker and Members of the Legislative Assembly of New South Wales, in Parliament assembled.

The humble Petition of the Illawarra Harbour and Land Corporation (Limited),—

SHOWETH, AS FOLLOWS:—

1. Among the business to be brought before your Honorable House on Wednesday, 7th instant, is the following:—

Government Business.—Orders of the Day.

1. Mr. Young to move,—That it is expedient that the construction of a Deep-water Harbour for Port Kembla, as referred by the Legislative Assembly to a Parliamentary Standing Committee on Public Works, be carried out by constructing the eastern breakwater only, as recommended by the said Committee.

2. By a Private Act assented to on December 20th, 1890, the Illawarra Harbour and Land Corporation (Limited) were empowered to form and maintain an entrance and passage between the South Pacific Ocean and the waters of Lake Illawarra, in the county of Camden, and to construct, use, maintain, and, in certain respects, control and regulate, a Harbour within the waters of the said Lake and of Windang Bay in the county of Camden; and to make, establish, maintain, and control wharfage and shipping accommodation in connection therewith; and to construct, work, use, and maintain a line or lines of railway to connect with the said Harbour, all or any coal-bearing lands situate between the South Coast Colliery on the north and the Macquarie River on the south; and to reclaim, purchase, take, occupy, and otherwise acquire land on certain terms. Provided that the said Harbour and entrance thereto and channel should be commenced within two years, and be made and completed in accordance with the provisions of the Act, and opened throughout for the admission of vessels of a draught of 15 feet, within the term of seven years from the passing of the Act, failing which all rights and privileges acquired under the Act should be null and void, and all reclaimed lands should revert to the Crown, excepting certain lands in the said Act mentioned.

3. By the Illawarra Harbour and Land Corporation Act Amendment Act of 1895 the time mentioned in the Principal Act for the completion of the Harbour and entrance thereto and channel was extended for a further period of one year from the 20th day of December, 1897.

4. Your Petitioners have already expended a sum of £12,032 Gs. under the provisions of the Statute upon surveys, plans, and works at the entrance to the said Lake Illawarra, and in constructing a line of railway connecting the said Lake with the South Coast Colliery, and also connecting same with the smelting works and the State line of railways.

5. That, in view of the construction of the said Harbour, a large commercial undertaking for the smelting and reduction of ores has been established on the shores of Lake Illawarra.

6. That, upon the question of the construction by the State of a Harbour at Port Kembla being submitted to the consideration and report of the Parliamentary Standing Committee on Public Works, your Petitioners applied to the said Committee for leave to appear by counsel, with the object of explaining the effect which the construction of a rival Harbour by the State would have upon the scheme of works then in progress by your Petitioners.

7. That this request was refused by the Committee on Public Works, and the whole question of constructing a Harbour which could not fail to be a rival of that of Lake Illawarra was dealt with, entirely ignoring the then existing statutory rights and powers of your Petitioners.

8. That the Committee on Public Works having recommended the construction of a Harbour at Port Kembla, the authority of your Honorable House for the commencement of such Harbour is now about to be asked.

9. That your Petitioners fear that the Bill for the introduction of which authority is sought, if passed, will greatly increase the difficulty which they have hitherto experienced in the completion of the work of Harbour construction which they have in view.

Your Petitioners, therefore, most humbly pray that, in order that your Honorable House may be fully informed of the details of the objects which they have in view, previous to the adoption of any resolution affirming the desirability of commencing the construction of a Harbour at Port Kembla, your Petitioners may be heard by counsel at the Bar of your Honorable House in explanation of the objects and position of your Petitioners.

In witness whereof the common seal of the Illawarra Harbour and Land Corporation (Limited) has been affixed hereto this 7th day of July, 1897.

The common seal of the Illawarra Harbour and Land Corporation (Limited) was affixed hereto by the authority of the Directors, previously given in the presence of the undersigned, two of the Directors, and countersigned by the undersigned.

J. ARMSTRONG, }
A. G. FRIEND, } Directors.

FRANK JARVIS, Secretary of the said Corporation.

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

FLOOD-PREVENTION IN THE HUNTER RIVER.
(DEPARTMENTAL REPORTS RESPECTING).

Printed under No. 7 Report from Printing Committee, 10 June, 1897.

Copies of Reports by the Engineer-in-Chief for Public Works, and Mr. Price, Assistant Engineer, Public Works, in regard to flood-prevention in the Hunter River, presented in fulfilment of a promise made on the 27th ultimo by the Secretary for Public Works in answer to a question by the Honorable Member for West Maitland.

The Engineer-in-Chief for Public Works to The Under Secretary.

HUNTER RIVER FLOOD-PREVENTION.

Department of Public Works, Sydney, 29th April, 1897.

I FORWARD herewith Mr. E. B. Price's report on prevention of floods in the Hunter River.

I have perused it carefully, and am of the opinion that it is worthy of serious consideration.

There is no doubt that the height of floods in the lower river can be reduced and, to a considerable extent, regulated, by impounding water in the upper part of the valley, but, at the same time, as pointed out by Mr. Gordon in his report, great care must be exercised in releasing impounded water not to do more harm by maintaining the water for a much longer time at a harmful level, for if the flood water should be kept up to a level exceeding a banker for a considerable time, it may do much more injury to property than by letting a big wave pass quickly down the valley.

For instance, in 1870 there were five big floods during the months of February, March, and April, following in such quick succession that the impounding reservoir, which will really only hold about half a large flood, would have been practically useless unless one long continual flood-level, higher than a banker, had been maintained, and it is possible that this continuous high water might do more harm than the five waves did in passing down the valley.

Mr. Price has, I think, taken too sanguine a view as to the probable cost of the dam. The prices are cut altogether too fine, and I doubt if any competent contractor would be ready to tender at the figures quoted, seeing that none but contractors with a large command of capital could undertake this vast work, for a very large amount of money must be sunk first in providing sufficient suitable plant for carrying on with expedition. Also, taking into account the great risk a contractor must run from floods during the progress of the work, it is necessary to make a liberal allowance over the bare cost of excavating material in a dry cutting. It must further be borne in mind that the excavation for the foundation goes to a depth of from 50 to 60 feet below the surface, and a great portion is some 25 to 30 feet below river-level in water-bearing strata, for which contractors will certainly require a very high price. Should a flood occur at any time while this excavation is being taken out, many months work may be wholly lost.

Taking this and the probable cost of the masonry into consideration, I am of the opinion that the very lowest cost at which this undertaking could be completed for would be £900,000, instead of £550,000 as estimated.

I have also some doubts as to whether such a great dam could be safely built on a shale and coal bed formation. This would require most careful investigation before entering upon the work. As a rule the shales and pipe-clays found adjacent to coal seams are most unreliable, and not calculated to form a safe foundation.

I quite agree with Mr. Price as to the injudiciousness of expending large sums of money in making flood-cuttings in the lower river to reduce the flood-height at certain places. This might be beneficial to certain places, but would mean destruction to other places lower down.

With these few remarks, I submit Mr. Price's report for the Minister's consideration.

C. W. DARLEY,
Engineer-in-Chief for Public Works.

The Engineer-in-Chief for Public Works.

Sydney, 24 March, 1897.

Sir,

Having received instructions from the Minister to investigate and, if possible, devise some means for the prevention of floods in the Hunter, I have, during the past eighteen months, devoted all the time it was possible for me to spare from my other duties to the study of the question.

I regret the delay which has occurred in the furnishing of my report, but for a long time I found it impossible to give the time necessary to complete my personal examination of the river and its tributaries, and afterwards to work out a scheme for the information thereby acquired.

The question of floods in the Hunter has been so often reported upon that I have had at my disposal a number of documents, amongst which are the following complete reports, viz.:—

1. By the late Mr. Moriarty, Engineer-in-Chief for Harbours and Rivers, dated 1868,
2. By the Flood Commissioners, dated 1870,
3. By Mr. W. Clark, dated 1877,
4. By Mr. G. Gordon, dated 1890,

all of which contain valuable information for the guidance of anyone who may be investigating the subject anew. Indeed the information collected in the first report must always form the ground-work on which calculations of discharges are based.

It is not my intention to discuss these reports which have been public property for many years; I must, however, point out that the circumstances of the country have altered very much since the first two were written, but since the last was composed the highest flood since 1820 has occurred. It is impossible, therefore, to say what conclusions would be arrived at by the authors if they were reporting at the present date. Neither have I the time available to give a full description of the Hunter River and its floods, all information of this character will be found in the above-mentioned reports.

The flood with which I have more especially to deal is that of 1893, of which, unfortunately, we have not very complete data. It is, however, acknowledged to have been the highest ever known, with the exception of that of 1820, of which we have little information.

I must, however, point out that the floods vary greatly in character and in the amounts of rainfall which produced them. Also that the rainfall on the lower river cannot be taken as a guide to what has fallen on the mountains at the source; for which reason the rainfall returns in connection with the early floods are of little use.

Early in my investigation I came to the conclusion that so little was known of the Upper Hunter and its great tributary, the Goulburn, as well as of the minor tributaries, Williams, Paterson, Wollombi (or Cockfighter), and Pal Brook, Page's River, &c., that it was imperative that I should examine them all, as without the personal knowledge gained thereby it would be impossible for me to select the best.

I therefore commenced at the sea and worked upwards, examining the main river and each important tributary far into the mountains. I afterwards came down the river, from Denman to Maitland, in a light boat, to satisfy myself that no possible site for a dam had escaped my notice on this important section of the river.

This examination has convinced me,—

- 1st. That the increasing importance of Maitland and its surrounding district warrants the expenditure of a large sum to minimise the loss of property and the danger to life which arises with each recurring flood.
- 2nd. Of the practical impossibility of conferring any real protection on the whole flooded area by embanking, deepening, widening, or altering the channel of the lower river, or by cutting a new outlet to the ocean.
- 3rd. That the only practical manner in which the floods can be dealt with is by the creation of a large lake or "regulating reservoir" below the junction of the Goulburn with the Hunter.

With regard to the first, it will be sufficient to point out that West Maitland alone has a population of between six and seven thousand, and a capital value of over a million sterling. That the town is built on the worst possible site there is no gainsaying, yet there it is and will remain till some day a disaster occurs resulting in great loss of life. The fact of the town being embanked, though affording protection against small floods, adds considerably to the danger during great floods. If, during the 1893 flood, the dam above the town, and the embankments on the far side of the river, had not burst and so afforded an escape for the pent up waters, there is no doubt the high embankment round the town would have been cut through, and many houses swept away, with great loss of life. As these flood-escapes have since been closed and made more secure the danger to the town is now greater than ever. I have never seen a flood in the Hunter, but have in several of our other large rivers, so can realise what such a flood as that of 1893 means, and am surprised that the loss of life was so small. The protection of life and property is considered the first duty of a Government, and for this reason alone I think the regulation of the flood on the Hunter should be looked upon as a State work.

With regard to possible remedies. Increasing the strength and height of the embankments round West Maitland, though affording protection to that town, would, by closing the natural regulator of Wallis Creek, tend to augment the height of the flood at other places. To counteract this, the embankment on the far side of the river would probably be raised, with the result of still further confining, and, consequently, increasing the height of the flood to the danger of West Maitland. It would also be possible to reduce the level of ordinary floods at Maitland, by carrying out one of the proposed schemes for shortening the river between there and Morpeth. The result would, however, be disastrous to the lower river, unless other more expensive cuttings were carried out lower down. These remedies have been so fully discussed in previous reports that it would only be a waste of time to further consider them here; moreover, channels which would have been large enough to carry the floods on which these reports were based, would have proved quite inadequate for such a wave of water as came down in 1820 or 1893. A careful study of the matter has convinced me that no system of channels could save Maitland when such extraordinary rainfalls occur, and when conditions are favourable for the quick discharge of the watershed.

watershed. In this connection, I may mention that if the rain which fell in the 1833 flood on the Goulburn River had also fallen on the Upper Hunter, the result would have been a more appalling flood than that of 1820, which was many feet higher than that of 1893. I cannot, therefore, agree with those who think the extreme height of the 1820 flood was owing to the banks of the river not having been cleared. This would have retarded the flood-wave in the upper river, and thus tended to lower it to just as great an extent as the obstructions in the lower river would have raised it. The experience of other rivers is, that the more the rivers are settled upon and cleared the greater will be the height of the floods, consequently, at any time we may expect even higher floods than those recorded.

Any scheme for straightening and deepening the lower river must start from the ocean. The works now in progress at Newcastle will be most beneficial, and when the entire scheme for training the lower river through the flats is carried out a much better flood-discharge will be obtained, to the benefit of Hexham, Raymond Terrace, and the lower Williams. The effect, however, will hardly be felt at Morpeth except during small floods.

In this connection must be considered the proposed canal from Raymond Terrace to Port Stephens, which has been brought prominently under my notice, and to which I have given rather more than its share of attention. This canal, in length about 12 miles, would join one tidal water with another. There could, therefore, be no flow through it except the level at Raymond Terrace was raised by a flood. The rise during the 1893 flood was 15 feet, while an ordinary flood will rise from 5 to 10 feet. All, therefore, this canal could be expected to do would be to prevent a flood rising above a certain arranged maximum, say 8 feet at Raymond Terrace, with a corresponding decrease in the flood-level for some miles up the Williams and Hunter and down the river to Newcastle. To have this effect the canal would have to be very large. For instance, a cutting 300 feet wide, with slopes of 3 to 1, excavated to a depth of 12 feet below low water, would discharge only about 35,000 cubic feet per second, which would not have reduced the 1893 flood by 7 feet. When it is considered that such a canal would average 43 feet for 7 miles and about 20 feet for the remaining 5, and would consequently cost over a million, it must at once be rejected. This money, or portion of it, spent on the lower river in training walls would have a much better effect, and would improve navigation, whereas the suggested canal would ruin it unless carefully maintained and regulated. I cannot help thinking that the promoters of this scheme brought it forward under the belief that the swamps between Raymond Terrace and Port Stephens were very little above high water-level, whereas our surveys show them to be for miles from 10 to 28 feet higher. I need not refer to the other suggested cuttings from the lower river to the ocean further than to say I have given them all due consideration, but cannot recommend any of them.

A flood outlet from some point on the upper river would be a complete remedy for all great floods, but from an examination of the intervening mountains I am convinced of the practical impossibility of carrying out such a scheme.

Having, therefore, been convinced from my examination of the lower river that it would be a costly if not an impossible task to so reduce the level of great floods by any series of cuttings as to remove all danger, I turned my attention to the upper river and tributaries in the hope that some suitable sites for regulating reservoirs could be found either large enough to control a whole flood or half a one as suggested by Mr. Gordon.

It appears strange that this examination was not made previously, as it might have influenced the finding of the Royal Commission and the recommendations of different engineers. For all that was known to the contrary, a most economical site for a regulating reservoir might have been available. I should here mention that I received every assistance and valuable information from the residents in each locality, and thereby was saved much loss of time. It was Mr. E. R. White, of Merton, who directed me to the site at Woodlands. It was rather a difficult matter to follow the Hunter and Goulburn Rivers, as in few districts do tracks follow near the river banks, while the country along the upper tributaries is wild and inaccessible.

During my examination I found many possible sites for reservoirs, but none so favourable as that at Woodlands, on the Hunter, about 10 miles below the Goulburn Junction. In order to regulate a flood it was necessary either to find a suitable site on the main river above Singleton and below the Goulburn Junction, or to obtain a number of sites for smaller reservoirs on the tributaries. All things being equal, one large reservoir was to be desired, as giving more complete control, since, with a number of small reservoirs, even with the most complete telephonic communication, it would be a difficult matter to regulate the discharge of a flood; though, of course, if very economical sites were available on the tributaries, this disadvantage would be counterbalanced.

In selecting a site for a dam it was necessary to find—

- 1st. A place where high land approaches the river on both sides, with a rocky foundation at a reasonable depth.
- 2nd. That the site should occur not far below a large extent of plain which could be submerged.
- 3rd. That good building stone and sand should be available close at hand.

Amongst the various sites discovered or examined by me the following are worth mentioning:—
On the Hunter (1) above Hudson's Bridge, about 8 miles from West Maitland. This complies with the first and third condition above specified, but, unfortunately, not with the second, as otherwise the site is favourable in many ways. Should it be thought desirable at any future time to hold back the flood-wave from the Cockfighter and the lower tributaries, this position might be selected for an additional regulator. (2) Below Jerry's Plains. This site is inferior in nearly all points to that at Woodlands. (3) The Woodlands site, though complying with all the above conditions, is not so economical with regard to the first as some others. This is, however, compensated for by the enormous holding capacity of the reservoir and the magnificent quarry of freestone (locally known as "the Battery") which overhangs the right bank of the river. These three sites being below the junction of the Goulburn—which is in reality the main river, as it carries far more water than the Upper Hunter—are geographically suitable for the construction of single regulating reservoirs. The first is, however, too low down, as it would not benefit, but rather injure, Singleton and a large number of cultivated farms, while the others would preferably be below the junction of the important Wollombi Brook or "Cockfighter." With regard to the tributaries, I found sites for reservoirs on the Williams, above Clarence Town; on the Paterson, and its tributary the Allyn, near Gresford; on Wollombi Brook, about 5 miles above Broke township, and again above the town

town of Wollombi; on Fal Brook, about 5 miles above the railway crossing; on the Goulburn, near Baerami Creek, and again above Kerrabee and at Bylong Creek, the last being the best I saw on the Goulburn, but too high up to be of service, except in conjunction with other reservoirs. On the Hunter, above Aberdeen; and on its branches, Page and Isis, near Gundy, I found several sites suitable for small auxiliary reservoirs.

Not one of the aforementioned sites are free from some objection; in fact, the Hunter is a very difficult river on which to form storage reservoirs.

After thoroughly examining the upper tributaries, I formed the opinion that it would be far more economical to create one great lake, by constructing a high masonry dam at Woodlands, below Denman, than to form a great number of smaller reservoirs on the tributaries. I therefore obtained permission to have a preliminary survey made, and sent Mr. Surveyor Fleming with boring-gear to thoroughly prospect the site and run contour levels. The result of his work will be seen in the plans which accompany this report, and on which my estimate is based. The borings revealed the fact that the foundation of the dam would be on hard blue shale, with certainly two coal-seams.

This shale, which crops out in many places on the Hunter, is of a hard dry nature, and appears to resist the action of water and weather in a wonderful way. Though some of our bores were carried to a depth of 40 feet into the shale, they were always free from water. Overlying the hard shale on the south bank are softer shales and sandstone. On the north bank the hard shale has, at one time, been washed bare, and is now covered with gravel, boulders, and clay to a depth of from 30 to 50 feet. This extends back for nearly 1,000 feet, till the hill at Woodlands House is met. This hill, from our trial shafts, appears to consist of a kind of cemented basalt, overlying sandstone, while further back a freestone escarpment appears. Looking at the site from the plains higher up the river, one would form the opinion that this escarpment was at one time continuous across the valley, and that the whole of the plains at the junction of the Goulburn were at one time under water. To reconstruct this lake, though on a smaller scale, is, to my mind, the only feasible solution of the problem of the Hunter River floods.

Raising the water level at Woodlands 130 feet above summer level would submerge over 33 square miles of plain, and would back up the Hunter and Goulburn Rivers for 10 and 8 miles respectively above their junction near Denman. It would, unfortunately, flood the township of Denman, which would have to be removed to higher ground on the adjoining village reserve. This, however, except for the expense entailed, would be rather an advantage, as the township, which is situated on a rich alluvial flat, intercepted with depressions and waterways, is now completely submerged during high floods, which at times sweep houses away with loss of life.

The village itself is of little importance, consisting of two hotels, a couple of small stores, a Court House, Police Station, Post Office, two or three places of worship, a few fair sized residences, and a number of small cottages and huts. Many of the buildings could be taken down and rebuilt.

After the town is removed to the adjoining high ground, the rich flat would be available for agricultural purposes, and would benefit from the fact of the high floods being held long enough to deposit silt instead of as at present sweeping rapidly over the surface and doing more harm than good. This applies also to the whole of the plain which it is intended to submerge during great floods. At present, with the exception of one small farm near the dam which would require resumption, the land is held in large estates, and utilised for cattle-grazing alone. The principal owners are the Messrs. White, of Martindale and Merton, and E. Vickery, of Woodlands. About 2 square miles is reserved, some being leased under the "Prickly Pear" Act. The best land lies about Merton, where rich black soil occurs. Much of the land is covered with "wiry" grass, which must take considerably from its value for grazing, and which a good deposit of silt might kill. At present, when a flood is expected, the cattle are removed from the plains. Prior to the 1893 flood this was not always done, but in that year the river rose with such rapidity that it overflowed its banks and swept across the plains before the cattle could be removed, and consequently many were drowned. It can never be foretold to what height the flood will rise, or what course the overflow will take, as both depend on the times of the arrival of the flood-waves from the Hunter and Goulburn. The river also frequently alters its channel, as can be seen from the old floodways and anabranches; even within the past few years large areas have changed hands through this cause. It will therefore be seen that though much of the land is very valuable for grazing, the liability to flooding considerably depreciates it for agricultural purposes, for which, as previously pointed out, it is used to a very small extent.

So far as grazing is concerned, the value of the land will be enhanced rather than depreciated by the proposed work. At present the flood rushes across the land with great velocity, and does not deposit much silt; whereas, in future, it would be retained long enough to thoroughly soak the ground, and deposit almost the whole of the silt, which is of the greatest value in renewing pastures. The loss, therefore, of the grazing for a few weeks longer than usual would be more than compensated for by the enrichment of the land.

It is not proposed to resume any large area of land, except in the immediate vicinity of the dam, together with the alienated portions of the township of Denman. The land at the dam will be necessary in order to form a permanent shallow lake, in which all flood *debris* would be checked before reaching the dam, where it might choke the sluice-guards. By lowering the level of this lake in dry seasons, when it was desirable to flush out the lower river, the fringe of drift could be dried and burnt.

As the land surrounding the lake would be covered more frequently and for longer periods than that higher up towards Denman, where the existing state of things would not be altered except by very high floods, it would be more advantageous to resume than to compensate the owners. This would also allow of water being stored for irrigation and the production of power, if so desired. It must here, however, be clearly pointed out that it would not do to retain a very large quantity, as, by so doing, the flood-holding capacity of the reservoir would be proportionally reduced. Nor would it, in my opinion, be worth while doing so, as irrigation on the east coast can never be carried out to a large extent. For irrigation to be successful there must be either very little rain or it must fall at regular periods, whereas on the Hunter Valley heavy soaking rain may fall at any time of the year.

With regard to power, the proposed dam, if kept at about the 40-foot level, will create one of the greatest water powers in the colonies; by using the lake as a compensating reservoir, anything from 1,000 horse-power to 100 horse-power would be available, according to the dryness of the season. There are many ways in which this cheap power could be turned to advantage, such as the electric production of aluminum.

The

The maximum capacity of the reservoir formed by the proposed dam will be, as near as can be estimated, 40,000,000,000 cubic feet. The following table gives approximately the capacity for different depths. The bottom, 40 feet, though covering nearly a square mile, does not contain much, as the river banks are high, and will be retained as a permanent lake, and utilised as previously pointed out:—

Table showing holding capacity of reservoir.

Depth at dam in feet.	Area covered in square miles.	Cubic feet.
40	0.97	200,000,000
60	.....	2,200,000,000
70	7.22	3,100,000,000
90	.....	10,000,000,000
100	21.07	15,500,000,000
120	.....	31,000,000,000
130	35.02	40,000,000,000

It is hard to realise such an immense body of water as 40,000 million cubic feet. No artificial reservoir in the world at all approaches it. The Bear Valley reservoir, which I believe is the largest in America, contained 4,161 million cubic feet, while the new Croton reservoir in course of construction for New York Water Supply is estimated to hold nearly 5,000 million cubic feet. In the United Kingdom the largest is the Vyrnwy Reservoir for Liverpool Water Supply, which contains 2,080 million cubic feet. India at present has the largest reservoirs in the world. The Mutha reservoir—called Lake Fife after its originator—in the Bombay residency, contains 5,000 million cubic feet—but this is being surpassed by the Periyar reservoir in Madras, now being constructed, which will contain 13,300 million cubic feet. Our own Prospect reservoir holds about 1,730 million cubic feet, and it will give some idea of the proposed reservoir on the Hunter to consider it as equal to 23½ Prospects.

In the proposed dam there will be a series of sluices sufficiently large to control the flow of the river. The larger sluices, which would be situated about 40 feet over the bed of the river, would be on the "stoney" principle moving on live rollers and actuated by "turbine" wheels as well as hand power. I can speak from personal experience of the excellence of these sluices. In the works for the regulation of floods on Lough Erne in Ireland, carried out by my father, four of these sluices, each 30 feet wide by 14 deep, were erected across the Erne River, and have during the last fourteen years given complete satisfaction. Since then they have been adopted on the Thames above London. A few smaller sluices sufficient to carry the ordinary flow of the river would be placed nearer the bottom.

A spill-way will also be provided sufficiently wide to pass, with assistance from the sluices, the heaviest known flood without injury to the dam. In the design of the dam, which accompanies this report, the spill-way is shown on top; it would, however, be preferable to have an additional spill-way cut through the solid rock at one end, as thereby the depth of water falling over the dam would be reduced.

I am in hopes that when the quarry on the south end is opened up hard freestone will be found at a level low enough for a by-wash. It will then only be necessary to work the quarry in the form of a wide channel to obtain a by-wash in the natural rock. The dam is, however, designed to allow a flood 10 feet deep to pass over the top. Owing to the depth of the "water cushion" on the lower side—varying from 20 to 60 feet according to the volume of the flood being passed—there would be no danger of erosion from the falling mass of water. It is obvious that when a large body of water is passing through the sluices or over the dam, there must be a current down the reservoir, especially at the narrow place, about 3 miles above the dam. To produce this current the water surface at the upper end of the reservoir will have to be considerably higher than what the contour levels show, and consequently the quantity held back by the dam when a flood is being passed will be greater than that shown for each level. During the 1893 flood the fall in the surface from Denman to the dam as near as can be estimated was 4.6 feet per mile; this of course was exceptional, and was caused by the great flood-wave which came down the Goulburn. When the reservoir is full and discharging 100,000 cubic feet per second, the fall on the surface would average about 3 inches per mile. The water level at the upper end of the reservoir would consequently be raised about 5 feet, and the capacity increasing about 3,000 million cubic feet. The reservoir would, therefore, to a certain extent act as an automatic regulator, as no sudden overflow could take place. In fact, if it were not for the lower tributaries, it would not be necessary to have many sluices in the dam, but simply an open arch, which would check back the flood to the fixed maximum. As, however, the lower tributaries are of themselves capable of causing a considerable flood, it becomes necessary to provide sluices whereby the flow of the upper river can be stopped completely, if desired, in order to give the lower river time to empty.

During my investigation I found, as was to be expected, that the residents of each particular locality considered that the tributary next above them was the immediate cause of the flood. For instance, at Raymond Terrace the Williams and Paterson are blamed, at Maitland the Cockfighter, and so on. They overlook the fact, however, that although their tributary may add considerably to a flood, after all its contribution bears a very small ratio to the discharge of the whole river. Take the Cockfighter, for instance; one has only to compare its narrow, tortuous channel below Wollombi with the channel of the Goulburn to be convinced that the Cockfighter alone could never produce a flood of any consequence in the Lower Hunter.

If it were not for the obstructions caused by bends, narrows, and *debris*, not only in the tributaries but in the main river, especially above Singleton, the effects of a flood would be much more serious. These obstructions check the velocity and cause the water, as it were, to remain in the river a much longer period, and to overflow the banks, thereby forming a storage reservoir. For instance, I calculate that during the 1893 flood the maximum discharge at the site selected for the regulating dam amounted to 234,000 cubic feet per second, while at Singleton, after receiving Doyle's Creek, Foy Brook, Fal Brook, and the Cockfighter, it amounted only to about 150,000 cubic feet per second. If this quantity, which passed Singleton in one second, produced the disaster of 1893 at Maitland, what would have been the result of 234,000 cubic feet per second passing down? This

This instance will show the objection to cutting a large channel between Maitland and Morpeth, which has already been pointed out in various reports.

The effect which could be produced by the proposed regulating reservoir must now be considered, and here I must state that it is utterly impossible to determine this with any degree of accuracy. All formulas for the flow of large rivers are at any time difficult things to apply correctly, but still more so when there are few and faulty data to go upon. In the case of a steadily flowing canal or river, fairly accurate results can be arrived at after careful observations, but in a river like the Hunter, when discharging a flood, the surface inclination must alter from hour to hour as the flood-waves arrive from the different tributaries, or as the lower river overflows its banks. Again, it is impossible to foretell what rise will be produced in a river from a given rainfall. Too much depends on the condition of the ground, nature of watershed, comparative size of tributaries to main river, and character and distribution of rainfall, to allow of anything more than a guess being made.

If we take the 1857 and 1870 floods, of which we have more reliable information with regard to levels and discharges than of any others, we are met by the difficulty of want of rain-gauge returns to show the quantity and distribution of the rainfall. It is, however, clear to me from a study of the tables of discharges and such information as to rainfall as we possess, that the rainfall which caused these floods, though more prolonged, was much less violent in character than that which caused the flood of 1893.

With regard to the 1893 flood, which was the highest on record, if we exclude that of 1820, though we have little reliable data from which to calculate the discharge, yet the Government Astronomer's admirable rain-gauge records supply fairly full information as to the rainfall, I find that although there had been heavy rain in different parts of the watershed during the previous days, sufficient, indeed, to soak the ground and start the river, yet the flood was caused almost entirely by the rain which fell in the twenty-four hours ending 9 a.m. on the 9th March. This was heaviest over the Lower Hunter, Cockfighter, and Goulburn rivers. Some of the rain-gauge returns are extraordinary; for instance, Newcastle 11.14, Maitland 14.79, while Morpeth, only three miles away and between the two, had 21.52. I can hardly believe that the Morpeth record is correct, and that three miles would make a difference of 7 inches in two gauges both nearly at sea level, especially when Newcastle, on the coast, had less than either. If the Morpeth return is correct, it must have been very local; nevertheless, I have taken it when calculating the mean fall for the lower river. If we divide the whole watershed of the Hunter into three parts: "Upper," or that above the proposed dam; "Central," between the dam and East Maitland; "Lower," between East Maitland and the sea, and distribute the rainfall of the 9th March, 1893, the following results are obtained.

Table showing Distribution of Rainfall which caused the 1893 Flood.

Watershed.	Area in square miles.	Average Rainfall for 24 hours ending on 9th March, 1893.	Amount produced in cubic feet.	
			Per 24 hours.	Per second.
Upper	5,230	4 inches.	48,601,344,000	562,511
Central	1,944	9 "	36,130,406,400	418,176
Lower	1,095	13 "	33,070,752,000	382,763
Totals	8,269	.....	117,802,502,400	1,363,450

It must not be imagined that the whole of this water, though falling in one day, could flow off the land in one day, or, in fact, ever flow off. In small rocky watersheds, under favourable conditions, 90 per cent. of the total rainfall will at times flow off, but the larger the watershed the less will be the percentage.

Various formulas have been devised to determine the total flow off a watershed and the proportion which the maximum flood discharge can bear to the rainfall in a given period. All of these, however, depend on a knowledge of local conditions, and must be taken as very approximate.

I have no reliable data as to the total amount which flowed off during the 1893 flood. If the river had not burst its banks at Maitland, the record of the heights at Belmore Bridge would be an approximate guide; as it is, however, they are of very little use. In the flood of 1857, which occurred at the end of winter, when all conditions are favourable to a large discharge, the total flow off the watershed is estimated at 88,000,000,000 cubic feet, equal to about 5 inches spread over the whole watershed. We have, unfortunately, no rain-gauge returns of any use for this period from which a percentage could be calculated. The flood seems to have been caused by continuous rains, and took a month to flow off. I have made a careful study of this question, and, from a comparison of the Hunter with other watersheds from which the flow off has been observed, I have come to the conclusion that under the most favourable circumstances 70 per cent. of the total rainfall is the maximum amount which could flow off the Hunter watershed. Rather more might flow off the Goulburn and upper tributaries, but much less off the lower river. This maximum would only be reached when tropical rain fell as in 1893. Even in India on smaller watersheds it is very seldom that more than 60 per cent. of the monsoon rain flows off.

If we allow even 70 per cent. of 1893 rainfall to have flowed off, the proposed reservoir would have been capable of stopping the entire discharge of the upper river for a month if desired.

Referring to the previous table, it will be seen that the average fall per second on the watershed above the dam amounted to 562,511 cubic feet. The maximum flood, however, which passed the dam site was only 234,000 cubic feet per second, or about 42 per cent., and, as far as I can learn, this maximum was not maintained for twenty-four hours. As the rainfall was exceptionally heavy we may safely take 42 per cent. of the daily rainfall as the maximum quantity which could reach the regulating reservoir in one day.

If

If we take the maximum flood at Maitland as equal to that which passed Singleton, and compare it with the rain falling on the combined upper and central watersheds, we will find it amounted to about 15 per cent., showing how much faster the drainage reaches the upper than the central river, and how the long river-channel and decreased fall of the country tends to reduce the height of the flood-wave.

Granting that the proposed reservoir will be large enough to completely stop the flow of the upper river, we must now see, if possible, what effect that would have produced on such a flood as the 1893. During that flood the maximum quantity of water which reached Maitland in one second was about 150,000 cubic feet. This was produced by about 85,000,000,000 cubic feet of rain falling in one day above Maitland. If, therefore, we deduct the 49,000,000,000, approximated, which will be cut off by the dam, the remaining 36,000,000,000 cubic feet should have produced a maximum flood-wave less in the ratio of 85 to 36, or 64,000 cubic feet per second, corresponding to a rise of from 20 to 24 feet at Maitland Bridge, according to the state of the Paterson and Williams Rivers. Or, if we take the future maximum flood at Maitland, which could be produced by the central river, as bearing the same ratio to the rainfall on its watershed as the present maximum flood at Maitland bears to its rainfall, viz., 15 per cent., the result would be a flood of 63,000 cubic feet per second.

These modes of reasoning are, of course, open to objection; but they are the only means whereby an approximate result can be arrived at.

Reducing the volume of a flood would also reduce the velocity with which the flood-wave would pace down the river, thus allowing the Paterson and Williams to discharge before the water from the central watershed reached Morpeth. In this connection I must quote from the late Mr. Moriarity's valuable report as bearing out the conclusions I have arrived at:—"On reading over the accounts * * * of the great floods of 1857, 1861, 1864, and 1867 it will be seen that in every instance the flood consisted of two distinct waves, the first being due to the lower tributaries—the Wollombi Creek, Black Creek, Cockfighter's Creek, etc.—which, rising nearer the coast, get the rains sooner than the upper heads, and having shorter sources to run send down their water with greater rapidity. They produce the first flood-waves which, though rising sometimes very quickly, rarely attain a dangerous height, and soon commence to subside, but before they have had time to flow away through the contracted and tortuous channel below Maitland they are overtaken by the second waves coming down from the main heads of the river—the Goulburn, the Hunter, and the Dart. The result is that the already gorged channel is utterly inadequate to carry off their united waters, and hence the second rapid and great rise which is observed, by which the banks are everywhere overflowed and the river channel rendered less capable of performing its duty."

The above is the opinion of one who was better acquainted with the Hunter floods than probably any one else. So far, therefore, as Maitland is concerned it must be conceded that the proposed reservoir will be capable of reducing a flood of even the magnitude of 1893 to harmless limits. I find it, however, quite impossible to estimate the effect that would be produced on the flood-level at Morpeth and lower down. Here so much depends on the state of the Paterson and Williams and on whether a strong easterly gale is blowing, that it would be useless to attempt any calculation.

As a rule the Williams and Paterson discharge their floods with great velocity and before the flood-wave comes down the Hunter. By retaining the greater portion of the Hunter flood-wave the velocity of the remainder will be decreased, giving more time for the lower river to clear its channel. With the lower river fallen, a much better discharge will be obtained at Morpeth for the flood-wave from the Cockfighter and the central tributaries which consequently should not rise so high. No doubt the farms about Morpeth would be flooded for a short time should we have another flood such as 1893. This would occur so seldom that it is doubtful whether it would do more harm than good.

In order to save the lower farms from all flood it would be necessary to increase the carrying capacity of the lower river to a minimum of, say, 60,000 cubic feet per second either by making new cuts and by embanking or by enlarging the existing channel. I am, however, inclined to believe with the regulator once constructed the land would not be flooded oftener than is necessary to keep it enriched. Certainly these cuttings should wait till the regulating reservoir is constructed and experiments conducted as to the discharging capacity of narrow portions of the lower river.

In this connection it should be pointed out that if at any time it is desired to submerge the farms on the lower river it can be done by opening the sluices in the dam.

With regard to the low land on Wallis Creek, this will be protected from all future floods by the existing sluice-gates.

The creek is now sufficiently embanked to allow the local drainage to discharge without overflowing the adjoining low land except when a high flood occurs in the river. The outside floods will now be reduced low enough for the creek to discharge almost at all times. Should, however, the Cockfighter produce a flood so high as to prevent the gates opening, it will last for such a short time that Wallis Creek will not have time to rise high enough to do any damage. Then by keeping the regulator closed for even twenty-four hours the river would fall so rapidly that Wallis Creek would completely empty itself before it was necessary to cause a fresh in the river by commencing to empty the regulating reservoir.

A regulating reservoir, therefore, will have a beneficial effect on the whole river, whereas any other scheme will benefit one locality at the expense of another. There will also be no interference with the natural channel of the river which it is dangerous at any time to touch; as the fact of cutting off one bend will cause the river to encroach somewhere else unless expensive protective works are undertaken.

It must now be considered how the vast body of water retained in the reservoir is to be got rid of without doing any injury. Taking the case of the 1893 flood, I have pointed out that the reservoir would not have been filled even if the sluices had been kept closed for a month, while long ere that the lower river would have emptied itself. Not having the upper water to sustain it the fall should be nearly as rapid as the rise. Once, therefore, the lower river has fallen sufficiently for Wallis Creek to empty itself, there is no reason why the sluices at Woodlands should not be allowed to discharge at the rate of from, say, 30,000 to 50,000 cubic feet per second, according to the state of the weather and the probability as to another flood coming, which would empty the reservoir in from ten to fourteen days. This discharge would first have to fill the channel of the river from the dam to Maitland—approximately, 100 miles long, and containing for a 15-foot rise about 3,000,000,000 cubic feet, and therefore the fresh caused would rise very gradually at Maitland and be less in volume than the discharge of the sluices. The safe rate of discharge

discharge would, however, have to be determined experimentally, as the faster the stored-up water can be got rid of the better. Different floods would have to be treated in different ways. The rainfall returns will always, in conjunction with a knowledge of the state of the ground, allow of the character of a flood being foretold. With a sudden fall as in 1893, a great wave of water is to be expected and the sluices closed entirely until the lower river clears its channel. With long continuous rain as in 1857 and 1870, it would be advisable to keep the sluices partly open so as to maintain the flood at Maitland up to a safe limit. In the case of these floods the amount to be retained in the reservoir would not be nearly so great as in 1893. A really intelligent man who was willing to make a study of the question should, after the experience of a year or so, be able to foretell the character of a flood and work the sluices accordingly. It would also be possible without waiting for a great flood to test the discharging capacity of the river; this could be done by storing up the ordinary flow of the river for a short time and then letting it out at different rates. By this means it can be accurately determined whether it is necessary to interfere with the narrower parts of the channel below Maitland.

There is one other point yet to be considered, namely, the effect of the reservoir on navigation.

Reducing the height of a flood will cause it to remain within its banks, and form fewer cross currents, therefore less silt should be deposited. A large quantity of silt and *debris* will also be deposited above the dam on the submerged plains, where the timber will be burnt off, and the silt go to enrich the grass. Again letting out a strong stream from the dam when the lower river has fallen should tend to scour out the bed, especially where training walls have been constructed, while with the reduced flood it should be possible for vessels to enter Newcastle Harbour at all times. In no way, therefore, would navigation suffer, but rather the reverse.

The mode of construction and cost of the proposed dam must now be considered. Owing to the magnificent and easily worked stone at the site, I would propose to build the dam of massive squared rubble masonry, set in three to one cement mortar, and the interstices filled with concrete, formed by ramming broken stone into the mortar. Where good easily squared freestone is available very large blocks can be used, and fairly close joints made without much trouble or expense. Specially large blocks would be selected for the front and back faces. Those on the water face would be dressed on the beds and joints, the joints being afterwards raked out and calked with stiff mortar for a depth of a few inches, so as to form a water-tight wall. The face stones should also be left as rough as possible under the spill-way, so as to break into spray the descending mass of water. All face stones would be bedded at right angles to the batter of the faces of the dam. I would also leave weep-holes in the back, with drains leading into the centre to allow any water which may find its way through the front face to escape without producing internal pressure. In designing the profile of the dam, I have followed the now well established rule of keeping the lines of pressure inside the middle third, and have taken the mass as weighing 150 lb. per cubic foot, which, with stone weighing 165 lb. per foot, as that in the Battery Hill averages, should be easily attained. If care is taken to drive small stones into the mortar-filling of all internal joints the mass weight should reach 155 lb. per cubic foot.

To regulate the discharge a series of arches would be formed through the dam. The larger ones would be about 40 feet above the bed of the river, and fitted with "Stoney's" patent sluices, already described. These would be about 10 feet wide and 15 high, while to give complete control about twelve would be required. In addition there would be smaller sluices at a lower level. Since the discharge of such an enormous body of water through sluices might give rise to vibration, I would propose to build into the dam over and around the arches about 1,000 tons of old rails and tram cables, which can be purchased cheaply from the Railway Commissioners.

A fender of old rails would also be constructed in front of the sluices to stop any *debris* which might drift across the permanent lake above the dam. The plans and sections of the proposed dam which accompany this report are, of course, tentative, as more complete information should be obtained by sinking numerous shafts or bores before the design is finally adopted. I have curved the dam slightly in plan as this form allows of a certain amount of expansion and contraction to take place without vertical cracks appearing. Not that such cracks are any real defect in a gravity dam, as each section will stand by itself; they are, however, unsightly, and cause slight leakage which, however, in this case would be of no consequence. The curved form also offers additional resistance to the over-turning pressure, and as it adds little to the cost should, I think, be adopted. I may mention that the huge Quaker Bridge dam now being built in connection with the Croton water supply scheme for New York is curved in places on the recommendation of the Committee of Experts who were appointed to examine the preliminary design.

The depths to which the foundations are shown are of course only approximate; when the shale is laid bare it may appear that certain portions are softer than others, and, consequently, it will be necessary to sink deeper, or widen out the base at these places. My intention is that the foundations should be set 5 feet into solid rock. The coal seams will also have to be followed until hard compact coal is found and a water-tight joint made. These coal seams, though not any improvement to the foundations, will be valuable as providing an unlimited supply of cheap fuel to drive the machinery during construction; a short distance below the dam the coal can be struck about 30 feet below the surface.

It is doubtful how far the south end of the dam will have to be extended into the "Battery Hill" before sound shale or sandstone is found. At the north end I propose to construct an embankment with the best of the material excavated from the foundation.

As the embankment would be subject to pressure for very short periods, and only during high floods, it will not be necessary to obtain such good material as would be required for a dam for water supply purposes. If, however, sufficient good material is not obtainable from the foundations it might be necessary to construct a masonry core. I am, however, of opinion that from the enormous amount to be excavated all that is required will be obtained, though possibly the puddle wall would have to be brought from elsewhere.

It is impossible, without going to much greater expense than is desirable at this stage, to give more than an approximate estimate of cost. The quantities to be dealt with are so enormous that it may be assumed that the best labour-saving appliances and plant will be used. For the purchase of this I have allowed a lump sum of £20,000. The cement would, of course, be specially imported into Newcastle, unless indeed it could be manufactured on the ground. As, however, the nearest line is 15 miles away, it is doubtful, even with coal on the spot, whether this could be done cheaply enough to compete with cement imported in large quantities, and I have no doubt the Railway Commissioners would grant the usual reduction in freight on large quantities carried by rail to Muswellbrook.

Carting

Carting out will be a considerable item, as the distance is about 17 miles; this, however, might be shortened by opening a road through private land for a few miles. I have taken the cement as costing 8s. 6d. per cask on trucks at Newcastle, and adding railway freight and cartage, the cost per cask at the work would be about 13s., so that, as excellent sand in inexhaustible quantities is obtainable from the river on the site, the cost of 3 to 1 mortar would be about 30s. per cubic yard.

All stone would be obtained from the "Battery Hill" which overhangs the site and rises to several hundred feet above it. The stone is very similar to the best Pyrmont stone, and should be quarried by machinery into square blocks, and delivered on the dam at 5s. or less per cubic yard, the waste stone being used to ram into the mortar so as to form concrete. If we allow $\frac{1}{4}$ of the whole mass to consist of mortar and $\frac{3}{4}$ stone the raw material would cost 11s. 3d. per cubic yard; adding 3s. 9d. per yard for placing in position and ramming it will bring the mass work out at 15s. per cubic yard.

This sounds low, and could only be attained where large quantities have to be dealt with and modern appliances are used; yet, taking into consideration the fact of all materials, except cement, being on the ground it is in my opinion, if anything, rather high.

Since designing and working out the estimates for this dam, details of the construction of the Vrynwy dam have been published. I find that the method adopted there, after trials of other methods, was very similar to that adopted by me; and although the builders had a much more difficult stone to deal with they succeeded in getting the average mass to weigh 90 per cent. of the weight of the stone used. Although the profile of the Vrynwy dam is a most extravagant one and has been greatly criticised, no fault can be found with the way in which it was built.

The excavation for the foundations will be through black soil, yellow clay, basalt, boulder, clay, gravel, sand boulders, sandstone, yellow and blue shales. As the quantity will be very large and all in one place it should be done very cheaply. I have added considerably to the quantities to allow for sloping or timbering and for the expense of coffer dams when constructing the dam in sections across the river, and have put the whole down at 1s. 6d. per cubic yard, which is to cover the cost of forming portion of the excavated material into an embankment at the north end. As I have already provided a lump sum for plant, this amount should be sufficient. If advantage is taken of a dry season there should be very little trouble about getting in the foundations.

For sluices, gearing, old rails, cables, and grids I allow a lump sum, which should be more than sufficient, while for engineering and contingencies I allow the usual 10 per cent.

In estimating the quantities of masonry I have made no deduction for the space left by the arches, but have allowed that to go against the extra expense of dressing and selecting stones and other contingent works.

The following is the estimated cost of the dam:—

	£
Excavation and embankment, 410,000 cubic yards at 1s. 6d....	30,750
Rubble masonry, 510,000 cubic yards at 15s. ...	382,500
Sluices and ironwork ...	18,750
Plant ...	20,000
	£452,000
Engineering and contingencies, 10 per cent. ...	45,200
	Total £497,200

It is hardly my province to give an estimate of the cost of land and compensation, nor would it be wise to give details, so the estimate which follows must be taken as very approximate.

It will be necessary to resume in all about 2,000 acres, and to remove the buildings in Denman to the new town, to be laid out on the adjoining reserve, or else to supply new ones in place of old. A certain number of new roads must also be opened up to give access during high floods, or when the reservoir is full.

Telegraph lines would also have to be altered and new ones established. Then there is the difficult question of compensation to owners of grass lands for occasional flooding to be considered, taking into account the increased value owing to the deposit of silt.

Taking all these matters into consideration, I would allow £52,800, bringing the total cost of the Regulating Reservoir up to £550,000.

This is, no doubt, a large sum, but yet not so great as the estimated cost of some previous proposals, which would not have been so effective. If hereafter it should be found necessary, in order to save the farms below Maitland from all flooding, to shorten the channel to Morpeth, this could be done, *via* Howes' Lagoon, for under £20,000. A small cutting at Green Rocks would be a useful work in any case, and could be done for about £6,000.

Since before anything could be done the whole question will have to be considered by the Minister, and submitted by Parliament to the Public Works Committee to be thoroughly thrashed out, it is hardly necessary for me to go further into the matter. For the same reason I refrain from bringing forward any scheme for the payment of the whole or part of the interest by the levy of a tax on the betterment principle, besides the information necessary to frame an equitable scheme of taxation could only be obtained by some such body as the Public Works Committee.

I must, however, express it as my opinion that since the whole country will benefit by the protection afforded to our railways, and by the saving which I am confident will result in the cost of maintenance of Newcastle Harbour, a large proportion of the cost of the work should be borne by the country at large.

I have, &c.,

EDWD. PRICE,
Assistant Engineer, Public Works Department.

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

CLOSING OF WHALING-ROAD, NORTH SYDNEY.

(RETURN RESPECTING.)

Printed under No. 20 Report from Printing Committee, 21st October, 1897.

RETURN to an *Order* made by the Honorable the Legislative Assembly of New South Wales, dated 1st July, 1897, That there be laid upon the Table of this House,—

“ A *précis* of papers in connection with the closing of Whaling-road, North Sydney.”

(*Mr. E. M. Clark.*)

Part of the Whaling-road, Borough of East St. Leonards.

PRÉCIS.

In March, 1868, application was made by the Borough Council of East St. Leonards for proclamation of alignment of roads and streets in their Municipality.

In compliance with this request, the late Licensed Surveyor Armstrong was instructed to make the necessary survey for the purpose. To carry out the work he was compelled to resurvey certain land known as the Whaling allotments, situate between Careening Cove and Neutral Bay, in order to determine the position of the Central road, now called the Whaling-road.

Mr. Licensed-Surveyor Armstrong reported, when transmitting his plan, that his survey on the south-west of the Whaling-road agreed very well throughout with the original survey, which proved that the road was correctly placed by him. He further stated that to give Mr. Loxton (who owns part of Mitchell and How's grant) his boundaries as conveyed to him by deed it would be necessary to extend the measurements across the road laid out by him; and the opposite allotment (No. 2, Barker's, now Parbury's) would be deprived of its road frontage—in other words, the grant would overlap the road.

Further on in his report he speaks of the buildings erected by Messrs. Loxton and Younger as intrusions on the road.

Mr. Surveyor Deering, who was instructed to report on Mr. Armstrong's survey, in consequence of the protests of Mr. Loxton, takes exception to the term “ intrusion,” as applied by Mr. Licensed-Surveyor Armstrong, and states that the buildings are within the boundaries granted by the Crown, and that the facts are:—That the Government, on one hand, reserved the Whaling-road on the designs for subdivision in the descriptions of all surrounding grants, and in the survey of the allotments on the south-western side of the road; but, on the other hand, the Government included the road in the survey and measurements of the north-eastern allotments; and further, that the dimensions of these allotments, as furnished by Mr. Assistant-Surveyor Larmer (the original survey), embraced the road beyond all doubt.

Proclamation of the streets, as surveyed by Mr. Armstrong, was made in August, 1870, and confirmation in May, 1873, with the exception of that part of the Whaling-road between the western boundary of the Whaling lots and the waters of Port Jackson (the part in question), and this omission was in consequence of protests made by Mr. Loxton, on the grounds that the road, as marked by Mr. Armstrong, ran within a few feet of his residence (which was erected at great cost), and cut off about 2 acres of his land. Whereas he alleged the road ought to be without his boundaries, as granted by deed (*vide* accompanying plan).

When authority was obtained of the Executive Council for alignment of the streets under 2nd Victoria No. 2, the part of the Whaling-road referred to, *viz.*, from the western boundary of the Whaling allotments to the waters of Port Jackson, was carefully excluded, as it had been from the confirmation notice, and consequently did not receive Executive authority for alignment, yet, by a mistake, it was included in the alignment notice with the other streets.

On

352—A

[580 copies—Approximate Cost of Printing (labour and material), £7 7s. 5d.]

On a memo. from the Clerk of the Executive Council asking how this error can be cured, the question was referred to the Crown Solicitor, who returned the papers at the request of this Department, with a statement to the effect that the Attorney-General had not advised in the case yet.

Mr. Lamb, on behalf of Mr. Parbury, applied for the Government to take immediate steps for the removal of serious obstructions that have been placed on the Whaling-road by private persons (meaning Mr. Loxton and Mr. Younger), and for the opening such road for the use of surrounding residents.

Investigation showed that a design for the subdivision of the point of land on which the Whaling allotments are situate was approved by Governor Darling in July, 1830.

A survey in accordance with this design was made of portions Nos. 3, 4, 5, 6, and 7 in May, 1831. These portions lie on both sides of the Whaling-road.

It was stated by Mr. Lamb that the grants of the allotments on the northern side of the road are many years subsequent to the date of those under which his client (Mr. Parbury) claimed. This is not the case, for the respective dates of some of these grants are as follows:—

Barker's, lots 1 and 2, south side; date, July, 1834.
 Donnison's, lot 3, south side; date, February, 1837.
 Brown's, lot 6, north side; date, May, 1840.
 J. Lamb, lot 4, south side; date, June, 1841.
 Mitchell and How, lot 7, north side; date, September, 1846.

There is no doubt that Barker and Donnison's grants, all on the south-west of road, were the first issued, and it is in right of these that Mr. Lamb claimed to have the road opened.

It was submitted to the Honorable the Minister for Lands that the Crown Law Officer's opinion be obtained, not only on the subject of the letter from the Clerk of the Executive Council, but also as to the legality of carrying the Whaling-road, as surveyed, to the waters of Port Jackson, having in view all the circumstances of the case, and also section 15 of 4 William IV. No. 11.

On 25th May, 1876, the Minister for Lands (Mr. Garrett) approved of the papers being forwarded for the Crown Law Officer's opinion on the subjects mentioned in the foregoing paragraph, and, in accordance with that approval, the papers were so forwarded.

On the 4th June, 1877, the Crown Solicitor returned the case, with a statement that the Attorney-General was unable to advise thereon until furnished with further information respecting it. Such further information was supplied to the Attorney-General (Mr. Windeyer) by an officer of the Surveyor-General's Department, in the course of a personal interview, but the Attorney-General does not appear to have advised on the case at that stage, and on the 7th January, 1878, the papers were obtained from the Crown Solicitor, for the information of the Minister for Lands (Mr. Farnell), who had consented to receive a deputation of property-holders interested in the opening of the road.

No notes of what transpired at the interview granted by the Minister to the deputation can be found with the case, but on the 15th January, 1878, the Minister wrote:—"This road may now go on to completion."

Several communications were next received from persons interested, urging the opening of the road, and on the 17th April, 1878, in the Legislative Assembly, Mr. Greenwood, M.P., asked the Secretary for Lands, pursuant to notice,—

- (1.) Have any steps been taken towards removing the obstructions which prevent the public from using the Government Road at St. Leonards, called the Whaling-road?
- (2.) Do the Government intend to open the said road; and, if so, when?

Mr. Farnell answered,—

- (1.) No steps have been taken, for though it was the intention of the Government to reserve a road, no allowance was made for it in the measurement of adjoining grants.
- (2.) No decision has been arrived at, and the case will probably require the introduction of a special Bill before Parliament.

On a communication from Mr. R. P. Abbott, who, on behalf of Mr. P. Hayes, urged that in the settlement of any question as to the opening or closing of the road, the latter's claim to have such road as the eastern boundary of his land should not be overlooked. The Minister (Mr. Farnell), on 10th May, 1878, wrote, "A Bill will be required to deal with the matter of the Whaling-road. All claims will be considered."

Mr. Surveyor Maitland was then, on the 23rd May, 1878, requested "to make himself acquainted with the requirements of the persons interested in the road herein referred to as the Whaling-road, and to suggest a way in which a road may be taken through the peninsula to the waters of the harbour that will meet the requirements of a majority of the people interested, and that will not entail the necessity of paying an excessive amount of compensation."

In reply, Mr. Surveyor Maitland, on 29th June, 1878, transmitted a plan and field-notes of a survey of proposed road through the Whaling allotments from Alfred-street to the waters of Port Jackson, and reported in connection therewith that after a close inspection of the locality he had laid out a road that he would suggest as the most suitable to meet the views of a very large majority of those interested in the matter, and which would entail the necessity of the Crown paying a smaller amount of compensation than any other line that could be adopted.

In his report, Mr. Maitland stated that it appeared to him that there were but three possible lines, one of which would have to be adopted—

1. A continuation of the Whaling-road, as surveyed by Mr. Armstrong, passing through land claimed by Thomas Loxton, Watt and Fell, Wood and Younger, Edward Lord and Mrs. Younger.
2. A road passing through lands owned by G. von Meyer, J. E. Loxton, H. Simpson, W. Cope, J. J. Slade, W. Henderson, and Edward Lord.
3. A continuation of High-street (already dedicated to the public as far as the west boundary of E. Lord's 1 acre 1 rood by Mr. Lamb's private subdivision) through Edward Lord's land to the water's edge.

To the first-mentioned line—that proposed by Mr. Armstrong—Mr. Maitland took very strong objection, sharing the opinion expressed by Mr. Surveyor Deering that the fact of Thomas Loxton's land embracing

embracing the road is an error wholly attributable to the surveyor (Mr. Larmer) who originally surveyed the land, and apprehending consequently that the Government would be called upon to pay a very serious amount as compensation to Loxton, as the damage done to the latter's property would be very material.

In the case of line No. 2, Mr. Maitland reported that compensation would have to be paid to each of the proprietors, not only for the area taken from their properties for the road, but also for damage effected by the fact of the road passing in close proximity to buildings, &c.

The exceedingly rough, precipitous nature of the country formed a further objection, in Mr. Maitland's opinion, to the adoption of either of lines 1 or 2.

With regard to line No. 3, Mr. Maitland reported that though some compensation would be demanded, that line would cost the Government less than either of the other lines mentioned, met with the approval of a large majority of the persons interested, presented no engineering difficulties, and was, in consequence, the one which he could confidently recommend for adoption, suggesting, for economic reasons, that High-street should be retained at its original width (83 feet) as far as Edward Lord's 1 acre 1 rood, through which it should be widened to 50 feet.

In a further communication, dated 23rd July, 1878, Mr. Maitland, at the request of the Surveyor-General, reported having shown upon the plan transmitted with his previous letter (of 29th June, 1878) "a means of access to every proprietor of land having frontage to the Whaling-road"; that the roads shown thereon by dotted lines through Watt and Fell's portion were, he was informed by Mr. Fell, secured by deed and afforded access to the portion owned by Messrs. Wood and Younger; and that the road proposed by him afforded "good means of access to Edward Lord, Mrs. Younger and P. Hayes' portions."

The papers were then (on 25th September, 1878) forwarded by the Surveyor-General to "Lands" for the purpose of the preparation of the special Act.

At the meantime, the Minister was again approached by a deputation in the matter, and on the 22nd October, 1878, in the Legislative Assembly, Mr. Greenwood, M.P., asked the Secretary for Lands,—

- (1.) Is it the intention of the Government to open the Whaling-road at North Shore?
- (2.) Is it deemed necessary to deal with the matter by Bill; and, if so, when will such Bill be brought in?
- (3.) Failing the opening of the said road, what other provision do the Government intend making to remedy the great inconvenience now suffered by property-owners in its vicinity?

Mr. Farnell answered,—

- (1.) Yes.
- (2.) By Bill, which will shortly be placed in the hands of the Parliamentary Draftsman.
- (3.) Answered by previous answers.

NOTE.—In October, 1878, the business of dealing with road matters was transferred from the authority of the Minister for Lands to that of the Minister for Mines.

The papers were then, on the 11th November, 1878, forwarded to the Parliamentary Draftsman to prepare a Bill.

In response to a request of the Parliamentary Draftsman certain further particulars were supplied to him, and on 19th March, 1879, he forwarded for the perusal of the Honorable the Secretary for Mines a proof copy of a "Bill to authorise the prolongation of High-street, in the Borough of East St. Leonards, in the county of Cumberland, to the waters of Port Jackson."

Further communications from interested parties were received, and deputations waited upon the Minister for Mines in the matter.

In a lengthy letter, dated 23rd April, 1879, Mr. Donnelly Fisher, a petitioner for the opening of the Whaling-road, advanced arguments, such as the fact of the Government having granted land with a frontage to Whaling-road, thereby practically dedicating that road to the public, and also on the score of economy to the Government to support the contention that the Whaling-road should be opened instead of the proposed prolongation of High-street, but upon that letter the Minister for Mines (Mr. Baker) wrote:—"It is thought that High-street should be proclaimed and opened to the water's edge.—Approved.—E.A.B., 7/6/79."

On a further communication being received from Mr. Donnelly Fisher, that gentleman was informed that "the Minister for Mines has directed the extension of High-street to the waters of Port Jackson, through Mr. Lord's property. Proclamation of the same is now about to be made."

On 15th July, 1879, the authority of His Excellency the Lieutenant-Governor (Sir Alfred Stephen) and the Executive Council was obtained for the "preliminary notification" of High-street from Alfred-street to the waters of Port Jackson, parish of Willoughby, county of Cumberland, and notice was duly published in the *Government Gazette* of 8th August, 1879, folio 3513.

After waiting the customary time for the receipt of objections to the proposed road the Clerk of the Executive Council returned the case, with a statement that no objections had been lodged with him.

On 20th November, 1879, the Deputy Surveyor-General wrote the following minute:—"I am of opinion that the case of the Whaling-road, and claims in connection with it, can be dealt with only by a special Bill, as previously determined (see Ministerial 78-5502 herein); but should it be considered that this part of High-street can be established under 4th William IV No. 11, which I believe cannot legally be done, and that its establishment meets the necessities of the case, confirmation is the action remaining to be taken."

Further public demand for the opening of the prolongation of High-street was made, and on the 11th May, 1880, in the Legislative Assembly, Mr. Greenwood, M.P., asked the Secretary for Lands,—

- (1.) Is the Government aware that Whaling-road, St. Leonards East, has been stopped at one end by a land-owner, who claims that he has purchased it?
- (2.) Will the Government inquire into his right; and, if such exists, give him compensation, so that the street or road will be opened as promised?

Mr. Baker answered,—

- (1.) Yes; it is understood that a portion of the road in question has been obstructed.
- (2.) The matter is now under the consideration of the Government.

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The Minister for Mines, after going into the matter, and according an interview to Mr. Lord (through whose land it was proposed to take the road—the extension of High-street) intimated through the Under Secretary for Mines that he wished the extension to High-street to be “shown in such a position as to take as little as possible of Mr. Lord’s land between Mrs. Younger’s land and the water frontage even though it involved a bend in the street.” The case was then, on the 21st July, 1880, referred to Mr. District-Surveyor Woolrych, who was requested to report upon the proposed alteration of High-street in accordance with the direction of the Minister for Mines, and who was informed that it was understood that the street should be 33 feet wide and not 50 feet, as laid out by Mr. Maitland. Mr. Woolrych transferred the instruction to Mr. Surveyor Bullock, who, on the 2nd September, 1880, reported that after carefully examining into the relative merits (as regarded gradients, cost of formation, and convenience to the public) of the road as laid out by Mr. Maitland, and the suggested alteration thereof, he was of opinion that the road as laid out by Mr. Maitland was by far the better one, and added that he failed to see a single reason why the deviation should have been thought of. Mr. Bullock further stated, “It would appear, on inspecting tracing, that Mrs. Younger would have no access to the road—should the road as laid out by Mr. Surveyor Maitland be adopted. This, however, would not be the case, for Mr. Lord informs me that she is entitled to a right-of-way through his land to the present street.”

The Deputy Surveyor-General then wrote the following minute: “Under this report the suggested deviation is inferior to the road laid out by Mr. Surveyor Maitland, and cannot be recommended as affording any solution to the difficulties of the case.”

Further communications from the public urging the speedy settlement of the road question were received.

On 15th December, 1880, a tracing illustrative of the course of the proposed road through his land was forwarded to Mr. Edward Lord, and that gentleman was requested to say what sum he would claim as compensation in the event of the road being carried through his land in the position shown thereon.

On 21st December, 1880, Mr. Lord replied that he would require compensation to the amount of £500.

The Surveyor-General then minuted, “*The acceptance of Mr. Lord’s offer cannot be recommended, as the amount of compensation asked for by Mr. Lord is so great, and even though it be granted and High-street carried out, it would still leave the question of the Whaling-road unsettled.* Attention is drawn to the course proposed in my minute of 20th November, 1879, upon Roads 79–3,291.”

The Minister for Mines then directed that a valuation should be obtained of the land proposed to be taken from Mr. Lord, and Mr. District-Surveyor Woolrych was instructed to cause such valuation to be made. Mr. Woolrych transferred the instructions to Mr. Surveyor Bullock, who, on the 16th July, 1881, reported that the proposed extension of High-street would take from Mr. Lord’s property an area of 1 rood and 2 perches, which he (Mr. Bullock) valued at £250, and from an adjoining property, an area 29 perches, valued at £190. Total value of land taken, £440.

The Minister for Mines (Mr. Suttor) then asked whether the reservation of 100 feet from high-water mark, which existed in the deeds of grant of the land that would be effected should High-street be carried to the water’s edge, had been alienated; and upon being informed that, although application for permission to purchase the rescission of that reserve had been lodged, it had not been alienated, directed that all applications for permission to purchase the rescission of the reserve referred to should be refused pending the settlement of the question of compensation for land required for road.

Meanwhile, on the 7th July, 1881, in the Legislative Assembly, Mr. Farnell had asked the Secretary for Mines,—

Has any action been taken; and, if so, what action, relative to the opening of Whaling-road, at North Shore, to the waters of Port Jackson, or has any action been taken for the opening of a road or street in lieu of the said Whaling-road?—and Mr. Baker had answered,—No action has recently been taken in relation to the opening of the Whaling-road, at North Shore, to the waters of Port Jackson. An extension of High-street, at North Shore, to the waters of Port Jackson has been proclaimed, but such extension has not yet been confirmed pending receipt of a report by the District Surveyor upon claim for compensation for land required for such extension.

Further communications urging the opening of High-street to the water’s edge were received, and on the 27th September, 1881, in the Legislative Assembly, Mr. Farnell asked the Secretary for Mines,—“What progress has been made towards opening High-street at St. Leonards, and when is it probable that the said street will be opened?” to which Mr. Suttor answered,—“The question of compensation for land required for the extension of High-street to the waters of Port Jackson is at present under consideration. As soon as that has been decided, High-street to the water’s edge, will be confirmed.”

“On 22nd November, 1881, the Minister for Mines (Mr. Renwick) wrote:—“With reference to the opening of High-street, St. Leonards, to deep water, and Mr. Lord’s claim for compensation in connection therewith, I am of opinion, considering that Mr. Lord is now an applicant for certain reserved Crown land (100 feet above high-water mark in front of his property), which it has been recommended by the proper officers, he should have at a nominal price; and, further, that in original tracings the quantity of land to be taken for this street from Mr. Lord was represented as being about half an acre (as it was supposed to include land contained in the reserve already referred to), and the valuation fixed by Mr. Lord for such quantity was £500, but as it is now known that the land to be taken from Mr. Lord’s property is only quarter of an acre, Mr. Lord should be content to take £300 compensation, and that he be informed accordingly.” Mr. Lord was informed in terms of Mr. Secretary Renwick’s minute, and on 30th November, 1881, he gave a written agreement to accept £300 in satisfaction of his claim. The Minister then directed that steps should at once be taken to establish the road by confirmation, and upon the Surveyor-General pointing out that the road as proposed included another strip of land 29 perches in area, and which Surveyor Bullock had valued at £190, and for which, although no application for compensation had at that time been received, compensation would ultimately have to be paid, said that any claim, if made in respect of that piece of land could be dealt with at the proper time; and, further, drew attention to the fact that 27 perches out of the area quoted came within the 100-foot reservation, and that, consequently, the landowner could claim only in respect of the remainder, viz., 2 perches.

The road, “High-street from Alfred-street to the waters of Port Jackson,” was then confirmed by notice in *Government Gazette* of 20th January, 1882, folio 330; claims for compensation in respect of land

land taken for the confirmed road were received from Mr. J. J. Slade (£100), and from Mrs. Thomasine Fisher (*per* Donnelly Fisher). These claims were referred to Mr. District-Surveyor Woolrych—and by him transferred to Mr. Surveyor Maitland—for report.

Mr. Maitland reported that Mr. J. J. Slade's claim was excessive, and that a sum of £55 would be fair compensation. Mr. Slade was informed of the surveyor's report, and on 20th July, 1882, wrote expressing his willingness to accept the amount mentioned, £55, as full compensation, and Treasury was authorised to pay him that sum.

In the case of Mrs. Fisher, Mr. Maitland recommended that a slight deviation in the road should be made to avoid encroachment upon the properties of Mrs. Fisher and others. This recommendation was given effect to. An objection on the score of encroachment to High-street, as originally surveyed, was at a later date received from Mr. J. F. Loxton, but the encroachment complained of was avoided in the deviation recommended by Surveyor Maitland and approved by the Minister.

The agitation for the opening of the Whaling-road was renewed by property-holders interested therein, and deputations waited upon the Minister for Mines with the object of urging the adoption by the Government of one of two courses, namely—to open the road and compensate owners of land on northern side of such road for loss of land and improvements, and deterioration in value of property, or to close the road and compensate land-owners on both sides of it for the loss of such road.

On 31st March, 1882, Mr. Stopps (for the Surveyor-General) wrote the following explanatory minute:—"Could any definite position be assigned to, or agreed upon, for Whaling-road valuable property and improvements would be interfered with, and it is doubtful that the Borough Council of East St. Leonards would ever make the road, as the land is described to be remarkably broken and precipitous; these facts, together with other circumstances of the case, fully dealt with in previous papers, led to the determination which was arrived at in 1878, namely, that Whaling-road should be annulled by Act of Parliament, and any claims arising out of such action should be dealt with under the Bill, which was also to provide for the resumption of land to extend High-street (a private street) to the waters of Port Jackson, and such extension of High-street was to be in lieu of Whaling-road, which road virtually never had any existence. The Bill referred to was prepared, and a survey was made of the proposed extension of High-street, which was to be established under the Bill in connection with the settlement of claims for loss or deprivation of frontage to Whaling-road through its cancellation. The Bill, however, never became law, but High-street was carried down to the water's edge under 4th William 4th, No. XI, thus leaving undone the intended abolition of Whaling-road and settlement of claims consequent thereon, which were the objects for which the survey of the extension of High-street was made."

In response to a verbal request made by the Minister for Mines that those land-owners who, in the event of the Whaling-road being closed, would consider that they had claims against the Government for compensation for loss of frontage, &c., would furnish estimates of the amount of compensation they would require, the following forwarded claims:—T. J. Loxton, £5,000; Mr. G. von Meyer, £3,000; Mr. J. J. Slade (for self and Mrs. Thomasine Fisher), £2,708; T. H. Simpson, £450. J. F. Loxton also wrote in on the subject, complaining that his property was very injuriously affected by the non-opening of Whaling-road, but without specifying the amount of compensation he would claim in the event of the road being closed. Mr. Henry Levien, solicitor for Mr. George von Meyer, wrote in, stating that he had been instructed by his client to demand £4,000 as compensation for damage to property by the closing of the road.

In connection with his application for permission to purchase the rescission of the 100-foot reservation in front of his property, Mr. E. Lord relinquished any claim he might have in respect of the Whaling-road.

On the 9th January, 1883, the Principal Under Secretary (Mr. Critchett Walker) addressed a communication to the Under Secretary for Lands, stating that, by notification in the *Government Gazette* of that day's date, the Honorable Sir John Robertson, K.C.M.G., Secretary for Lands, had been appointed nominal defendant in "the matter of the petition presented by Mr. R. H. Levien, solicitor, to His Excellency, on behalf of Mr. George von Meyer, as to a certain claim or demand which he deems himself to have against the Government."

On the 7th February, 1883, Mr. R. H. Levien wrote to the Minister for Lands asking for an interview, with the object of seeing if a settlement could be arrived at with regard to the claim of G. von Meyer. The matter was referred to the Under Secretary for Mines, and the Minister for Mines was supplied with copies of the deeds of grant of the land through which the Whaling-road is supposed to pass.

On the 15th March, 1883, the Minister for Mines (Mr. J. P. Abbott) wrote: "The question at issue in reference to this matter is really not one of roads, but, as I take it, rather a claim for an error made in the Department of Lands by issuing a grant which included a road. If the claimant is entitled to any compensation it is for the loss he has suffered through this mistake, and the late Government named Sir John Robertson (as the head of the Department which is charged with making the mistake) as the nominal defendant. If the plaintiff is entitled to compensation, a jury alone, it appears to me, can safely assess that compensation."

Several of the land-owners interested renewed the agitation for a speedy settlement of the road question, and the Minister for Mines (Mr. J. P. Abbott), in referring the matter to the Crown Solicitor for Attorney-General's opinion thereon, wrote the following minute:—"In February, 1837, the Crown made a grant to Henry Donnison of 8 acres 2 roods 5 perches. This land is described as starting at a rock in Careening Cove, and bounded by a road (*see* copy of the grant at page 5 hereto annexed, and also copy of a plan herewith). In 1840 the Crown made another grant to William Brown of 3 acres 2 roods 36 perches. This land is described as starting from the waters of Neutral Bay (*see* copy of grant at page 17, and also the plans). This grant is described as extending from the water to a road, but the length of the lines given has the effect of including within the description of that grant whatever road was referred to in the grant of 1837 (*see* plan). I shall be glad to be advised whether by the first grant there was not an actual dedication of a road?

"(2.) Whether the second grant was not inoperative, so far as it had the effect of granting that road?

"(3.) What rights have the present owners of the second grant for a deficient area within their boundaries, assuming that the Crown had no power to include the road?

"I shall be glad if the Attorney-General will favour me with his opinion upon the points submitted as soon as possible.

"Mr.

"Mr. Attorney-General Dalley inquired whether, at the time of grant being made to Donnison (February, 1837), there was any road in user on the boundary-line of this piece of land between Neutral Bay and Careening Cove, or whether any such road is shown on the old maps? Also whether, if no road were either actually in user or marked on any plan at the time of Donnison's grant, it was in existence at the time of Brown's, three years afterwards"; and was informed by Mr. Stopps, for Surveyor-General, that there was nothing whatever to show that a road or track was in use along the boundary in question of Donnison's grant, that, on the contrary, there appeared to be presumptive proof that a road could not have been in use, inasmuch that the land along that boundary formed the crest of a steep, rocky, and broken hill, which had been described as almost impracticable in its natural condition, as at present—that, probably, the only access to the Whaling allotments that was required or used at the time was by the waters of the harbour, and that a sketch (which was forwarded to the Attorney-General with this minute) showed "that the design for the subdivision of the promontory proposed to provide land for a road which should run along the middle of the promontory, and separate the allotments on one side from those on the other side; but the lengths of lines and areas given under the deeds of the allotments embraced the land proposed to be set apart as a road."

Mr. Attorney-General Dalley then advised as follows:—"I have now seen the Surveyor-General's report, confirmed by an explanatory plan. It appears clear from the papers that there was no road in use along the boundary of Denison's (this should be 'Donnison's') grant. The design for the subdivision of the promontory proposed to provide land for a road running along the middle of the promontory, but the lines and areas of the allotments given in the deeds embrace the proposed road, and, therefore, show that this design for the road was never carried out. I think, therefore, it must be assumed that there was no road either by dedication or user."

In the meantime, in the Legislative Assembly, Mr. Holterman moved, pursuant to Notice, "That there be laid upon the Table of this House copies of all papers, correspondence, minutes, reports, plans, and any and all other documents in connection with the dedication, resumption, closing, or sale of Whaling-road, Milson's Point, North Shore, or the resumption, closing, or sale of any portion of such road."

The question was put and passed. In obedience to the order of the Legislative Assembly, a return was prepared, and laid upon the Table of the Legislative Assembly on 6th February, 1884, with tracings.

On 7th February, 1884, the Honorable John McIntosh, M.L.C., forwarded a letter received by him from Mr. Georgo von Meyer, in which the latter urged his claim for compensation in respect of the closing of the Whaling-road. No action was taken upon the letter, pending the settlement of the question.

On 6th May, 1884, the Legislative Assembly appointed a Select Committee, consisting of Messrs. Abigail, Withers, Chapman, Sydney Smith, George Campbell, Levien, A. G. Taylor, Abbott, Harris, and Holtermann (Chairman), "to inquire into and report upon the opening of Whaling-road, at North Shore, from Alfred-street to the waters of Port Jackson." On 1st November, 1884, that Committee issued the following report:—

1. Your Committee, having examined the witnesses named in the list (whose names will be found appended hereto) find as follows:—

1. That, in about the year 1830, Mr. James Larmer, licensed surveyor, acting under instructions from Mr. Surveyor-General Mitchell, surveyed and marked out at North Shore a road 1 chain wide, which road divided two sets of allotments granted for the purpose of encouraging the whaling industry, and was known as the Whaling-road.
2. That the allotments referred to have since been sold by the original grantees to various purchasers, and have been subdivided by different surveyors and resold. In some of these measurements the road has been absorbed, and is now held by the purchasers of the allotments under the subdivisions.
3. That the original allotments are now shown to exceed in area the quantity of land granted by more than would suffice to restore the road.

2. Your Committee, in view of the foregoing facts, are of opinion that the road known as the Whaling-road should be at once dedicated and proclaimed by the Government as a public thoroughfare.

On 20th January, 1886, Sir Henry Parkes, K.C.M.G., on behalf of G. von Meyer, wrote *re* the Whaling-road, and the Minister for Mines (Mr. R. M. Vaughn) replied:—"Sir Henry Parkes may be informed that nothing more can be done in the matter."

NOTE.—In May, 1887, the business of dealing with road matters was retransferred from the authority of the Minister for Mines to that of the Minister for Lands.

On 17th August, 1887, the Borough Council of East St. Leonards requested that alignment posts should be fixed in position on the Whaling-road, and stated "the Whaling-road has already been aligned."

On the 31st August, 1887, the Borough Council was informed that there is no alignment of the road in question to mark with posts, consequently their request could not be complied with. The Borough Council then applied to have the Whaling-road aligned, and on 23rd September, 1887, wrote requesting an interview with the Minister for Lands in connection with the matter. The Minister (Mr. Garrett) appointed a day to see the deputation, and wrote, "The position of the Crown can only be satisfactorily ascertained by referring the case to the Crown Law officers for their opinion, which is set out on papers herewith."

The papers were accordingly forwarded to the Crown Solicitor on 4th October, 1887.

On 27th September, 1887, a Mr. Henry Deane, on behalf of land and property owners in the neighbourhood of an alleged road called the Whaling-road, wrote to the Minister for Lands requesting him to fix a day to receive a deputation in opposition to the opening of the said road.

The writer was informed that Mr. Secretary Garrett had already decided to grant an interview at 2:30 p.m. on 30th September, 1887, to a deputation from the Borough Council (presumably in advocacy of the opening of the Whaling-road), and would receive the deputation in opposition to the opening of that road at the same hour. Mr. Deane then wrote expressing regret at the inability of his deputation to attend at the hour named, and asked the Minister to defer arriving at any definite determination with regard to the road in question until his deputation expressed their views in writing.

In January, 1888, Mr. G. von Meyer wrote to Mr. Burns (Acting Minister for Lands), urging the matter of the Whaling-road, and on 25th February, 1888, Mr. Secretary Garrett, referring to delay by
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Crown Solicitor in furnishing the opinion of the Attorney-General on the matter, wrote: "It is of the greatest importance that the opinion sought for should be given without delay, as there are cases before the lower Courts and a Committee of the Legislative Assembly sitting on the matter at present." The Crown Solicitor was accordingly requested to expedite action on the matter.

On 6th March, 1888, the Crown Solicitor returned the paper with a request preferred by Mr. Attorney-General Simpson for further information in the case. In making the request, the Attorney-General remarked: "These papers appear to have been before the late Attorney-General since October, 1887, and he has evidently not advised on the case for some reason which he considered a good one. I believe it was because proceedings are going on in a Court of Equity, and he did not think the Crown should interfere pending such proceedings. I find in a letter written by the late Attorney-General on 23rd January last to Mr. von Meyer, Whaling-road, the following:—'The Attorney-General desires me (the Secretary to Attorney-General) to inform you that as the matter is pending in the Supreme Court he has deferred giving his opinion upon the point of law involved. You are under a misapprehension in thinking that any opinion of the Attorney-General would settle the matter in dispute. The point is a legal one, and seeing that legal proceedings have been taken it can only be settled in a Court of law.'

"I have had a conversation with the late Attorney-General, and I am very much inclined to agree with him.

"As, however, my hon. colleague the Minister for Lands wishes for the opinion of the Crown Law Officers—meaning thereby, I assume, the Attorney-General—I will be very happy to give an opinion, without any delay, upon a proper *précis* of the case being prepared and submitted."

Mr. Stopps, of the Surveyor-General's Department, waited upon the Attorney-General with required information, and explained the case to him. The question submitted for opinion was as follows:—"Assuming that there is no land, or insufficient land to afford a roadway in the position described in the deeds of the allotments of land alienated by the Crown, is the Crown legally responsible; and, if so, what steps would the Attorney-General advise to be taken in the matter?"

On the 9th April, 1888, Mr. Attorney-General Simpson advised as follows:—"I am of opinion that the Crown is not legally responsible, at all events to the present owners of the lands in question. I advise that no steps be taken by the Crown, and that the parties interested be left to have their rights determined by the legal tribunals of the Colony. I understand that equity proceedings are now pending."

The Minister for Lands (Mr. Garrett), on 23rd April, 1888, wrote: "Seen. Attorney-General's advice to be acted upon."

On 22nd August, 1888, the Cumberland Ranger (Mr. J. McKeown) forwarded a letter which he had received from Mr. G. von Meyer, in which the latter complained that the Great Northern Coal Company had fenced in a piece of Crown land which formed part of the Whaling-road. Mr. von Meyer was informed that if any Crown land existed at the point in question forming part of a road, and was illegally enclosed and occupied, it came within the scope of the authority of the Municipal Council to protect the rights of the ratepayers from infringement.

On 23rd October, 1888, Mr. G. von Meyer interviewed the Minister for Lands (Mr. Brunker), and left a letter (setting forth at length the injury which he claimed had been done him by the non-opening of the Whaling-road), together with some other documents and newspaper clippings.

In the meantime the case of the Whaling-road had come before the Police Court at St. Leonards, Mr. von Meyer and five other persons having pulled down a wall that had been erected by J. F. Loxton, across what was claimed to be part of the Whaling-road, were proceeded against on an information laid by the latter on a charge of "forcible entry." Mr. Stopps attended on behalf of the Department of Lands, and produced certain evidence that had been called for. The defendants were discharged.

On 22nd November, 1889, Mr. G. von Meyer wrote asking for an interview with the Minister for Lands. The Minister (Mr. Brunker) appointed Thursday, 19th December, 1889. On that day a deputation consisting of Mr. Cullen, M.P., Mr. von Meyer, Alderman Clark, and others attended. Mr. von Meyer reiterated the statements set forth in his letter of 23rd October, 1888, to the Minister of Lands, as to the injury done him by the non-opening of the Whaling-road. Alderman Clark said the Municipal Council of which he was a member, were being continually pestered by people to do something in the matter of the Whaling-road, and he contended that the road having been gazetted, and also recommended for establishment by the Select Committee of the Legislative Assembly, should be opened up by the Department.

The Minister (Mr. Brunker) said "he could do nothing in regard to the case. The Crown has a legal adviser—the Attorney-General—who has advised that the Crown was not responsible, and that the parties interested should be left to have their right determined by the legal tribunals of the Colony. The survey of these Whaling grants appeared to have been first made on paper, and when they came to be made on the land, it was found that there was not sufficient ground available for both grants and road." With regard to the statement that the road had been confirmed by *Gazette* notification, the Minister said that "the road had not been confirmed, but, through an error, it had been included in the alignment notice. It was only a notice, and not one binding on the Government. In any case he could not go against the 'Attorney-General's opinion.'"

On 28th July, 1890, the Municipal Council of East St. Leonards requested the Minister for Lands to "proceed against Mr. Loxton for an intrusion upon Crown lands, and to cause such lands to be properly laid out and dedicated as a road;" the lands referred to being described as the Whaling-road.

The Council was informed as follows:—"The Department is not satisfied that there has been encroachment upon Crown land by Mr. Loxton, or that there are grounds sufficient to take action against him for intrusion, and declines to comply with the request of the Borough Council of East St. Leonards.

On 26th and 27th October, 1890, Mr. D. M. Maitland attended, on behalf of the Department of Lands, at the Supreme Court (in Equity), with evidence in the case of Loxton *versus* von Meyer.

On 8th November, 1890, the Borough Council of North Sydney solicited an interview with the Minister for Lands, with the object of urging upon him that the Government lodge a caveat against the application of Lucinda Jane Loxton (No. 8,189) to bring certain lands (including part of the alleged Whaling-road), and which lands were described in *Government Gazette* of 17th October, 1890, folio 8070, under the provisions of the Real Property Act.

On the 14th November, 1890, the Minister (Mr. Brunker) received the deputation, which consisted of Mr. Cullen, M.P., the Mayor, Aldermen Clark and Mosely, &c., &c.

The deputation said that the Borough Council, in the interests of the ratepayers, had decided to lodge a caveat against the application of Mrs. Loxton, and asked the Minister to strengthen their hands by lodging another. Mrs. Loxton would get 4 acres 3 perches if her application were granted, whereas she was only entitled under her grant to 3 acres 22 perches.

The Minister said that he could not do what they desired. He had the opinion of the Attorney-General that he was not justified in so doing. He thought that if the Council lodged a caveat the better course would be to have the matter threshed out in the Supreme Court. The Department would look very foolish going into Court when they had documentary evidence to show that the Whaling-road had been carefully omitted from the alignment. In regard to the area, not one of these old grants but had more than its proper area. Their surveyors did not say there was Government land there—quite the opposite, and they would soon have this pointed out to them if they went into Court.

On 17th November, 1890, the Borough Council of North Sydney addressed a communication to Sir Henry Parkes, K.C.M.G., further urging that the Government should lodge a caveat against Mrs. Loxton's application. The letter was referred to the Minister for Lands (Mr. Brunker), who decided that, in view of the answer given to the deputation on 14th November, 1890, no further action was necessary thereon.

On 20th July, 1891, in answer to a request made by Messrs. Ellis, Makinson, and Plunkett to be allowed to file an information and statement of claim in the name of the Attorney-General, and of their clients (Tierney and others, trustees of St. Joseph's Investment and Building Society) to assert a right to the Whaling-road as a highway, Mr. Attorney-General Simpson wrote, "Inform Messrs. Ellis, Makinson, and Plunkett that, after due consideration, I have come to the conclusion that it is my duty to refuse compliance with the request contained in their letter of the 20th instant."

On 21st December, 1891, the Legislative Assembly appointed a Select Committee, consisting of Messrs. Copeland, McGowen, Haynes, Cook, Want, Crick, Levien, Hutchinson, Hassall, and E. M. Clark (which Committee was subsequently altered to include Messrs. Rose, Donald, and Dr. Hollis in lieu of Messrs. Want, Crick, and Hassall), to inquire into and report upon the opening of the Whaling-road, North Shore. On the 17th March, 1892, the Special Committee reported that they were of opinion that the road as shown on plans referred to and known as the Whaling Road, was a public thoroughfare, and recommended that the road "as gazetted on 18th July, 1893," should be at once opened by the Government for public use.

On the 29th November, 1891, judgment was delivered in the case of Tierney *versus* Loxton. Tierney had lodged a caveat against Mrs. Loxton's Real Property application, and an order of Court had been made settling the issue at highway or no highway. The judgment of 29th November, 1891, rescinded the order of Court directing trial of issues, and the Registrar-General was directed to take the caveat off the file.

On 3rd December, 1891, in the Legislative Assembly, Mr. E. M. Clark drew attention to the question of the Whaling-road. He understood that from the decision of the Court in Tierney *versus* Loxton the caveators would have to withdraw their caveat on the following Saturday. He wished to know whether the Attorney-General would join issue with the caveators in the case. Mr. Barton (Attorney-General) said that he could not see that there was any question that could not be as well fought out without the intervention of the Attorney-General.

On 13th December, 1892, in the Legislative Assembly, Mr. E. M. Clark asked the Secretary for Lands,—

(1.) Has he yet considered the advisability of giving effect to the resolution of this House, adopted as a formal motion, and therefore unanimously, "That the Report of the Select Committee on the Whaling-road be adopted"?

(2.) Is it a fact that the North Shore Gas Company has erected a gasometer on the said road, and that one J. F. Loxton has also lately erected a stone wall across same?

(3.) As the recommendation of the Select Committee was that the road should be at once opened, has he any objection to state why he declines to give effect to the unanimously expressed resolution of this House which adopted such recommendation?

Mr. Copeland answered,—

(1 and 3.) The resolution of the House was a formal motion, which slipped through inadvertently, and should not have been dealt with without full consideration, seeing that a Select Committee cannot be appointed on a formal motion. The recommendation embodied in the Committee's Report is the reverse of that recommended by the ex-Attorney-General (Mr. Simpson). I will, however, endeavour to obtain the opinion of the present Attorney-General on the vexed question, and in the meantime no action will be taken.

(2.) It is understood that a gasometer and other buildings are on the land, which might be locally spoken of as the Whaling Road.

On 19th December, 1892, the case was forwarded to the Attorney-General, the Minister (Mr. Copeland), having written: "Forwarded to Attorney-General. I should be obliged if my honorable colleague would favor me with his opinion as to whether the Crown should be held responsible for opening this road."

On 5th April, 1893, Mr. Clark, M.P., wrote drawing attention to the fact that the North Shore Gas Company had made a Real Property application in respect of land known as the Whaling-road, and urging that the Department of Lands should lodge a caveat against such application.

At various times during April, 1893, in the Legislative Assembly, Mr. Clark asked questions of the Secretary for Lands relative to the Whaling-road, and was informed that the case had been referred to the Crown Law Officers for the opinion of the Attorney-General thereon, and that this Department will take such action as might be recommended by the legal adviser of the Crown.

On 16th May, 1893, Mr. Clark wrote to the Minister for Lands, pointing out that the period within which caveats might be lodged in the matter referred to expired on the 26th May, 1893, and that in the case of Tierney *versus* Loxton, it was held in the Supreme Court that no property owner could caveat in respect to a right of road. The letter was referred to the Crown Solicitor for the information of the Attorney-General.

On 22nd May, 1893, the Crown Solicitor forwarded Mr. Attorney-General Barton's opinion on the matter, referred to him on the 19th December, 1892. It was as follows:—"This matter gives rise to a number of complex and difficult questions, but the subject more immediately demanding an opinion from me is whether the Crown ought to lodge a caveat against the application of the North Shore Gas Company."

"I have come to the conclusion that this course is not advisable. The evidence as to what has been called the 'Whaling-road,' whether in respect of its location or in respect of the question of dedication and user, is, in my opinion, so vague and unsatisfactory that I am unable to say that the caveat could be supported with reasonable hope of success, assuming that there still existed the means of proving everything which seems to favour the claim of a road. But the great lapse of time makes even this most doubtful, and on the whole I am of opinion that it would be a waste of money on the part of the Crown to litigate the matter.

"The Municipal Council of North Sydney are, I understand, anxious to contest the claim of road if they could acquire any footing to enable them to do so. If they are willing, in view of the limited prospects of success, to take the risks attaching to litigation, it may be a question for my honorable colleague whether he will contest the matter on the Municipal Council giving a satisfactory indemnity to the Crown against all the costs. But it must be remembered, as pointed out by the Court in its judgment in *Tierney v. Loxton*, 'that there is nothing to be found in any section of the Act (*i.e.*, the Real Property Act of 1862) which points to the conclusion that the Legislature ever intended that questions as to the existence of a highway or right of public user of land should be contested under its provisions.' In a later part of the judgment it is hinted that the Minister might think it right to take the necessary steps to enter a caveat, but the Court does not clearly intimate its opinion that a caveat is any more open to the Minister than to anyone else for the purpose of contesting questions as to the existence of a highway.

"On the other hand, it may be that a writ of intrusion would be the best means of settling the question if the Municipal Council will take the risk by giving an indemnity. But unless or until they intimate a desire to do so it is not necessary to inquire minutely into this branch of the subject. It is enough for me to say now that I do not think there is sufficient evidence to warrant the Crown in contesting the question as asked.

"The Under Secretary for Lands (Mr. Houston) then submitted that, 'in view of the advising of the Attorney-General, no steps be taken to lodge a caveat against the application of the Gas Company.' This is the matter requiring immediate settlement. The Minister (Mr. Copeland), on the 23rd May, 1893, wrote. 'In view of the Attorney-General's opinion, I should not feel justified in taking any action in the matter. Inform.'

"Mr. Stopps then queried, 'The question of whether a caveat shall or shall not be lodged having been settled in the negative, it is now submitted whether it is considered that the subject of the Minister's reference to the Attorney-General of 19th December, 1892, on paper 86 herein, has been dealt with in Mr. Barton's opinion, and whether in view of the tenor of it *no further action be taken* to survey or to attempt to locate and open the so-called road.'

The Under Secretary (Mr. Houston) submitted that the question really was whether litigation was to be entered upon with a view to opening the supposed road; if so, he ventured to think, it should only be undertaken on the conditions indicated in the concluding paragraph of the Honorable the Attorney-General's advising.

The Minister (Mr. Copeland), on 6th June, 1893, wrote: "Approved." On 13th June, 1893, Mr. E. M. Clark, M.P., was informed in terms of the foregoing.

On 3rd August, 1893, Mr. G. von Meyer submitted a lengthy letter relative to the Whaling-road to the President of the Executive Council, and stated that in 1882 "Dr. Renwick, M.P., the then Minister for Mines, was requested to assess the damage done to my wife's estate (*i.e.*, by the closing of the Whaling-road), and the said Minister assessed the damage at £3,000, but my said wife has not received one single penny on the said assessment."

Mr. von Meyer's letter was referred to this Department, and in answer the Principal Under Secretary was, on 9th October, 1893, informed that the Honorable the Attorney-General having expressed his opinion that the evidence as to what has been called the Whaling-road is so vague and unsatisfactory that it has been decided not to take any action towards opening the said road unless the Borough Council of North Sydney will take the risks of litigation which might issue thereon by giving the Crown an indemnity.

In answer to a communication from Mr. G. von Meyer, that gentleman was, on 16th October, 1893, informed that his letter to His Excellency the Governor and the Executive Council, having been referred to this Department, was reported upon on 11th October, 1893.

On 18th November, 1893, Mr. G. von Meyer addressed a communication to the Principal Under Secretary, stating that he relied mainly upon "the authority of the Crown given to Dr. Renwick (late Minister for Mines) to assess the value of the property," the subject of his claim for damages in respect of the Whaling-road, and further stating that he awaited the return of Dr. Renwick to Sydney for the purpose of prosecuting his claim.

On 25th September, 1894, in the Legislative Assembly, Mr. William Morgan asked the Secretary for Lands,—

- (1.) Has any sum been awarded to George von Meyer as compensation for losses sustained in consequence of the closing of the Whaling-road, North Sydney?
- (2.) If so, what amount?
- (3.) Did Dr. Renwick, when Minister for Mines, assess the damage sustained at £3,000?
- (4.) Has this sum been paid; if not, why not?

Mr. Young answered,—

(1 and 2.) No.

(3.) The papers do not disclose that Dr. Renwick, as Minister for Mines, assessed the damage alleged to have been sustained by Mr. von Meyer, who, however, made a claim for the sum of £3,000 for compensation for such alleged damage, which was refused, on the opinion of the Attorney-General that the Crown was not legally responsible.

1897.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

CLOSING OF BRANCH ROAD, DOUBLE BAY.

(RETURN RESPECTING.)

Printed under No. 20 Report from Printing Committee, 21 October, 1897.

RETURN to an *Order* made by the Honorable the Legislative Assembly of New South Wales, dated 1st July, 1897, That there be laid upon the Table of this House,—

“A *précis* of papers in connection with the closing of Branch Road, “Double Bay.”

(Mr. E. M. Clark.)

Précis in re Branch Road, Double Bay.

In 1833 grants were issued of 13a. 3r. to William McDonald, and 11a. 2r. to Elizabeth Pike, the land therein granted being described as follows:—

William McDonald, 13a. 3r. County of Cumberland, parish of Alexandria, allotment No. 10. Bounded on the north by a line dividing it from No. 9 allotment, bearing east 13½ chains; on the east by the shore of Double Bay and a stream to a marked tree thence 3 chains north of the bridge on the old road to Point Piper; on the south by a branch road from the marked tree to the upper road; and on the west by the upper road,—being the allotment sold as lot 18 in pursuance of the advertisement of 11th September, 1833, and therein stated as 13 acres.

Elizabeth Pike, 11a. 2r. County of Cumberland, parish of Alexandria, allotment No. 11. Bounded on the west by the upper road; on the north by the branch road leading to the bridge; on the east by the old road leading to Point Piper; and on the south by a line dividing it from No. 12 allotment, bearing west 15 chains,—being the allotment sold as lot 9 in pursuance of the advertisement of 11th September, 1833, and therein stated as 13 acres.

The boundaries of branch road, which divided these two allotments, do not seem to have been definitely marked on the ground. The plan shows it as being of variable width, *vide* copy herewith marked P 1.

In 1867 Mr. Licensed Surveyor John Armstrong made a survey of this road and transmitted a plan, a copy of which (marked P 2) is attached. He reported that there was then a slight encroachment by Mr. W. Smart in the position indicated by green edging.

On 28th November, 1867, Mr. Armstrong reported that, in accordance with instructions given to him, he had pointed out to an officer of the Municipal Council the position of the road.

On the 5th August, 1886, R. Hellings applied to be allowed to purchase, under section 66 of the Crown Lands Act of 1884, an area of 6½ perches of land, described as being the land between Spring-road and his freehold land. This land is shown by red tint on tracing marked P 3 (attached).

On the 27th September, 1886, the application was refused, as the land was reported to form part of a road, the alignment of which had been asked for by the Woollahra Municipal Council.

On the 5th August, 1886, Elizabeth Hunt made an application under the same clause for the land shown by red tint on the attached tracing marked P 4, which was refused for the same reason.

On the 29th June, 1886, William Bell drew the attention of the Department to an alleged encroachment upon this road which, he alleged, obstructed approach to his land, and he asked that the Cumberland Ranger be requested to cause such alleged encroachment to be removed; he was, however, advised to apply to the Borough Council.

On the 28th August, 1886, the Borough Council of Woollahra asked that this road might be aligned, and instructions were issued to Mr. Surveyor Woolrych for the alignment accordingly.

On the 16th December, 1886, Messrs. Want, Johnson, & Co. advised the Department that certain fences erected upon Miss Hunt's land had been removed by officers of the Crown, and they requested that such fences be replaced. Further particulars were asked for regarding the matter.

On the 4th January, 1887, Surveyor Mills transmitted a tracing showing the position of branch road from Darling Point Road to Ocean-street, and suggested, before finally marking the alignment, that the matter of encroachments (shown by him on the tracing accompanying his report, *vide* attached tracing P 5) be referred to the Woollahra Council as to whether it was probable that the road would be constructed for vehicular traffic, and, if not, whether the road as fenced with a lane between the properties of Hunt and Morgan, giving access to the properties claiming frontage to the road, would sufficiently meet the public requirements.

On the 11th February, 1887, the Council was referred to as to what would be the best course to adopt in connection with the public and ratepayers' interests in view of the report of Surveyor Mills.

On the 17th February, 1887, the Council replied that the best course to adopt would be alignment in accordance with the original application; instructions were issued to the surveyor accordingly, and Messrs. Want, Johnson, & Co. were informed of the intended action.

Several letters were then received from solicitors acting for Miss Hunt and Mr. Morgan, objecting to the alignment of the street in such a way as to deprive them of any land occupied by them.

On the 2nd May, 1887, Mr. Hellings lodged another application under section 66 of the Crown Lands Act of 1884, for the land previously applied for, which was refused on the same grounds as his first one.

On the 29th June, 1887, a number of the residents of Double Bay and Darling Point petitioned against the alleged creation of a proposed new road; in reply to which they were informed that no attempt at creating a new road was being made in the position referred to by them, that action was being taken to define the position of a road left in the subdivision of the Crown Estate in compliance with a request of the Woollahra Council, and that in doing so it was found that a number of encroachments on the road existed.

On the 29th January, 1888, Surveyor Mills transmitted the plan of survey for alignment (*see* attached tracing, marked P 6).

As however the road, as thus aligned, embraced a considerable portion of land included in Mr. Morgan's certificate of title, No. 4,296, which he had improved in good faith and at considerable expense, the Registrar-General was asked to say if the error in the certificate could, and would, be dealt with under section 40, or any other section, of the Real Property Act. The preliminary notification of the road appeared in the *Government Gazette* of the 20th April, 1888.

On the 4th May, 1888, J. F. Morgan lodged an objection to the opening of the road, and similar objections were lodged on the 7th May, 1888, by J. W. Johnston; on 12th May, 1888, by Elizabeth Hunt; on 14th May, 1888, by W. S. Coulter; and on the 15th May, 1888, by R. Hellings,—all of whom stated that the road was not required.

The Registrar-General (after some correspondence) made an attempt to recall Morgan's certificate with a view to amendment, but Mrs. Morgan refused to deliver up the document.

The Crown Solicitor, having been instructed to take proceedings with a view to causing surrender of the certificate for amendment, on the 14th January, 1891, advised that the Department had a serious task before it in undertaking to prove before the Supreme Court that the certificate issued on the application of Mr. Morgan was so issued partly in error, and contained by misdescription certain Crown land, and that success seemed doubtful, and even if the action were successful the expense would be very heavy; he therefore suggested that the Council should be asked to say if they were still prepared to take over and form the road if aligned, having regard to the costs of such formation, and, if not, they might approve of a proposal to permit the adjoining owners to purchase the land encroached on by them up to the new alignment.

It was approved on 2nd March, 1891, that the Registrar-General and Crown Solicitor be advised to abandon the intended proceedings in the matter of recalling the certificate, and on the 24th March, 1891, in reply to a letter from the Woollahra Council, they were informed of the above decision.

On the 17th September, 1892, the Council advised the Department that they had received a petition, signed by over 100 residents, requesting immediate removal of all encroachments on this road, and the Council was informed in reply thereto that, in view of the advice of the Crown Solicitor, the Department declined to proceed further with the alignment as surveyed by Mr. Mills.

On the 20th October, 1892, W. Bell—per T. H. Hassall, M.P.—complained of certain encroachments on the road, as a result of which the value of his property was depreciated, and he requested alignment of the road, or that the ranger be instructed to cause removal of the encroachments (fences).

On the 3rd November, 1892, the matters mentioned by Mr. Bell were referred to the Borough Council, and an illustrative tracing was at the same time sent.

On the 13th December, 1892, the Council asked that the branch road be proclaimed and dedicated, and in reply were referred to previous correspondence, in which it was stated that the Department refused to proceed further with the matter.

On the 29th May, 1893, Bell again requested that the portion of the road alleged to be accurately defined by the descriptions in the deeds, and not covered by Morgan's deed, be dedicated to the Council, or that the ranger be instructed to cause removal of the encroaching fences.

On the 8th June, 1893, Mr. Hassall, M.P., asked that something be done either to cause alignment to be completed or removal of the encroachments.

After careful reconsideration of the circumstances surrounding the matter, it was decided, on the 2nd July, 1893, that in view of the advice of the Crown Solicitor the circumstances of the case did not warrant the Department undertaking expensive legal proceedings in which success was very doubtful, and that no modification of the decision previously given could therefore be made.

On the 6th October 1893, W. S. Coulter advised the Department that Mr. Bell had cut down a portion of the fence around his property in assertion of an alleged claim to a road.

In reply to a request by the Council for an interview, Mr. Secretary Copeland, on the 4th December, 1893, declined to reopen the question.

In consequence of Bell cutting down a fence belonging to Hellings, in order to assert a right to use the land as part of this road, an action for trespass was brought by G. Hellings against W. Bell, and he obtained a verdict with £100 damages.

On the case coming before the Full Court, on a motion for a new trial, a settlement was arrived at between the parties, Hellings agreeing to move his fence back so as to give Bell access to his land, and Bell agreeing not to oppose an application by Hellings to purchase the remainder of the land in dispute; the verdict for Hellings to be set aside and each party to pay his own costs.

On the 6th December, 1894, Hellings again applied to be allowed to purchase the area referred to in this agreement, being the area shown by pink tint on attached tracing marked P 7.

On the 22nd February, 1895, the case was referred to the Crown Solicitor to obtain copies of the notes taken at the hearing of the case "Hellings v. Bell," and for advice as to whether this Department would be warranted in proceeding to act in the way desired by Hellings, by providing a road of less width than that aligned by Mr. Mills, and entertaining applications for pre-emption of land between such road and the watercourse.

On the 3rd January, 1896, the Crown Solicitor advised that in his opinion the best course of procedure would be to formally revoke the dedication of branch road by action under section 105 of the Crown Lands Act of 1884, then to rededicate the land desired to be appropriated as a road, and the balance could then be sold to Mr. Hellings and others.

On the 2nd June, 1896, the District Surveyor reported that he had caused to be defined the limits of branch road as proposed to be laid out (*vide helio*. P 8 attached), and advised that the dedication of this road be formally revoked in the manner suggested by the Crown Solicitor, with a view to dedication of the road as now defined, and also alienation of certain portions of land not now required by the public.

On the 19th June, 1896, Mr. Hassall, M.P., requested that certain encroachments on this road be removed, and he stated that neither the residents nor the Council would consent to any alteration being made in the original road.

On the 8th August, 1896, Mr. E. M. Clark, M.P., requested that this matter be further looked into, in order that no individual rights might be interfered with.

On the 10th August, 1896, it was approved that the course suggested by the District Surveyor, under the report of the Crown Solicitor, should be followed.

On the 2nd September, 1896, Messrs. Clark and Hassall were informed that due consideration had been given the case, and the course proposed seemed the only method of settling a long disputed matter, except by embarking in expensive litigation.

The papers were then sent to the Crown Solicitor for preparation of the Executive minute in connection with the proposed action under section 105 of the Crown Lands Act of 1884, and on the 3rd December, 1896, he returned the case with the necessary draft of the Executive minute.

On the 14th May, 1897, Mr. Clark, M.P., wrote asking for a careful reconsideration of the whole matter, with a view to protection of the rights of the property-owners and the public.

On the 3rd June, 1897, Mr. Clark, M.P., was informed that the action being taken by the Department was decided upon after a very full consideration of the case, and after seeking legal advice, and, as it seemed the only solution of a very difficult case, it must be proceeded with, and that the decision must be considered as final.

On the 7th June, 1897, Mr. Clark advised the Department that he intended moving an adjournment of the House; he was asked, on the 11th of same month, to see the Minister.

On the 8th June, 1897, the Governor and Executive Council approved of the publication of a preliminary notice of the revocation of the dedication of branch road and rededication, in lieu thereof, of certain other roads forming portion of such road.

On the 30th June, 1897, Mr. Clark, M.P., advised the Department that he had given notice of motion with regard to the papers in the case, as suggested in a conversation with the Minister, and he requested suspension of further action in the case for the time being. He was informed that pending the preparation of the *précis* asked for action had been suspended.

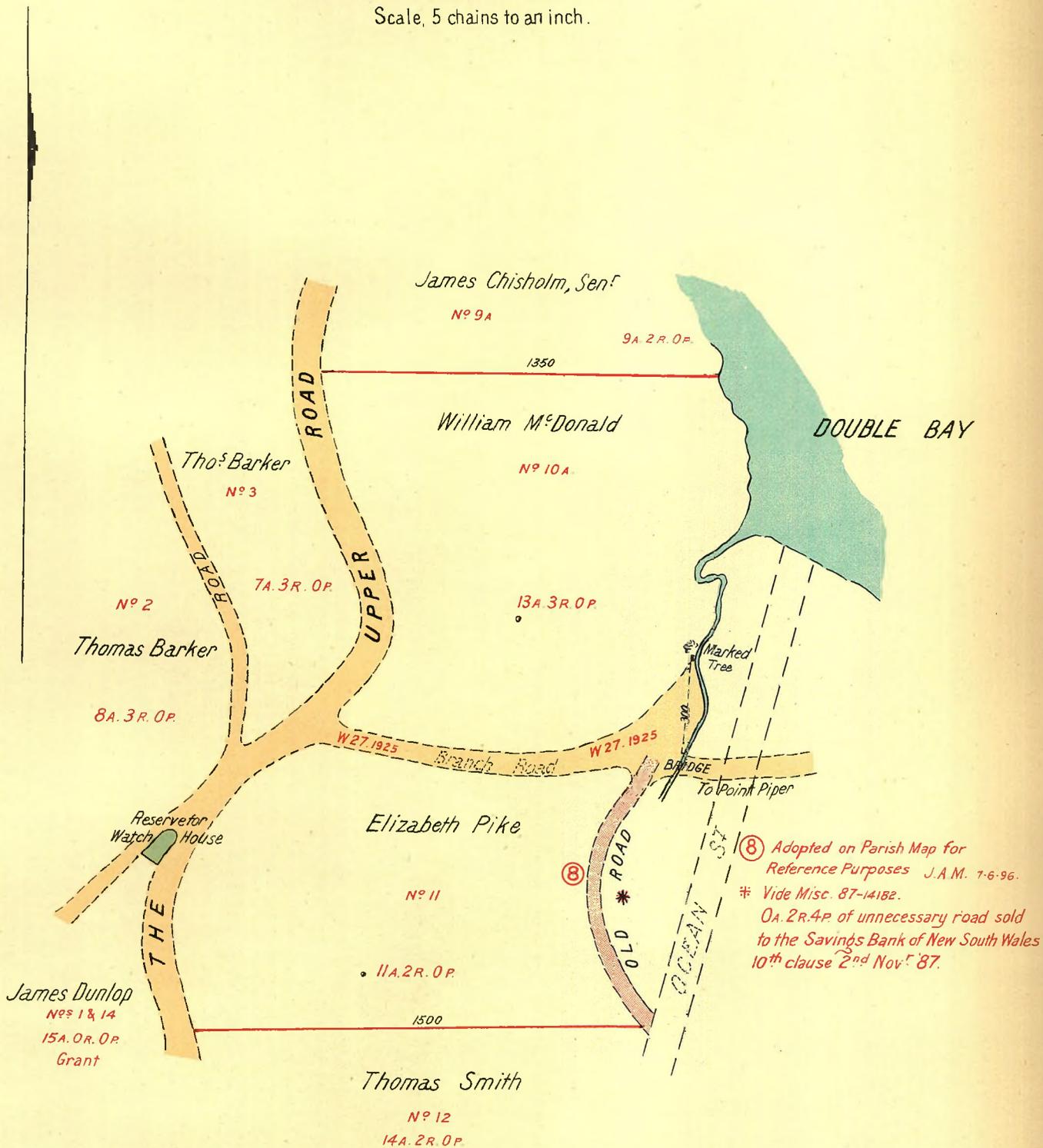
The attached tracing, marked P 9, is a copy of the original plan of allotments 27, 28, and 30.

[Nine plans.]

Cat. N^o Sl. 820

Tracing from Part of Plan of
M^{RS} DARLING'S POINT,
 County of Cumberland, Parish of Alexandria,
 showing the allotments for Sale on the 11th October, 1833.

Scale, 5 chains to an inch.



(8) Adopted on Parish Map for Reference Purposes J.A.M. 7-6-96.
 * Vide Misc. 87-14182.
 OA. 2R.4P of unnecessary road sold to the Savings Bank of New South Wales 10th clause 2nd Nov^r '87.

Portions N^{os} 1 to 3, 4A to 10A, 11 to 13 adopted vide M^s 93-7730 Dep. (S^d) C. F. F.

Plan to accompany Descriptions and letter transmitted to Major Mitchell, Surveyor General by M. W. Lewis.

Dated 9th October, 1833.

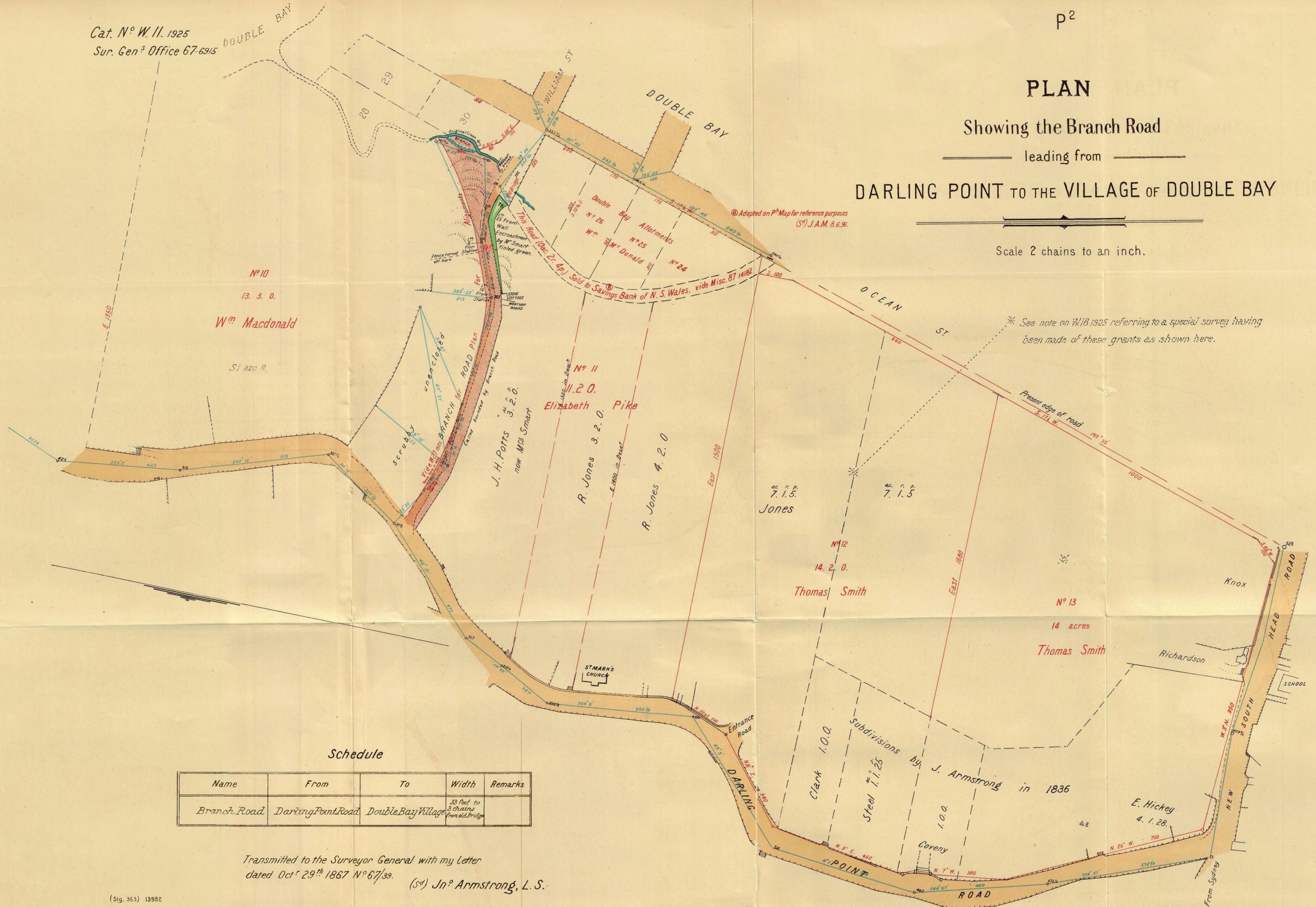
PLAN

Showing the Branch Road

leading from

DARLING POINT TO THE VILLAGE OF DOUBLE BAY

Scale 2 chains to an inch.



Adopted on P^o Map for reference purposes
 (S^y) J.A.M. 8.6.96.

See note on W/18 1925 referring to a special survey having
 been made of these grants as shown here.

Schedule

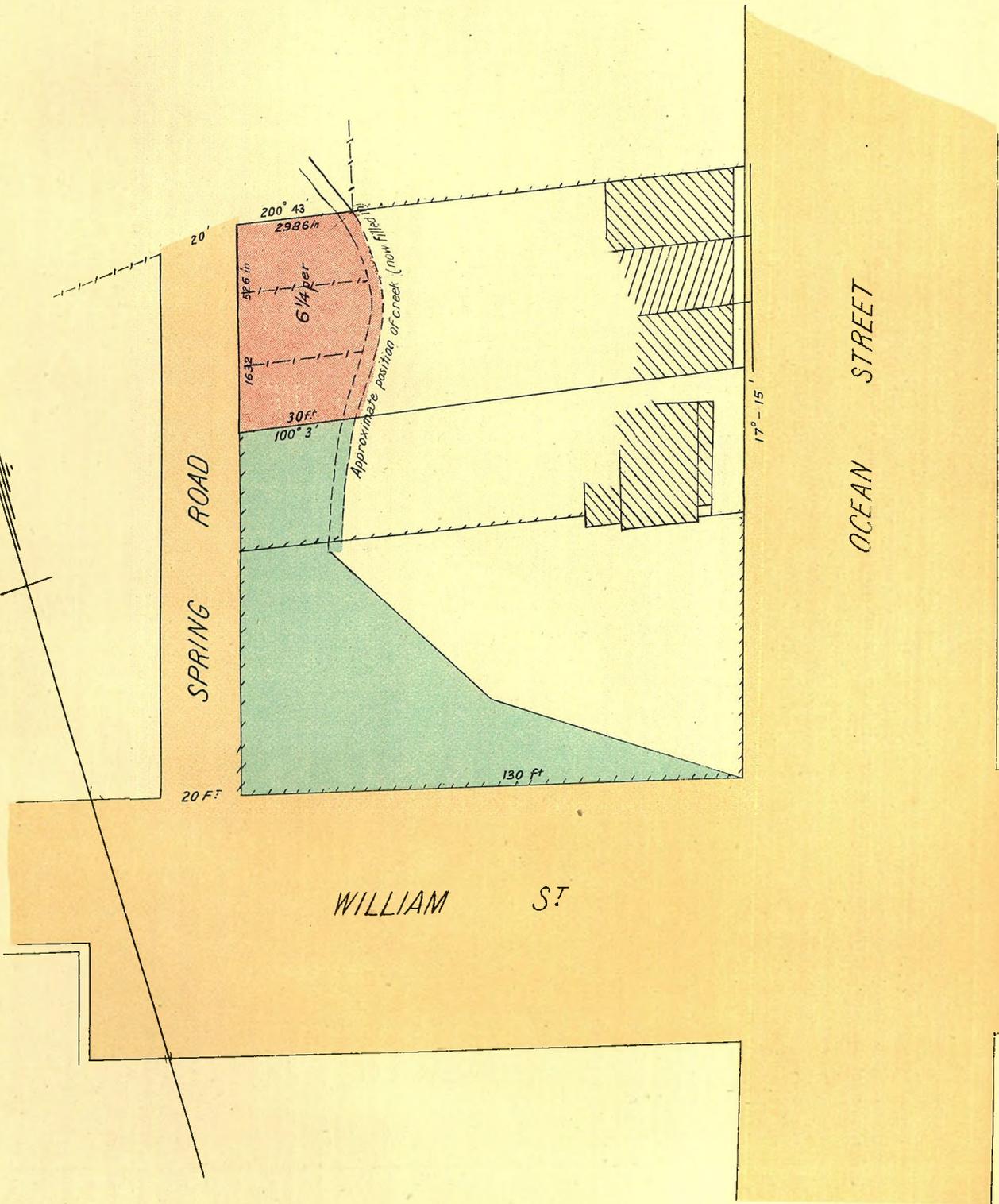
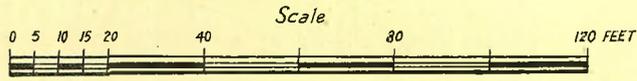
Name	From	To	Width	Remarks
Branch Road	Darling Point Road	Double Bay Village	33 feet to 8 chains from old bridge	

Transmitted to the Surveyor General with my letter
 dated Oct^r 29th 1867 N^o 67/39. (sd) Jn^o Armstrong, L.S.

James Dunlop N^{os} 1 and 4
 15. 0. 0.

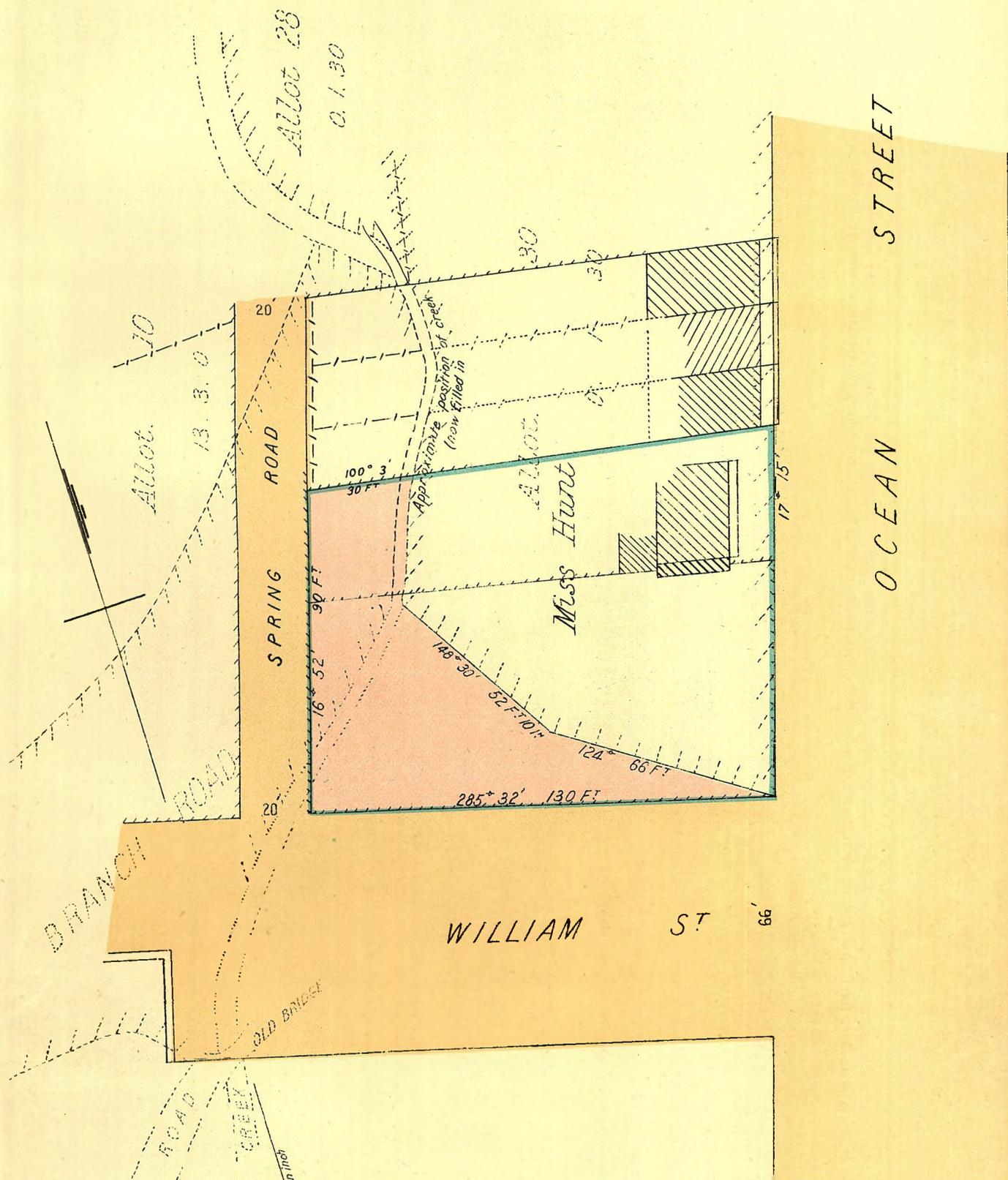
S.P. 87-50.

PLAN
of part of lot 58 M^r Adelaide Est^{te} Double Bay
Parish of Alexandria



(S^d) Richard Hellings

PLAN
of part of lots 56 & 57 M^t Adelaide Est^{te} Double Bay
Parish of Alexandria



(Sig. 353) 13982

Dawson & Ewing,
Lic^d Surveyors,
88 Pitt Street.

Sur. Gen^l Office, Roads Branch,
1886-³²⁰/₅
Enclosure

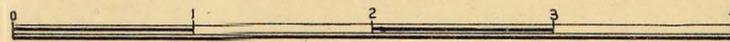
p5

PLAN

showing the Branch Road
from

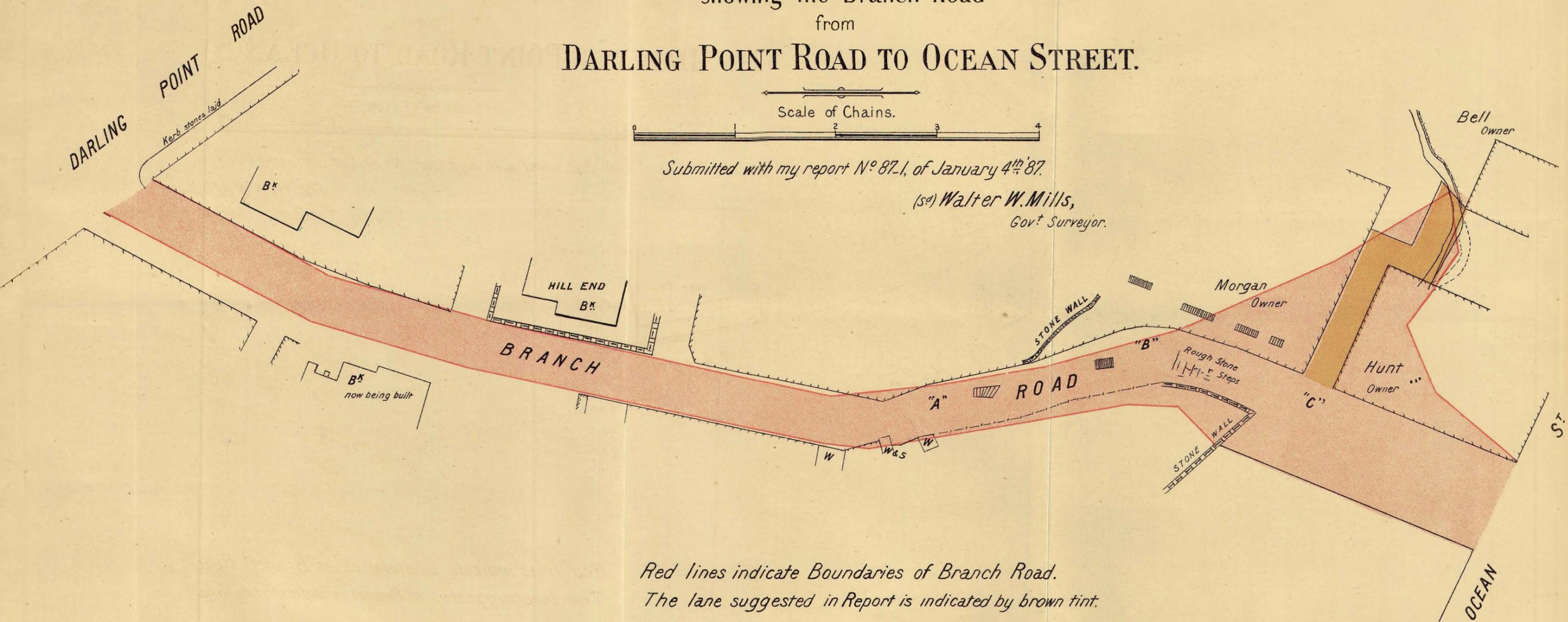
DARLING POINT ROAD TO OCEAN STREET.

Scale of Chains.



Submitted with my report N^o 87-1, of January 4th '87.

(s^d) Walter W. Mills,
Gov^t Surveyor.



Red lines indicate Boundaries of Branch Road.
The lane suggested in Report is indicated by brown tint.

(Sig. 353) N^o 13982

Plan of the Branch Road
in the
MUNICIPALITY OF WOOLLAHRA

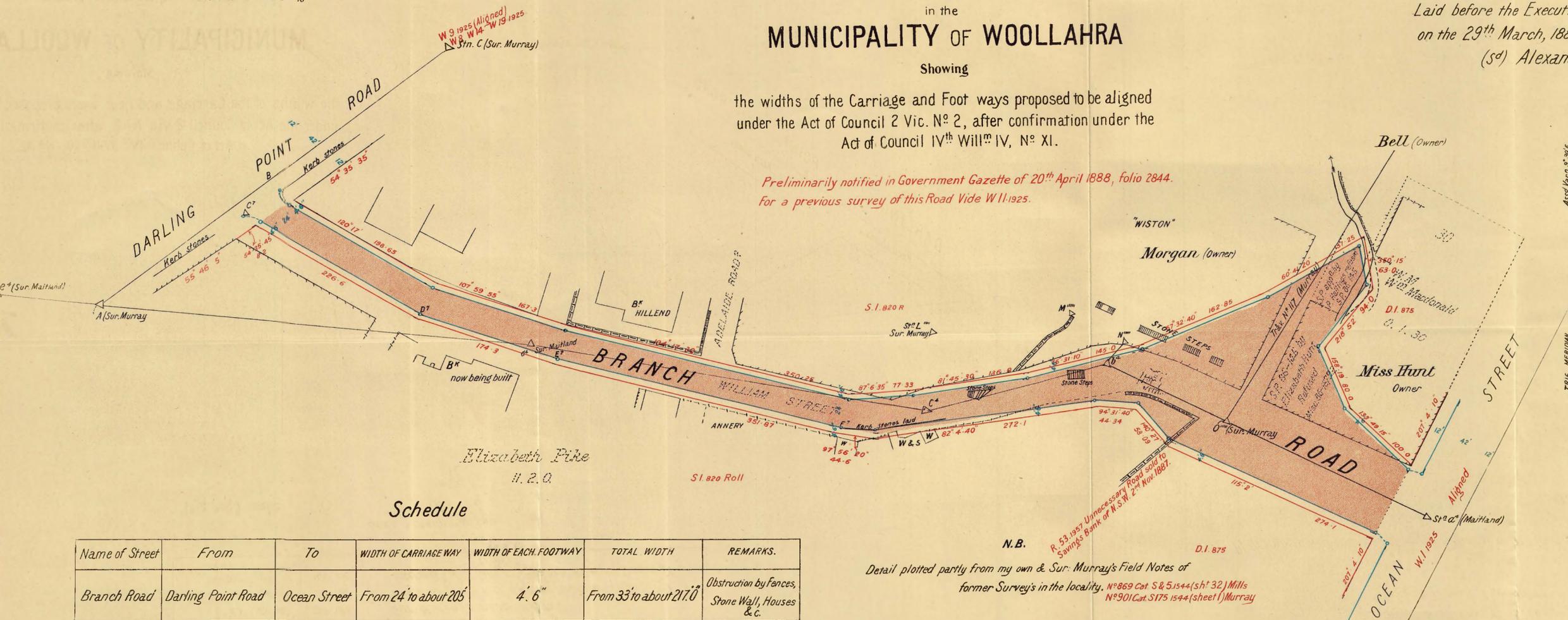
Showing

the widths of the Carriage and Foot ways proposed to be aligned
under the Act of Council 2 Vic. N^o 2, after confirmation under the
Act of Council IVth Will^m IV, N^o XI.

Preliminarily notified in Government Gazette of 20th April 1888, folio 2844.
for a previous survey of this Road Vide W 11-1925.

Laid before the Executive Council
on the 29th March, 1888.

(s^d) Alexander C. Budge, Clerk of the Council.



Schedule

Name of Street	From	To	WIDTH OF CARRIAGE WAY	WIDTH OF EACH FOOTWAY	TOTAL WIDTH	REMARKS.
Branch Road	Darling Point Road	Ocean Street	From 24' to about 205'	4' 6"	From 33' to about 217' 0"	Obstruction by fences, Stone Wall, Houses &c.

Reference to Traverse.

LINE	BEARING	LENGTH	REMARKS.
	77° 34' 25"	45.45	Stn. H ⁷ on Ocean St. Kerb line (from Sur. Maitland's a ⁷)
	207° 04' 10"	781.20	Cor. of alg ^t Post, Swamp St. from H ⁷
	309° 23' 50"	83.75	J ⁷ (Intersect ⁿ of Bld ^g lines Ocean St. & Branch R ^d)
	313° 49' 15"	100.00	K ⁷
	338° 19' 00"	80.00	L ⁷
	229° 53' 40"	315.35	Sur. Murray's St ⁿ C to St ⁿ C ⁷
	120° 17' 00"	242.65	D ⁷
	107° 59' 55"	173.35	E ⁷
	104° 17' 30"	351.65	F ⁷
	194° 17' 30"	6.81	Angle in Building Line from F ⁷
	14° 17' 30"	43.18	Opposite angle of Building line from F ⁷
	53° 00' 40"	520.65	Sur. Murray's traverse A to C
	248° 06' 00"	78.80	Angle of Stone Wall & fence (from Murray's St ⁿ O ⁷)
	207° 04' 10"	100.08	Intersect ⁿ of S. Side of Branch R ^d with Ocean St from J ⁷

Scale 1 chain to an inch

(Sig. 353) 13982

N.B. Detail plotted partly from my own & Sur. Murray's Field Notes of former Surveys in the locality, N^o 869 Cat S & 5, 1544 (sh^t 32) Mills N^o 901 Cat S 175 1544 (sheet 1) Murray

NOTES.

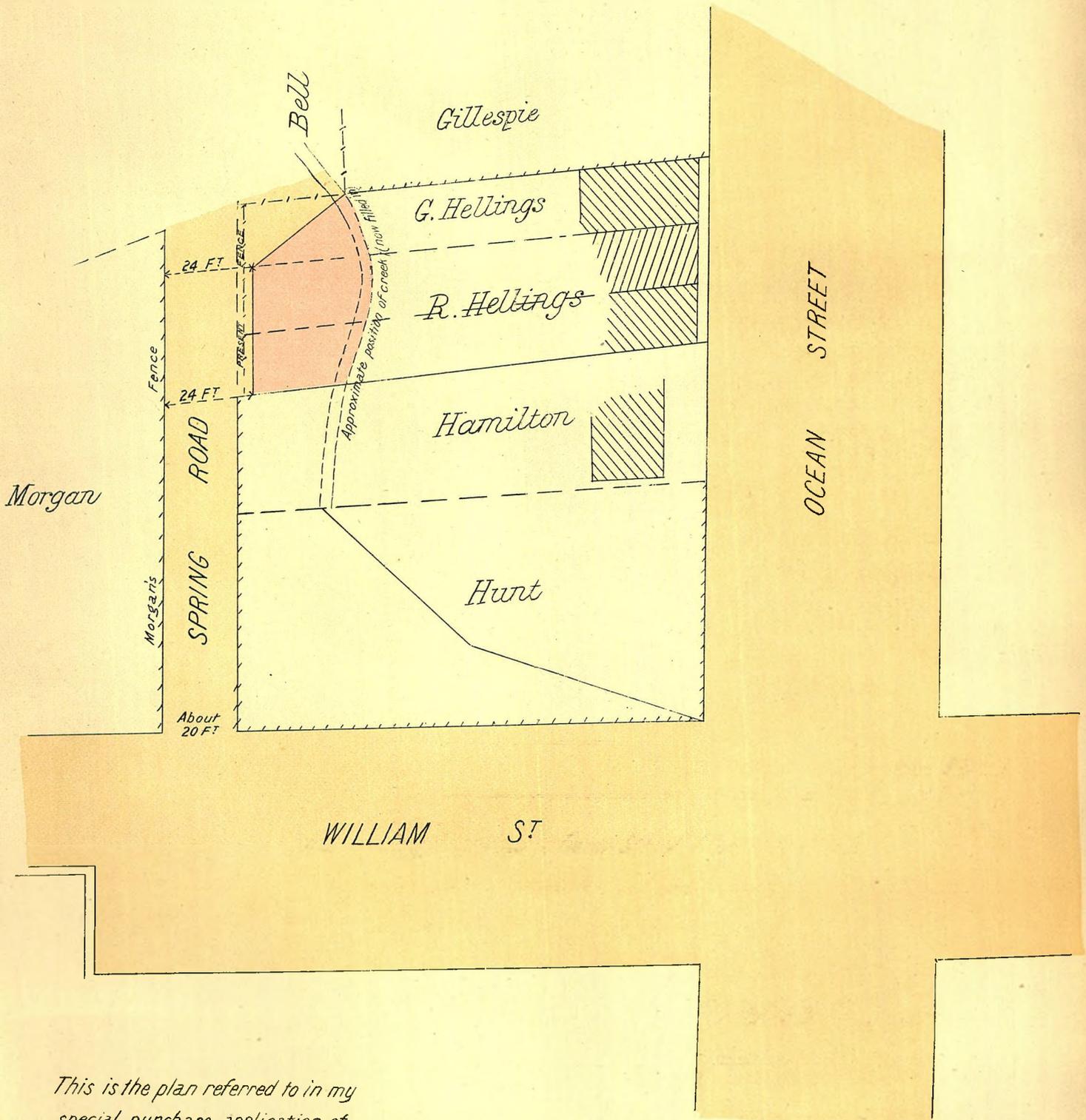
The figures in Red denote the lengths of Building lines in links
" " " Blue " widths " Carriage and footway in feet
" blue lines indicate the kerb lines
" red " " Building lines
blue circles " position of Alig^t Posts.
Traverse Stat^{ns} are shown thus Δ
Houses built of Brick are marked "B^x"
" " Wood " "W"
The Survey was completed on April, 1887
Subtract 9-30 from given bearings to obtain Mag^s do.
Five Inch Transit Theodolite used.

Plan transmitted to the Surveyor-General with Field Notes and my letter N^o 882 of 29th Jan^{ry}

(s^d) Walter W. Mills, Gov^r Sur^v

Enclosure

PLAN
 of part of lot 58 M^r Adelaide Est^{te} Double Bay
 Parish of Alexandria

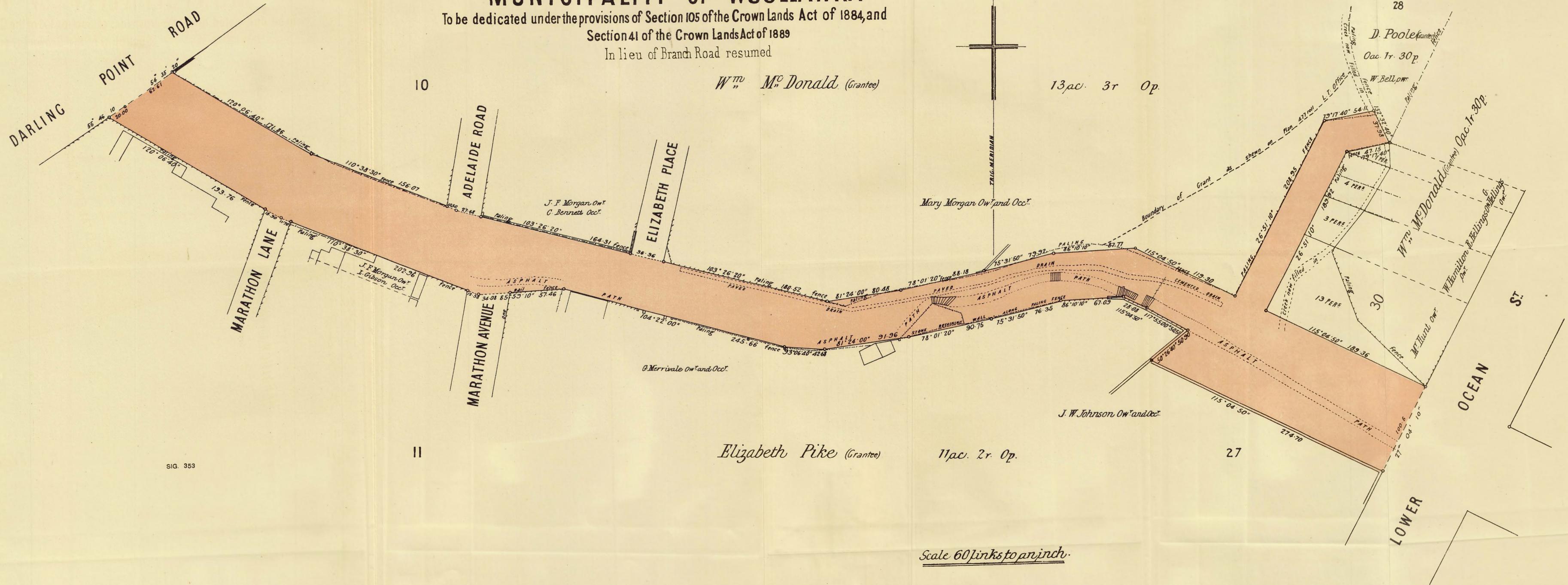


This is the plan referred to in my
 special purchase application of
 6th December, 1894.

(S^d) Richard Hellings
 (S^d) Geo. Hellings

PLAN
of Land at DOUBLE BAY in the
MUNICIPALITY OF WOOLLAHRA

To be dedicated under the provisions of Section 105 of the Crown Lands Act of 1884, and
Section 41 of the Crown Lands Act of 1889
In lieu of Branch Road resumed

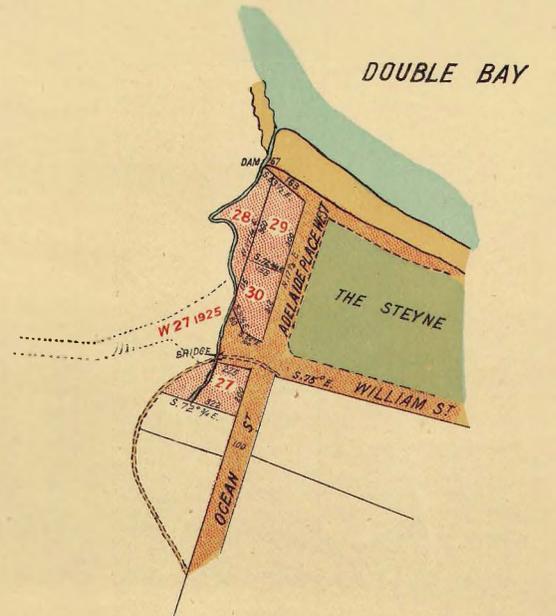


SIG. 353

M^s 1126 S^y

Cat. N° D. I. 875

8 chains to an inch



Allot ^t	Purchaser
27	William Macdonald
28	David Poole
29	William Macdonald
30	d ^o d ^o

hase

County of Cumberland
Parish of Alexandria

Larmer
October 31st 1834

Scale 8 chains to an inch

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

PARLIAMENTARY STANDING COMMITTEE ON
PUBLIC WORKS.

R E P O R T

TOGETHER WITH

MINUTES OF EVIDENCE, APPENDIX, AND PLANS,

RELATING TO THE PROPOSED

NEW BRIDGE AT GLEBE ISLAND.

Presented to Parliament in accordance with the provisions of the Public Works Act,
51 Vic. No. 37.

Printed under No. 20 Report from Printing Committee, 21 October, 1897.

SYDNEY: WILLIAM APPELGATE GULLICK, GOVERNMENT PRINTER.

MEMBERS OF THE COMMITTEE.

LEGISLATIVE COUNCIL.

The Honorable FREDERICK THOMAS HUMPHERY, Vice-Chairman.
 The Honorable JAMES HOSKINS.
 The Honorable CHARLES JAMES ROBERTS, C.M.G.
 The Honorable WILLIAM JOSEPH TRICKETT.
 The Honorable DANIEL O'CONNOR.

LEGISLATIVE ASSEMBLY.

THOMAS THOMSON EWING, Esquire, Chairman.
 HENRY CLARKE, Esquire.
 CHARLES ALFRED LEE, Esquire.
 JOHN LIONEL FEGAN, Esquire.
 THOMAS HENRY HASSALL, Esquire.
 GEORGE BLACK, Esquire.
 FRANCIS AUGUSTUS WRIGHT, Esquire.
 FRANK FARNELL, Esquire.

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 Appendix to Evidence.
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PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

NEW BRIDGE AT GLEBE ISLAND.

REPORT.

THE PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS, appointed during the first Session of the present Parliament, under the Public Works Act of 1888, 51 Vic. No. 37, the Public Works Act Amendment Act of 1889, 52 Vic. No. 26, and the Public Works (Committees' Remuneration) Act of 1889, 53 Vic. No. 11, to whom was referred the duty of considering and reporting upon "the expediency of constructing a New Bridge at Glebe Island, to replace the existing structure," have, after due inquiry, resolved that it is not expedient the proposed bridge should be constructed; but they recommend that there be substituted for the present bridge a stone causeway, having a steel swing-span in the centre, as proposed by the Engineer-in-Chief for Public Works; and, in accordance with the provision of sub-section (iv), of clause 13, of the Public Works Act, report their recommendation to the Legislative Assembly:—

QUESTION OF ERECTING A NEW BRIDGE.

1. The question of erecting a new bridge at Glebe Island was before this Committee in 1894. On 25th January of that year it was referred to the Committee for inquiry, and on 21st June, 1894, they decided "That when the renewal of Glebe Island Bridge becomes necessary it should be replaced by a timber structure of improved design, having openings by a swing-span of 60 feet, and a clear headway of not less than 20 feet"; but, in consequence of a sudden dissolution of Parliament, time did not permit of the resolution being embodied in a report and presented to the Legislative Assembly. It thus became necessary to again refer the question to the Committee, and this was done by the Legislative Assembly on 27th September, 1894, with the result, after further inquiry, that the Committee resolved it was "not expedient that the Glebe Island Bridge be replaced at present by a new structure." The bridge had recently been strengthened, and it was considered to be in a condition sufficiently satisfactory to serve the traffic passing over it for a considerable length of time.

Nothing further was done until April, 1896, when a report upon the state of the bridge being called for by the Honorable the Minister for Public Works, it was found that, though the condition of the structure was not very satisfactory, the matter might be allowed to stand over for another year. In May, 1897, a further report was obtained, and on that occasion it was stated that the bridge was rapidly becoming more insecure, and at that date "had barely a sufficient factor of safety to justify the traffic over it." Upon this the Engineer-in-Chief for Public Works recommended that a sum of money be placed on the Estimates at the earliest date for the reconstruction of the bridge, and £110,000 was noted for the Loan Estimates, that amount being the estimated cost of a new iron bridge as submitted to the Committee in 1894. At the same time arrangements were made for again referring the proposed work to the Committee, and on the 9th June, 1897, the present Committee were authorised by the Legislative Assembly to consider and report upon the expediency of erecting a new bridge, to replace the existing structure.

THE

THE PRESENT INQUIRY.

2. In carrying out their inquiry it was necessary for the Committee to ascertain clearly the condition of the present bridge as compared with what it was in 1894, and whether the period contemplated in the decision of that year, as that during which the structure might be expected to accommodate its traffic without risk, had now expired. With this object they made personal inspections of the bridge, as well as examined witnesses. Considerable delay occurred on the part of the Department of Public Works in placing before the Committee the design for the structure it was proposed should take the place of the bridge; but, to some extent, this was due to the Engineer-in-Chief for Public Works being out of the Colony, and it was remedied immediately he returned. The witnesses examined consisted of Government officers and persons interested in the question of the bridge, most of the latter having specially requested to be heard in the inquiry.

DESCRIPTION OF THE PROPOSED STRUCTURE.

3. The design submitted to the Committee, in the present inquiry, is not one of a bridge, but of a causeway constructed in the form of a solid bank of rubble from the shore at either end, hand-pitched on the slopes from low-water upwards, with a steel swing-span in the middle covering two openings of 60 feet in the clear, and two side spans each 80 feet long, the side spans being provided to keep the toe of the banks clear of the fairway through the swing-span. The mechanism of the swing will be similar to what it would be in a steel bridge; but instead of having a timber deck, trough plates filled with concrete carrying wood-blocking will be used, thus ensuring a practically permanent roadway.

The proposal to construct a new bridge, it is explained by the Engineer-in-Chief for Public Works, was abandoned by the Department, and a design for a causeway adopted, because fuller consideration showed the latter to be preferable.

The situation of the new structure will be about 90 feet from the southern side of, and parallel to, the present bridge, and it will carry a roadway of 40 feet and two 5-foot pathways. Part of the existing curve on the road from the present bridge across Glebe Island will be done away with, and a better gradient and wider roadway will be obtained from the causeway to the Abattoirs. On the Pymont side also the approach to the causeway will be widened considerably.

The material required for the causeway will be easily obtainable, a circumstance that will probably cheapen the work. Sufficient stone can be excavated on Glebe Island, but it may be obtained elsewhere and at a much reduced cost. There will, for instance, be a considerable amount of excavation in connection with the construction of the large power-house near Harris-street for the George-street electric tramway, and the site of the causeway will be very convenient as a place where the earth and stone so excavated can be deposited. The site will be equally convenient for the reception of the material excavated from Hyde Park, should the proposed railway extension into the city be carried out, or obtained from other excavations in or around the city. By using the material from such sources in this manner, it is the opinion of the Engineer-in-Chief for Public Works that the cost of the causeway will be reduced, probably to the extent of £25,750.

Both the causeway and the swing-span are to be so constructed as to admit of their carrying a tramway.

The time likely to be occupied in completing the work will be about three years.

ESTIMATED COST.

4. The estimated total cost of the causeway and swing is £84,500, but, with the widening and regrading of the Abattoir-road (an improvement necessary in any scheme for replacing the present bridge), £89,100, the total amount being made up as follows:—

Causeway	£32,130
Swing-span, including pivot piers and two rest piers	35,050
Side-spans, with piers, abutments, and superstructure	10,740
Approaches	3,250
Tram-track and protecting platform	3,330
	£84,500
Widening and regrading the Abattoir-road (including land resumption)	4,600
	£89,100

Of this amount, as previously indicated, possibly £25,750, and certainly a very considerable portion of that sum, may be saved by much of the material for the causeway being obtained either free of cost or at a very low price.

Cost

COST OF A CAUSEWAY AND OF A BRIDGE COMPARED.

5. In an appendix to the evidence of the Engineer-in-Chief for Public Works will be found a comparison of the estimated cost, annual charge, and capital value of the annual charge of the proposed causeway, with those of a timber bridge and of a steel bridge, which gives the following results:—

	Prime cost.	Annual charge.	Capital value of annual charge at 4 per cent. interest.
Causeway with steel swing-span:—			
Bridge and causeway	£81,500		
Protecting platforms	3,000		
	£84,500	£5,040	£126,000
Timber bridge:—			
Bridge and approaches	£56,500		
Protecting platforms	3,000		
	£59,500	£5,270	£131,750
Steel bridge—Tarred metal deck:—			
Bridge and approaches	£89,400		
Protecting platforms	3,000		
	£92,400	£5,840	£146,000

If £25,750 be saved, as previously explained, the prime cost of the causeway and swing will be less than £60,000, and the annual charge and its capital value proportionately reduced.

CONDITION OF THE PRESENT BRIDGE.

6. The condition of the present bridge which is thirty-five years old, appears to be such as to justify the erection of a new structure. The piles, as a whole, are fairly sound, though some of them are hollow and show indications of decay or of the ravages of the white ant, as do the girders. The piers are very light, and the superstructure is not strong enough for the traffic which the bridge carries; the vibration is much in excess of what it ought to be. The bridge is defective also in its swing, which is small and obsolete, inconveniently worked, and badly situated. Only constant supervision and repair since the inquiry by the Committee in 1894 have kept the structure in a condition fit to accommodate the traffic passing over it without undue risk of accident, and it has now reached the stage when it is considered to be no longer economical to expend money upon the bridge in repairs beyond what may be necessary to keep it open for traffic until a new bridge or causeway can be provided. Up to the present £21,800, in addition to its original cost, has been expended upon it.

THE BRIDGE TRAFFIC.

7. The bridge was designed to provide for only light traffic, and consequently cannot satisfactorily meet the requirements of the present traffic, which is largely in excess of what was the case at the time the bridge was erected, a great increase having taken place in recent years. In 1889, for instance, the daily average number of vehicles crossing the bridge was 196; in 1894 it was 1,792; and now, according to a count made in the week 19th to 29th June last, omitting Sundays, it is over 2,000, in addition to which there is a daily average traffic of 51 horsemen, 215 driven animals, and 1,295 pedestrians.

One-fifth of the present vehicular traffic is connected with the Abbatoirs; the remainder consists of vehicles passing to and from districts to the north and west of the bridge.

NECESSITY FOR A BRIDGE OR CAUSEWAY.

8. A bridge, or causeway, from Pymont to Glebe Island is absolutely necessary for the traffic between those places. While the Abattoirs remain on the island there must be some means of communication with them such as the present bridge affords, and they may remain there permanently, for there is plenty of room to permit of their enlargement and of their being connected with the railway at Homebush. But, if sooner or later, they should be removed, there is sufficient traffic across the bridge unconnected with the Abattoirs to justify its existence, as most of that which comes over the Lane Cove, Parramatta, and Iron Cove bridges uses the Glebe Island Bridge.

REASONS

REASONS FAVOURABLE TO A CAUSEWAY.

9. If it is proved that the present bridge—or something to take its place—is necessary to preserve the means of communication with the Abattoirs and the districts to which the bridge affords access, and that the one now in existence is in such a state of decay that a new structure is required, the only question that arises is the kind of new structure it is advisable to adopt. A comparison between the cost of a bridge and of a causeway shows that the latter is cheaper in annual cost and is the more permanent. One other point for consideration is whether the causeway will prove to be, in any way, an obstruction to water traffic to and from Blackwattle and Roselle Bays, or lead to the silting up of any portion of those bays. A statement published with the evidence describes the businesses carried on in the bays, and from this it will be seen that, though most of what is done there is in connection with the timber trade, there are one or two firms engaged in other business undertakings which, with due facilities, may grow to considerable dimensions.

The average depth of water to be found in Blackwattle and Roselle Bays is about 13 feet, the depth at the head of the bays being about 9 feet. In Johnstone's Bay there is alongside Glebe Island a depth of 12 feet, which increases to 18 feet at Glebe Point. Dredging might increase the depth above the bridge at low water to 18 feet over an area of 160 acres, 22 feet over 120 acres, and 26 feet over 100 acres; or a channel 300 or 400 feet wide and of sufficient depth could be dredged around the shore, the cost of dredging by adopting this plan being considerably lessened.

This possible improvement of these bays indicates an important future to the area of water above the bridge in connection with the shipping trade of the port, and, in view of this, it is necessary that the approach to this part of the harbour should not be unduly obstructed. The swing in the centre of the proposed causeway will afford ample facilities for the movements of shipping to and from the bays, and the passage through the swing will be of so considerable a size in proportion to the area of water above the causeway that there can be no danger of any diminution of water within the bays by an interception of its flow or an accumulation of silt.

The only source from which deposits of silt reach that part of the harbour are, the Engineer-in-Chief points out, storm-water drains and local sewers which discharge into the heads of the bays, and there is no current in the locality which would have the effect of causing this silt to be precipitated near the causeway. After the construction of the causeway the silt would be, as now, a deposit near the drain or sewer openings, and would be removed by dredging.

BASCULE, OR SWING.

10. During the inquiry the question of having the opening in the centre of the causeway fitted with a bascule instead of a swing was considered. Each method has its advantages, but the swing appears to be the more desirable. With the bascule a central pier is not necessary, but the side piers upon which it would rest would have to be proportionately strengthened. The matter was referred to the Engineer-in-Chief, and he adheres to the swing in preference to a bascule, on the grounds that there could be no economy in adopting the latter, and that with the swing there could be provided a more permanent and satisfactory roadway.

A NEW ROAD ACROSS GLEBE ISLAND.

11. Some complaint has been made of the road across Glebe Island leading from the bridge, and which will lead from the causeway, passing through the Abattoirs. There is ground for this complaint; but the Engineer-in-Chief, to whose attention the matter was drawn, explains that in view of the uncertainty as to the use to which Glebe Island may be put in the future, it is not wise, at present, to construct a new road. If, for instance, the island should be used for shipping purposes, which is possible, a new road might interfere with the usefulness of the place for railway traffic. It is, however, easy to make, in connection with the causeway, a new road across the island, if such a step should be found necessary, and that road could be used for general traffic, the present one being devoted exclusively to the traffic connected with the Abattoirs.

DECISION

DECISION OF THE COMMITTEE.

12. Taking everything into consideration—the age of the bridge, the unsuitableness of it for the traffic passing over it, the large expenditure upon it in repairs, and its increasing weakness through natural decay—the Committee have no difficulty in deciding to recommend that the bridge be replaced, as soon as possible, by another structure. This recommendation is justified by what the Committee have personally seen of the bridge, and by what the evidence discloses; and it is not inconsistent, it may be pointed out, with the decision of the Committee who considered the proposal for the construction of a new bridge in 1894. At that date, as already mentioned, the bridge had recently been strengthened, and from personal inspection and from the evidence of witnesses examined it was regarded as in a condition to sufficiently serve the traffic over it for a considerable length of time. The swing opening, it was stated, is badly situated, causing inconvenience to vessels passing through it, and exposing the bridge itself to risk of injury; but the extensive repairs, carried out by the Department of Public Works, had made the bridge sufficiently strong to meet requirements until a new structure should become an absolute necessity. That time, in the opinion of the present Committee, has now arrived.

THE RESOLUTION PASSED.

13. The following extract from the Committee's Minutes of Proceedings of 10th September, 1897, will show the resolution passed:—

“Mr. Black moved—

‘That, in the opinion of the Committee, it is not expedient that a new bridge should be constructed at Glebe Island to replace the existing structure, as referred to the Committee by the Legislative Assembly; but they recommend that there be substituted for the present bridge a stone causeway, having a steel swing-span in the centre, as proposed by the Engineer-in-Chief for Public Works.’

“Mr. Farnell seconded the motion.

“Mr. Wright moved—

‘That the motion be amended by the omission of the word ‘not’ and of all the words after the word ‘Assembly.’

“The amendment was negatived, and the motion was then passed.”

THOS. EWING,

Chairman.

Office of the Parliamentary Standing Committee on Public Works,
Sydney, 15th September, 1897.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

MINUTES OF EVIDENCE.

NEW BRIDGE AT GLEBE ISLAND.

WEDNESDAY, 16 JUNE, 1897.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHRY.	CHARLES ALFRED LEE, Esq.
The Hon. JAMES HOSKINS.	JOHN LIONEL FEGAN, Esq.
The Hon. CHARLES JAMES ROBERTS, C.M.G.	THOMAS HENRY HASSALL, Esq.
The Hon. WILLIAM JOSEPH TRICKETT.	GEORGE BLACK, Esq.
The Hon. DANIEL O'CONNOR.	FRANCIS AUGUSTUS WRIGHT, Esq.
HENRY CLARKE, Esq.	FRANK FARNELL, Esq.

The Committee proceeded to consider the expediency of constructing a New Bridge at Glebe Island, to replace the existing structure.

Robert R. P. Hickson, Under Secretary for Public Works, sworn, and examined:—

1. *Chairman.*] I understand that, in Mr. Darley's temporary absence from town, you do not propose to deal with the design of the proposed bridge, but merely with the necessity for the substitution of a bridge for the existing structure? Yes.
2. You have prepared a statement for the Committee? Yes. It is as follows:—

R. R. P.
Hickson.

16 June, 1897.

GLEBE ISLAND BRIDGE.

On the 25th January, 1894, on the motion of Mr. Secretary Lyne, the following resolution was passed by the Legislative Assembly:—

That it be referred to the Parliamentary Standing Committee on Public Works, to consider and report on the expediency of removing the present Pyrmont and Glebe Island Bridges; the construction in lieu thereof of certain other means of communication between Sydney, Pyrmont, Balmain, and the northern suburbs; and the carrying out of incidental works in connection therewith.

The work was a subject of inquiry by that Committee from the 11th April to the 21st June, 1894, when the following decision, as far as Glebe Island Bridge is concerned, was arrived at:—

That when the renewal of Glebe Island Bridge becomes necessary it should be replaced by a timber structure of improved design, having openings by a swing span of 60 feet, and a clear headway of not less than 20 feet.

The dissolution of Parliament occurring somewhat suddenly, time did not permit of the resolution being embodied in a report and presented to the Legislative Assembly; it was consequently necessary to refer the proposed work to the next Committee, and this was done by the Assembly on the 27th September, 1894, with the result that the Committee reported, "It is not expedient that the Glebe Island Bridge be replaced at present by a new structure."

As the evidence given before the Committee was to the effect that the bridge had only a very short life, by direction of the Minister, I wrote a memorandum on the 1st April, 1896, as follows:—

The Minister would like a report on the present state of the Pyrmont and Glebe Island Bridges as soon as possible, to enable him to decide if it be necessary to take any action this Session with regard to the erection of new structures. He would like the examination made by the same officers as inspected last year, as they would be in a better position to judge of the changes (if any) which may have taken place.

In reply Mr. De Burgh furnished the following report:—

In accordance with instructions on 96/40-54 herewith, I have made an examination of the Pyrmont and Glebe Island Bridges, with a view to ascertaining what changes (if any) have taken place in the structures since 1894, when the question of replacing them was before the Public Works Committee. In 1894, extensive repairs were in hand with a view to strengthening the most decayed portion of the structures, and rendering them comparatively safe for traffic. Since then the bridges have been carefully watched, attention being paid to stopping the destructive work of the white ants, and also to keeping the decks in such order as to enable them to distribute the loads to the best effect over the girders. The precautions, however, could not and do not affect the general condition of the structures, the repairs being carried out "to make the structure safe till a new one can be erected."

It is not possible to define the alteration which has taken place in the bridges in the two years that have elapsed since these repairs were carried out. They have passed the life which could be expected from them, and the heavy traffic causing the old timbers to work upon each other makes them more and more shaky with each year. There is one point which I must draw special attention to, and that is the condition of the opening span of the Pyrmont Bridge. I pointed out in 1894 that, owing to the extensive decay in the pier carrying the swing, it was unsafe, and special attention was paid to strengthening it; but both pier and swing are so light that the traffic across the bridge is in danger of being stopped every time a vessel of any size passes through the opening. As an example of this, the "Fifeshire" in passing through touched the pier (2/12/95), and threw the span over about 2 inches, so that it could not be closed. This was at 4 o'clock in the afternoon, a time when an enormous stream

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of traffic is crossing the bridge to the railway yards, and the whole of this traffic was stopped for an hour and a half while the span was closed. Fortunately, I had a gang of men with gear working at Glebe, and so was able to start repairs a few minutes after the accident, or the stoppage of traffic would have been for a much longer period. Such an accident may occur at any moment, and may be of such a character as to suspend traffic altogether for weeks. In a word, the bridges are not only unsuitable, but they are quite worn out. If it is not intended to build new ones, the present structures should be gradually rebuilt and strengthened, to do which would, in my opinion, be to throw money away.

Although the report as to the state of the bridge was not very satisfactory, the Minister thought the matter might stand over for another year, and in May of this year, in accordance with his instructions, I wrote as follows to Mr. Darley:—
The Minister would like a report on the state of the Pymont and Glebe Island Bridges, with a view of deciding what steps should be taken, either as regards repair or re-erection, or, if safe, postponing any action for a time.

In reply, Mr. De Burgh, on the 21st May, again reported:—

In accordance with the instructions herewith, I have to report that, as we are constantly working at the Pymont and Glebe Island Bridges, no special examination is required to enable me to report on the necessity for renewal, but it is perhaps better to touch briefly upon the recent history of the bridges before expressing an opinion on their present state.

In September, 1893, Pymont Bridge was reported to be in an absolutely dangerous state. In 1894, upwards of £7,000 was spent in patching it up. In January, 1894, Glebe Island Bridge was reported dangerous, and £4,000 was spent in patching it. I wrote then *re* Pymont Bridge, and it applies to Glebe Island Bridge also, "That there may be no misunderstanding as to the state of the bridge, I may state that these repairs, and some minor repairs from time to time, should enable the bridge to carry traffic safely for (say) two and a half or three years, when the portion not now renewed will be unsafe."

When I completed the repairs I stated that the close inspection which was possible during the repairs confirmed my opinion of the bad condition of the bridges.

I made a further examination of the bridges in 1896, which showed that the decay in the old timbers was advancing rapidly through perishing, as well as from white ants and rot.

Now as to present state. The bridges are becoming more shaky as month after month passes. The timbers, weakened by age, work upon each other, and the piers are so weak that they cannot afford the support required to stop the vibration. At the time the bridges were built they were not up to the strength necessary for the traffic they now carry, and they now have barely a sufficient factor of safety to justify us in allowing the traffic over them. The size and number of vessels passing through the swing openings is increasing daily, and interruptions to the road traffic, which occur through the bridge being damaged by the slightest touch of a vessel, are numerous. If the work of replacing the bridges is put in hand at once, I shall consider that we have been extremely fortunate if we are able to carry the traffic on the old bridges until the new ones are built, and I may state that, had I thought the work would have been postponed so long in 1893, I should have recommended a very much larger expenditure than £11,000 on repairs; but, considering the unanimous opinion of all the officers who have had to do with the bridges that they should be replaced at once, I never doubted that steps would be taken not later than 1894. I cannot, of course, ask to be released of responsibility in connection with these bridges, but I must point out that I occupy a very difficult position with regard to them, as I cannot possibly recommend sufficient repairs to make them safe on account of the sum required being large enough to go a long way towards building new bridges. If, however, it is not intended to take such steps as will relieve the present bridges of the traffic in (say) three years (which is the shortest time in which the new structures would be likely to be ready) I shall have to ask for a heavy vote to strengthen the present bridges.

Upon this report, Mr. Darley minutes:—

I recommend that sums of money be placed on the Estimates at the earliest date to enable these bridges to be reconstructed. It is alike unwise and unsafe to attempt to keep them much longer in use. It is for the Minister to decide which class of the numerous designs estimated for should be adopted.

In submitting the matter for the Minister's information, I drew his attention to the fact that the Public Works Committee recommended the construction of a bridge at Darling Harbour, at a cost not exceeding £82,500, and that an iron bridge at Glebe Island, estimated to cost £110,000, was rejected, and on this the Minister minuted that—

The two sums of money named may be noted for Loan Estimates, a resolution prepared for submitting the Glebe Island Bridge for the consideration of the Public Works Committee, and one for the carrying out of the renewal of the Pymont Bridge in accordance with the recommendation of that body.

So far as Glebe Island Bridge is concerned, the result of this was that, on the motion of Mr. Secretary Young, the Legislative Assembly passed the following resolution on the 9th instant:—

That it be referred to the Parliamentary Standing Committee on Public Works to consider and report upon the expediency of constructing a new bridge at Glebe Island.

It would appear from the various reports that the present bridge, which is 35 years old, was constructed by the Government at a cost of £20,186 15s. 11d., and has cost for alterations and repairs since it was erected the sum of £21,800. In 1894, £4,000 was spent, and it was reported that further expensive repairs will have to be undertaken.

The bridge (irrespective of its probable life) is much below present requirements.

According to a return tabled in 1894, the average daily traffic for twelve hours, from 6 a.m. to 6 p.m. was as follows:—

Vehicular traffic (cabs, omnibuses, carts, vans, &c.)	1,792
Horsemen	60
Animals	357
Pedestrians	1,406

The average number of vessels passing through per day, according to a return recently made, is 17.5.

As the whole of the traffic has to filter through two tracks 8 ft. 6 in. wide at the centre of the bridge, and one track over the swing span, it is not surprising that the traffic becomes congested in the busy portions of the day.

The swing span with its 34 feet opening is too narrow, and being awkwardly placed at the Pymont end of the bridge accidents to vessels frequently occur.

The piers of this bridge are in a very weak state. They were never designed to carry the immense traffic, which now uses the structure, and, notwithstanding that they were patched up in 1894, the vibration is so great as to be dangerous.

The corbels and girders have perished through age, and the ravages of white ant, and are no longer to be relied upon.

The decking has to be totally renewed every two years, so need not be taken into consideration—its present state is fairly good, having only been down about twelve months.

The swing span of the bridge is totally inadequate for the traffic using the bridge—both road and water. It is so narrow that only one vehicle can cross at a time, often causing serious delays, and at the same time the water is so shallow that many vessels have a difficulty in getting through the bridge at all.

Mr. De Burgh is in attendance to give you particulars as to the state of the bridge from his own personal examination, and I would suggest that you should examine him upon that point.

3. Approximately six years have elapsed since the report made by a previous Public Works Committee, with reference to this bridge? Very nearly six years.

4. You made reference just now to a paragraph in the report of a former Committee, in which it was suggested that a new bridge was not at that time necessary? Yes.

5. *Mr. Hoskins.*] If the repairs executed in the bridge at the request of the Committee in 1894 are about worn out, and if the bridge as it stands is no longer serviceable, does it not serve to show that the timber put in was not good? No; the timber put in is as good as on the day on which it was put in, but it has been the old timber and the new timber working together which has caused the defect. That will be explained to you minutely by Mr. De Burgh. I have not examined the bridge personally.

Ernest

Ernest Macartney de Burgh, M.Inst.C.E., Assistant Engineer for Bridges, Department of Public Works,
sworn, and examined:—

6. *Mr. Humphery.*] You are in a position to give the Committee information as to the state of the bridge at Glebe Island? Yes.

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7. Have you prepared a written statement? No; but I can make a brief statement as to the condition of the bridge.

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8. Will you in the first place refer to the condition of the bridge in 1894, at a time when a considerable expenditure took place upon it for the purpose of strengthening it, and will you briefly tell us the condition of the bridge after that expenditure? At the time the previous inquiry was held by the Committee in reference to this bridge I was expending about £4,000 upon what were considered absolutely necessary repairs, to prevent an accident occurring. There was no attempt made at that time to strengthen the bridge throughout. The repairs were simply made with a view to make the roadway good enough to carry the traffic, and to replace any of the timbers which were so completely decayed as to be likely to collapse. When these repairs were completed, which was early in 1895, the bridge looked very much better than it had looked before; but as regards the unsuitable character of the piers, and the vibration when traffic passed over it, it was very little better. Since then we have had to re-deck it once, but that was simply due to the ordinary wear and tear resulting from the traffic. We have done nothing of an important character to stiffen up, or improve the bridge, because we were under the impression that a new structure would be built there.

9. What is the present condition of the bridge? In my opinion it is worn out. The piles, as I have previously stated, are fairly sound, but the piers are very light, and the traffic which goes over the bridge now is so much heavier than that for which the bridge was built that the vibration is much in excess of what it ought to be in such a structure. The superstructure was never strong enough for the traffic which the bridge carries now.

10. You have not a design of the bridge which you propose shall be substituted for the existing bridge? No.

11. The resolution passed by the Public Works Committee in 1894 was to this effect:—"That when the renewal of Glebe Island Bridge becomes necessary it should be replaced by a timber structure of improved design, having openings by a swing-span of 60 feet, and a clear headway of not less than 20 feet." In your opinion, will that meet all requirements? I hardly care to express an opinion as to any new structure until the Department has submitted its design to the Committee. I am merely a constructing officer.

12. When you were before the Committee in 1894, you expressed the opinion that when the improvements which you were making had been effected the bridge would last from three to five years;—have you any reason to doubt that the bridge will last long enough to enable you to erect a new structure? I think it will last long enough to enable us to do that.

13. What do you consider is now the probable life of the bridge? We cannot let the bridge fall down. If we were to let it fall down there would be trouble. We are bound to keep it up.

14. Do you say that the bridge has collapsed, or that it will collapse if you do not repair it frequently? It has not collapsed, and I do not propose to let it. But it would be a serious thing if we were to wait until we found out that a bridge was so worn out that it would be likely to fall down before substituting another structure. The bridge, in my opinion, has got into such a state that it is no longer economical to repair it. I should regard any expenditure in strengthening it as waste of money.

15. I gather from what you say that the principal expenditure ceased in 1895? Yes, about two years ago. I have re-decked the bridge once since then.

16. Last year? Yes.

17. When you re-decked the bridge did you make an examination of its state? I made no further examination. I am familiar with it all through.

18. You found it necessary to re-deck the bridge, although you are of opinion that a new bridge should be placed there? It was absolutely necessary to re-deck it. It is a matter of wear and tear. The horses' feet would wear out the decking in about two years.

19. Would the re-decking be an unimportant expenditure? I daresay it would run to about £400.

20. Is it your opinion that you would be able, without much difficulty, to maintain the bridge a few years longer, allowing time for the erection of a new structure? Yes; we can keep it in order until a new structure is erected.

21. Where is the principal defect in the present bridge? The girders carrying the superstructure when the bridge was originally built were very much too light. They are now about thirty-five years old, and in regard to the bulk of them, the timber is not, of course, nearly as strong as when they were put in. Even although they may not be actually decayed in the centre, the life has gone out of the timber. They were weak enough when they were put in for light traffic, and now that they are not so good as when they were put in, they have to carry very much heavier traffic.

22. What is the difference in the traffic as between 1894 and the present time? I have no record, except as regards the shipping. The vehicular and pedestrian traffic has not been counted.

23. Will you give the Committee the figures you have in reference to the shipping? In March, 1894, we opened the swing-span an average of eleven times daily to allow vessels to go through. Taking the average of the whole of 1896, and up to May, 1897, we have opened the bridge on an average twelve and a half times a day.

24. Over what period did you spread the average in March, 1894? I took the average of a week.

25. Did you take the average in the corresponding weeks in 1896 and 1897? No; I have given you the average from March, 1894, up to last month. A record has been made of the number of openings every day during the intervening period.

26. When did the increase in traffic become apparent? It has been pretty uniform right through.

27. *Mr. Hoskins.*] Is the class of vessels which go through now larger than it used to be? They always take as large ones through as they can, but the water is limited. Even small vessels can only go through at high tide.

28. *Mr. Humphery.*] Prior to March, 1894, what was the average number of vessels passing through daily? I have no record of that.

29. According to the figures you have given there has been an increase of something like 9 per cent. between March, 1894, and the present time? Yes. 30.

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30. You are not prepared to speak as to the tonnage? No; we keep no record as to the tonnage.
31. Have you any recent figures showing the number of vehicles and of pedestrians who have crossed the bridge? I have no record since 1894.
32. What was the state of the traffic in March, 1894? The daily average was 1,792 vehicles, 60 horse-men, 357 driven animals, and 1,406 pedestrians.
33. Have you no statistics showing the traffic since the time when the expenditure of £4,000 for the strengthening of the bridge took place? We have no statistics as to the traffic since the period I have just given you. It would involve putting on a special man to count the traffic.
34. What has led you to the conclusion, then, that the bridge is used to a larger extent now than it was previously to 1894? I do not think I made that statement.
35. Then in speaking of the traffic being greater now than in 1894, you referred to the opening of the swing only? Yes; I am not in a position to speak as to the other traffic. I should think it would be considerably greater, but I have no figures to go upon.
36. Do you think the increase of traffic has tended to weaken the bridge? It would not weaken the bridge. There would be more wear and tear of the decking; but as regards the strength of the bridge, that would depend upon the question of how many persons and vehicles were on it at the one time.
37. Do you think it likely that the opening of the swing has tended to weaken the bridge? The opening of the swing has not weakened the bridge; but if a vessel in passing through touched either the bridge or the swing itself ever so lightly, it would cause damage.
38. Why have you arrived at the conclusion that the increased traffic has to a large extent caused an earlier necessity for a bridge than you anticipated after the expenditure of £4,000 in 1894? I think there is some misapprehension. The statement I made was that the superstructure of the bridge was built for light traffic originally, and that the traffic in recent years had so greatly increased, and that the loads passing over the bridge were so much heavier, that it was not, in my opinion, strong enough to carry them in safety.
39. Are you referring to the traffic prior to or since 1894? There has been a gradual increase of traffic from the time the bridge was put up until the present day. The bridge is unsuitable for the traffic it is now called upon to carry.
40. Then, I presume, it was equally unsuitable in 1894? Yes.
41. There has been no change, so far as you are aware, between the conditions that then existed and those that now exist? So far as I am aware there has been no change. It might be of interest to the Committee if I gave you the number of vehicles which passed over the bridge in 1889. That will show you what an enormously increased traffic the bridge is called upon to carry. In 1889 there was a daily average of only 196 vehicles, 102 horsemen, 456 driven animals, and 1,011 passengers. That would be during a day of twelve hours. The number of vehicles, which, of course, constitutes the heaviest of the traffic, has increased from 196 in 1889 to 1,792 in 1894.
42. *Chairman.*] I suppose there would be no difficulty in getting the present traffic counted? No; I can obtain it.
43. We are sure to require it before the Committee report? Yes; but it would be scarcely well to take it this week, on account of the holidays coming on. I will see, however, that it is taken. It is only a question of putting a man on the bridge to count the traffic.
44. *Mr. Humphery.*] Can you explain the large increase of traffic as between 1889 and 1894;—was the bridge improved in the meantime? No, the bridge was not improved. I take the increase to be due to the increase in the suburbs and the larger volume of traffic to Balmain.
45. You think places of business have come into existence which have led to this increased vehicular traffic? Yes.
46. Can you so divide the traffic so as to show what portion might fairly be attributed to the Abattoirs and what might fairly be attributed to the suburbs? No attempt has yet been made to divide it, but I daresay it could be done.
47. Which suburb, in your opinion, has caused the greatest increase in the traffic? It would be very difficult to say.
48. Of course a large quantity of the traffic would be in connection with the Abattoirs? At certain periods of the day.
49. What is the annual cost of maintenance at the present time? It costs about £30 a month in ordinary wages apart from repairs, such as the putting down of a new deck. But the wages of the men would cover the cost of keeping the bridge clean and the opening of it.
50. It would come to about £360 a year? Yes.
51. What additional expenditure do you contemplate in connection with the maintenance of the bridge? If it be decided not to construct a new bridge, I should advise that the superstructure be renewed and the piers strengthened; but that would run into a large sum of money.
52. Have you made any examination to ascertain how many of the piers require removal? The piles of the piers are fairly sound, but the piers are too light. There is too much vibration.
53. That objection was mentioned when the matter was last before the Committee? Yes.
54. Although the piers are sound you think that they are too light? Yes; the whole structure is too light.
55. But, notwithstanding, it has carried the traffic safely up to the present time? Yes; there has been no accident, no collapse.
56. It is rather difficult to understand, if the piers are quite sound, and if the traffic has not increased, why it has become suddenly necessary to proceed with a new bridge? It has not become suddenly necessary. It became necessary some time ago, in my opinion. When I took charge of the bridge, in 1893, I expressed the opinion that steps should be taken to replace it. I repeated that opinion in 1894, and I still hold the same view.
57. Which means that the conditions of 1894 and those of the present time remain unaltered, but you think that the time has now arrived when a new bridge should be started? That is the case.
58. The bridge is as good as in 1894, because you then expended £4,000 upon it, but in your opinion before long the life of the structure will practically have ceased, and you therefore think that we ought now to commence the erection of a new bridge? In one respect you are in error; the bridge is not as good as it was in 1894. When girders are over 30 years old they get a certain amount of decay into them, and they get worse every year. The bridge will be in a worse condition next year than it is in now.

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59. You say the girders are not as sound as they were? They are not. Every year tells upon girders which are thirty years old.
60. Have you made an examination, with a view to ascertain the number of girders which are at present unsound? I have examined the structure from end to end many times.
61. When did you make the last examination? I think in 1896 I last went over the bridge in detail.
62. Have you the result before you? There is no detailed result. The whole of the timber, in my opinion, was perishing to such an extent as to lose a great portion of its strength. If we found any girder with a considerable defect in it we should have taken it out and put in a new one.
63. Will you be prepared, when the Committee make their visit of inspection to the bridge, to point out to them how many girders there are which, in your opinion, are wholly unsound. I hope there are none which are wholly unsound. If there are any which are wholly unsound they have escaped my attention and the attention of my officers. Under those circumstances, we should take out the girder and put in a new one. I hope you do not misapprehend the position. I shall not be able to show the Committee girders with great holes in them, and point to the probability of their breaking down the next day. If I could have done that the traffic would be in the harbour at the present time.
64. But you will be able to point out to the Committee girders which, in your opinion, have perished? Yes.
65. You are not prepared to say at this moment how many are perished? I am prepared to say that with the exception of new ones, which have been put in from time to time, they are all sufficiently perished to render their renewal very desirable.
66. Are they in a much worse condition than they were in in 1894? I should not like to say exactly what would be the effect of the three years upon old timber, but from a large experience among other bridges in the Colony—I am constantly reconstructing old ones, and so forth—I can say that when I pull down a bridge of that age I can seldom get any timber out of it which will be of any use for culverts or anything of that kind.
67. Are the girders now in the bridge the original girders? A great number of them are.
68. Can you say how many have been replaced within the last ten years? No; I could not say exactly how many have been replaced.
69. Over how long a period has your experience of this bridge extended? I have had personal charge of it only since 1893.
70. Therefore you can only speak of the expenditure upon the bridge since 1893? Yes.
71. Did you make an examination of the bridge when you took over its charge? Yes.
72. Did you then make a report upon it? Yes.
73. Can you produce your report? I think the first report I made was just before the matter was brought under the notice of the Committee in 1894. It would be at the latter end of 1893, or at the beginning of 1894. The date of the report is not given, but you will find it on the first page of the evidence appended to the Committee's previous report.
74. In that report you called attention to what you thought absolutely essential for the traffic at that time? Yes. You will find upon page 2 a paragraph dealing specially with the Glebe Island Bridge. The first portion of the report is more general, dealing with both the Glebe Island and Pymont Bridges. But further on you will find this paragraph:—
- As the result of a very careful inspection of this bridge, extensive repairs were found to be necessary. To place this structure in the same condition as the Pymont Bridge—that is to say, safe for three to four years—will cost £4,060, which will be the cost of renewing walings, defective girders, flooring, hand-rail, &c., and also strengthening the cross girders of the iron swing span. If authorised, work can be started immediately the timber is obtained.
75. That is preceded by a minute by Mr. Hickson to the effect that with repairs, at a cost of £4,500, the bridge will practically be in a safe condition for the three years which would be occupied in the construction of a new bridge? Quite so.
76. Are we to understand that the bridge would take traffic equal to that of the present time for a period of three years during the construction of a new bridge? Yes. I think that unless an unforeseen accident happens, such as a ship touching the bridge, it would carry the traffic for that period.
77. You think we may safely estimate the life of the bridge at three years? Yes.
78. You would not care to express an opinion as to anything beyond that? No. But I particularly wish it to be understood that the bridge, even during those three years, will be too weak and too light for the traffic it carries. I do not anticipate that it will fall down, but it is too light and too old for any engineer to care to carry upon it the present heavy volume of traffic for any longer period than he can help.
79. You do not say that the traffic is greater now than it was a few years ago? No.
80. But you think that during past years the traffic has been too heavy for the bridge, although it has carried it safely? That is my opinion.
81. Have you any statement as to the class of vessels which have passed through the bridge? No, we do not keep any particulars as to the vessels. We keep the number of openings more as a check on the men doing the work than anything else.
82. Are you prepared to express an opinion as to what should be the maximum size of the openings in any new structure that may be erected? I certainly think the openings should not be less than 60 feet.
83. How do you arrive at that opinion? I arrive at that opinion chiefly from my experience at the Pymont Bridge, which is also under my control, and through which large vessels pass.
84. Do you think that vessels of the same class would pass through the Glebe Island Bridge? I do not think such large ones are likely to pass through it. It is used now chiefly for timber vessels.
85. What depth of water have you under the Glebe Island Bridge at the deepest part? In about the middle of the bridge there is approximately 22 feet of water at low water.
86. Do you think that vessels of a larger tonnage than those now passing through the bridge would pass through it if the depth of water were greater than it is where the swing is at the present time? I think so. I think that if improved facilities were afforded a great many more, as well as larger, vessels would use the bridge.
87. What depth of water have you near the swing? At the swing there are only 9 feet at low water. There is more water directly under the swing, but a vessel to get to it has to pass over some rocks with a depth of 9 feet at low water. At the present time we have to let a number of vessels through at night to catch the high tide.

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88. What is the depth of water at the Blackwattle Bay wharf? I cannot say.
89. What is the width of the present opening of the bridge? 34 feet.
90. Do you think that the opening should be 26 feet wider than the present opening, assuming a new bridge to be necessary? Yes; I think it ought to be about 60 feet.
91. Do you arrive at that conclusion upon the character of the traffic passing through the Pymont Bridge, or from what you think will be the character of the future traffic passing through the Glebe Island Bridge? There is one thing which guides me to some extent in the formation of that opinion. We recently had occasion, even as the bridge is at present, to bring through some of the large dredges, and in order to get them through we had to widen the opening in the bridge to 58 feet.
92. Have you had dredges of the same class passing through the Pymont Bridge? No.
93. I suppose you could not get one through? No. We should have to do as we did at the Glebe Island Bridge—that is, remove a portion of the structure.
94. That is your reason for fixing 60 feet as the necessary width of the opening? I merely mention that as an instance; but I am of opinion that any opening of less than 60 feet is inadequate even for small vessels. They cannot always hit the opening exactly, and accidents are very likely to arise if you have a narrow opening.
95. *Mr. Wright.*] Would the difference in the cost as between a 40-foot and a 60-foot opening be very great? It would depend entirely on the width of the decking, and what kind of bridge you had.
96. *Mr. Humphery.*] Have you formed any opinion as to where the new structure should start from? There is a line shown on the plan placing the bridge alongside the existing one—to the south of it. That appears to me to be a very suitable position.
97. Is that the same design as the one which was placed before the Committee in 1894? That was the scheme I think which was placed before the Committee at that time.
98. Has it been altered in any way? I do not think the plan has been touched since. The site to which I refer is that which was proposed at the time you mention.
99. The place where the swing is shown under that scheme would be the deepest part of Johnstone's Bay? Yes. There would be as good water there as in any part of the bridge.
100. Do you know how far up above the bridge that depth is continued? I am not aware.
101. Have you the soundings of Blackwattle Bay? I fancy soundings were taken at the time designs were prepared for a bridge over the harbour, but I do not remember what they were.
102. There would be no difficulty in getting them? No. If they have been taken they can be easily obtained.
103. What would be the area of available water to a depth of over 20 feet in Rozelle Bay and Blackwattle Bay? I do not know the borings sufficiently to say.
104. Who could furnish the Committee with information upon that point? I should think the Public Works Department would be able to do so. Mr. Halligan, the marine surveyor, would probably have the information.
105. As far as you know, there would be, with good dredging, a considerable area of deep water? That is my impression.
106. *Mr. Lee.*] Supposing the question arose as to the advisableness of prolonging the life of this bridge by repairing it:—what would it be necessary to expend upon it to extend its life for a further period of ten years? I should recommend a practically new structure throughout. I should recommend bracing the piers below the present water-level, so as to stiffen them, and I should think that if you were going to extend the life of the bridge for so long a time as ten years, it would be very necessary to widen the roadway of the existing swing span—practically to put a new swing span in.
107. I named ten years, as I thought that would be a fairly proportionate period, having regard to the life of a new bridge, which I take it would be thirty years. If you expend £4,000 every two or three years in repairs, that would amount in ten years' time to £13,000 or £14,000. It might become a question whether it would be better to put the bridge in substantial repair for ten years, or to build a new bridge. I should, therefore, like to know the probable cost of giving the bridge a further life of ten years? Besides the condition of the bridge, you must take into consideration its limited capacity, the congestion of traffic at the swing, and the consequent delay.
108. In the first place, the swing is in the wrong place? Yes.
109. The condition of the present structure is such that in order to obviate danger, you have to put gates at a certain distance from each side of the swing? Yes.
110. To prevent traffic from getting too close to the swing when it is open? Yes; I am sometimes afraid of one of the little vessels touching the bridge, while persons are standing on it near the swing.
111. The bridge is shaky, not so much on account of the decay of the woodwork as from the slender nature and great length of the piles? That is it.
112. Looking at the question from the two points of view I have laid before you, you think it would be cheaper to erect a new and more commodious structure than to patch up the present structure, with a view to giving it a further life of ten years? Yes; I am very strongly of that opinion.
113. If the piles were long, strong, and sound enough to last for another twenty years, there would be some reason in recommending a new superstructure, would there not? Yes; there might be some reason in such a recommendation then.
114. But you could not recommend the putting of a new superstructure on piles which you have already condemned on account of their unfitness—not from their rottenness, but from their being too light? It would be of no use to put in a new superstructure without going to great expense in strengthening the piers.
115. Would you, as an engineer, recommend that that should be done? No; I would not recommend that anything more should be done to the old bridge.
116. If the piles had to be braced below water, and strengthened in other respects, and if a new superstructure had to be put upon them, that would go a long way towards the cost of a new bridge? Yes.
117. After having incurred all that expense, you would have a structure which would last for ten years; whereas, if you put up a new structure it would last for at least thirty years? Yes; providing a timber structure were contemplated.
118. You contemplate that, with a new timber structure, you will be able to give the necessary accommodation for the increasing traffic, placing the swing in a position in which it would afford greater convenience

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convenience to vessels plying to the upper portions of the harbour? Yes; but I do not express any opinion as to a timber structure. I am in favour of a new structure, but I express no opinion as to what kind of structure it should be.

119. It may be better to put in an iron one, but as between putting in a new wooden structure and repairing the existing structure, the difference in life would be represented by the difference between thirty years and ten years? Yes.

120. Have you any reason to suppose that the large volume of traffic passing over Pymont and Glebe Island Bridges is likely to be diverted by railway or tramway construction? I should not think so. I think there would always be a certain amount of traffic from the city to Balmain along that route. Knowing the district as I do, I should say that the traffic would be more likely to increase than to decrease.

121. No matter what action may be taken in the future in railway or tramway construction, you think that it would always be necessary to keep open bridge communication between these two points? I think so.

122. *Mr. Clarke.*] Are the piles in the present structure coppered below high-water mark? Yes.

123. In that case no injury would be done to the piling by the cobra? I do not think much injury would be done by the cobra. But even piles covered with copper are likely to get the copper rubbed off at places; and at those places the teredo may get in.

124. The danger of injury from the teredo lies chiefly between wind and water, or, in other words, between high and low water mark, does it not? So some persons say, but in my opinion they will work at any depth. I know that some persons say that they will only work between wind and water; but there is ample proof that they will do damage lower than that.

125. You think they will work anywhere where the timber is not covered with copper? Yes.

126. Although, in this case, the piles are slight, I suppose they are strong enough for the ordinary traffic which existed when the bridge was first erected? Yes. It was supposed to be a light-traffic bridge.

127. *Mr. Wright.*] Both the Glebe Island and Pymont Bridges have been in existence for some years? Yes. The Glebe Island Bridge is now 35 years old.

128. I suppose that, with ordinary care and good piles, a wooden bridge will last from twenty-five to thirty years? Yes; longer than that.

129. Therefore, the superstructure without the decking would last for a considerable time? No; because the girders which carry the decking are more exposed to influences which would cause them to decay than are the piles.

130. Will not the trusses last for a great number of years if they are built of hardwood? We estimate the life of these wooden bridges at from twenty-five to thirty years. That is a long life.

131. For a wooden structure? Yes.

132. But with proper care and occasional repair, and a coat of paint or tar, how long would such a bridge last? From twenty-five to thirty years.

133. How long have you had charge of the Construction Branch? I have been connected with it since 1887.

134. And during that time you have had occasion to superintend the repair of a great number of wooden bridges? A great number. There are about 2,800 bridges in the Colony which are under my care.

135. And your experience points to the fact that well-constructed wooden bridges will last from twenty-five to thirty years? Yes; not any more.

136. *Mr. Hassall.*] A good deal of delay at present takes place in getting the traffic across the bridge, does it not? The average daily delay would be one hour forty-five minutes—that would be from 6 o'clock in the morning until 6 o'clock in the evening.

137. Is not that principally caused by the narrow entrance to the bridge on the city side? The time I have given you is merely the time between the opening and shutting of the swing. Of course, when the swing is shut again, there is a long string of vehicles waiting to come over from Balmain, and another long string of vehicles waiting to cross over from the city. They are a long time battling through. The delay I have given you would not include the time thus occupied.

138. Then there would be considerable delay in addition to that which you have already mentioned? Yes.

139. In consequence of the narrowness of the bridge only one line of vehicles can pass over at a time? Yes; only one line can cross the swing at a time. The city-bound traffic crosses first, and the Balmain-bound traffic must wait until the city-bound traffic is over before it can get across.

140. That necessitates considerable delay? Yes; there is no room on the bridge for two lines of vehicles to pass over at one and the same time.

141. Is it not a fact that the traffic is largely increasing? As I have already said, I have no record of the increase in the vehicular traffic since 1894, but between 1889 and 1894 it increased to an enormous extent.

142. From your knowledge of the traffic, the bridge being under your supervision, do you not think it is necessary to make better provision for the traffic than exists at the present time? I am strongly of opinion that that should be done.

143. You think that any plan which is submitted should provide better facilities for traffic than those which now exist? Yes.

144. *Mr. Roberts.*] When did the expenditure of the £4,000, with which you were entrusted for the repair of the bridge, cease? It would be near the end of 1895 before the expenditure was quite completed.

145. About eighteen months ago? Yes.

146. Was it not contemplated that the expenditure of that £4,000 would preserve the bridge for another three or four years? It was expected that it would keep it safe, that there would be no accident.

147. Has the bridge become worn out sooner than was anticipated, or would it be safe for another two and a half years with the £4,000 of expenditure to which I have referred? In my opinion, it is not safe now from an engineering point of view. An engineer is not simply satisfied with the fact that a structure will hold up. He wants a certain margin of safety, especially in timber bridges, because there may be defects in the timber of which we know nothing. We have not that margin in the case of this particular bridge. Therefore, I say it should be entirely rebuilt. I have no reason to suppose that there will be an accident within the next three years with reasonable care.

148. You think that with reasonable care the bridge might last another three years? Yes; but it would not be right to carry traffic over it for a longer time than is absolutely necessary.

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149. Will you give the Committee the details of the expenditure of the £4,000? I took all the walings—that is, the cross-pieces on the piers—off, and put on new ones of a kind which were not very good, because I did not think they would be long required. I took the whole deck off, and patched the skin underneath. Here and there I took pieces out of it. I also put in a few new girders, and endeavoured to destroy some white ants in the bridge. I put a new hand-rail on it, and I also put new iron girders in the swing-span to strengthen it up a little. It was in dreadful condition. I also did some painting, which might lead persons to suppose that the bridge was stronger than it really is.
150. Do you regard the bridge as being safer now than it was at the time you commenced the expenditure of that money? Yes; it is in a better condition now than it was in at the commencement of 1894.
151. It is stronger? Yes, the deck is stronger.
152. Is the deck very much cut about by the large traffic now passing over the bridge;—it has now had about eighteen months' wear? The present deck will last for about nine months or a year. I shall then have to put in a new deck.
153. What would be the cost of the new deck? It would vary from £200 to £400.
154. Would the life of a deck be about three years? It generally runs from two to two and a-half years. There are a number of considerations affecting the life of a deck.
155. *Mr. Farnell.*] Do you think that in the construction of the new bridge it would be possible to ease the approach to the bridge on the Balmain side? Yes, quite possible.
156. Do you know it to be a fact that vessels are sometimes moored to the bridge? I have occasionally allowed a vessel to make a line fast to it; but it is not done without special permission and my knowledge of the vessel to be moored.
157. There is at the present time a considerable congestion of traffic on the bridge? Yes.
158. Have you ever noticed the bridge swaying backwards and forwards with the congested traffic? Yes.
159. As a matter of fact, when the bridge was constructed years ago, it was intended to meet the requirements of traffic between only two points—Balmain and Sydney—whereas since its construction the traffic from Ryde, Pennant Hills, Dural, and the districts to the north of the Parramatta River has come over the bridge? Yes; that is the case.
160. *Mr. Hoskins.*] You said just now, in reply to Mr. Farnell, that vessels are sometimes moored to the bridge;—is that a fact? I recollect two occasions within the last three or four years in which I have allowed a vessel to make a line fast to the bridge.
161. It is not the general practice is it? No; it is not done without permission.
162. Is permission frequently given? I can recollect giving it only twice.
163. Would not the making fast to the bridge of a laden vessel injure it if there were a heavy gale of wind blowing? In such a case the men in charge of the bridge would cut the line. They would not allow the line to remain if there were any wind or sea. In the cases to which I have referred the vessels were running out two or three mooring lines, and they wanted to make a light line fast to the bridge.
164. Is there not a regulation against such a practice? Yes. It is never done without permission.
165. Was the whole of the timber used in the repair of the bridge in 1894 seasoned timber? It was not what you would call seasoned timber. We seldom get seasoned timber for bridge repair. In this case the repair had to be done in a hurry, and we had to take the timber as we got it.
166. I understood you to say just now, in reply to Mr. Roberts, that you made certain repairs to the bridge which you did not consider were very good? It was not expected that the repairs of which I spoke were to last very long. I referred to the walings.
167. Why were those repairs not made good? If I had intended them to last for a long time, I would have coppered them, because the water comes over them at high tide; but, under the circumstances, I did not go to that expense.
168. Then I am entitled to infer that the repairs you made were intended to be only of a temporary character—they were to last only a short time? Yes. I should have regarded any more serious repairs as a waste of money.
169. Has any of the timber used in the repair of the bridge at the time the £4,000 was expended rotted away or decayed? No; none of it.
170. It is all in good condition? Yes. The ants may have got into particular pieces, but I do not think it likely.
171. Are we to infer that the portion of the bridge which has become so deteriorated as to make the structure almost unsafe is the old timber, and not the new timber which was put in in 1894? That is so.
172. You could not give us an estimate of what it would cost to replace the timber which is not in good order, so as to make the whole of it equal in condition to the timber which was last put in? No; I could not give you such an estimate, but I have already endeavoured to point out that if I were to renew the bridge by replacing each piece of timber now laid the structure would not be sufficiently strong to carry the traffic which passes over it.
173. You say that the piles are in good order, but that they are not sufficiently strong for the traffic? The girders in the superstructure are not strong enough to carry the traffic over such long spans as there are in this bridge.
174. I suppose the replacement of the girders would not be a very formidable matter? It would run into a good deal of money. If the bridge were all in new timber now, just as it stands, it would be about one-quarter as strong as one of our ordinary up-country bridges—one of the standard bridges of the Colony—that is, if you were to make every stick in it brand new.
175. You have had great experience in bridge-building, I take it, and you say that the vibration of the bridge is excessive;—is it not a fact that timber bridges generally vibrate when loads are passing over them? Yes.
176. Is the vibration of the Glebe Island Bridge greater than is usually the case in such bridges? Yes.

FRIDAY, 18 JUNE, 1897.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.
 The Hon. JAMES HOSKINS.
 The Hon. CHARLES JAMES ROBERTS, C.M.G.
 The Hon. WILLIAM JOSEPH TRICKETT.
 The Hon. DANIEL O'CONNOR.
 HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.
 JOHN LIONEL FEGAN, Esq.
 THOMAS HENRY HASSALL, Esq.
 GEORGE BLACK, Esq.
 FRANCIS AUGUSTUS WRIGHT, Esq.
 FRANK FARNELL, Esq.

The Committee further considered the expediency of constructing a New Bridge at Glebe Island.

Ernest Macartney de Burgh, M. Inst. C.E., Assistant Engineer for Bridges, Department of Public Works, sworn, and further examined:—

177. *Mr. Lee.*] Since you were last here you have made a further inspection of the Glebe Island Bridge? Yes. I went over yesterday morning before the Committee visited the bridge, to see what portions of the work showing its defective condition, I could point out to you. I found that, in addition to the very rotten piece of timber I showed to the Committee, the white ants had extended their operations from the Glebe Island end of the bridge to a point past the centre. I found them to be a good deal worse in the bridge than I anticipated they would be, because I have been at some pains in endeavouring to keep them out of it. Apart from that, however, I found nothing but what I quite expected to find—that is, decayed girders, and some of the piles hollow.

178. You are prepared now to reiterate your recommendation that no new superstructure should be placed upon the present under-structure? Certainly.

179. The reasons you have formerly given hold good to-day, first, from the lightness of the piles, and the partially-decomposed state of some of them? Exactly.

180. Apart from that feature in the structure, is there not one which should receive consideration at the hands of the Committee;—I refer to the circumstance that the bridge as it now stands is far too narrow to carry the increasing traffic? Yes. In my opinion, the swing portion of the bridge, especially, having only one roadway in it, is utterly unsuitable for the traffic, quite apart from the narrowness of the main structure.

181. Your under-structure, being of a certain width, you could not very well increase the width of the superstructure? No; not without making things worse than they are now.

182. As a matter of fact, the bridge is so narrow as to be altogether insufficient to carry the traffic? In my opinion that is the case.

183. Your recommendation, therefore, is that the bridge be built on a larger scale? Yes.

184. You think that all idea of patching up the old bridge should be abandoned? Yes; I think that would be useless.

185. How do you propose to conduct the traffic while the new bridge is in course of erection? If the Engineer-in-Chief proposes a new bridge on the site shown on the plan before you, no matter what kind of a bridge it may be, the traffic will be carried on over the old bridge during the construction of the new one.

186. Would the width of the approaches on either side of the bridge determine the amount of traffic that would pass over it? Unless the road were so narrow that two vehicles could not pass on it, I do not think the width would have any effect on the amount of traffic.

187. The road at present will admit of two or three vehicles passing one another? Yes.

188. On the other hand there are portions near the rock excavation which are very narrow? Yes; as you go up hill towards the Abattoirs there is a narrow portion.

189. If you provide for a double traffic bridge, you must also provide for double traffic approaches? In that case, you will have to increase the width of the roadway. No doubt in building such a large bridge as would be required at this place, they would increase the width of the road. That would be done as a matter of economy to get the material for the necessary filling.

190. Would there be much additional cost involved in that? No; the cost would be very trifling.

191. The erection of the larger bridge will not lead the country into a still heavier expenditure in connection with the widening of the roadway? The widening of the road on the far side would be a trifling matter.

192. If it became necessary to widen it the work could be done at a small cost? Yes.

193. You are quite clear about that? Yes; it would be a mere bagatelle compared with the cost of the bridge.

194. Is there any other point you desire to mention to the Committee? I might mention that yesterday morning while I was at the bridge, I counted sixty-four vehicles waiting to get across, the swing being at the time open to let a vessel through.

195. How long were the vehicles detained? I did not time the detention. Some would be detained a long time, others a minute or two. I do not know what the maximum time would be, as I was not there when the swing was opened.

196. *Mr. Roberts.*] Do you think that if you were to remove the swing to the centre of the bridge, the structure could be so strengthened as to last for another three or four years? Some time ago the ship-owners and persons who trade at the wharfs in Blackwattle Bay wrote to the Public Works Department and pointed out the great inconvenience to which they were subjected from the present position of the swing. They asked the Secretary for Public Works to cause the swing to be put in the centre of the bridge pending the erection of a new structure. We then looked into the matter very carefully to see if the matter were practicable; but the old iron swing which is there at present is such a poor affair, it is such an old-fashioned, ramshackle thing, and the cost of getting foundations for it in the deeper water in the centre would be so great as compared with the advantages to be gained for only a few years—you might say for only three years—that we thought the proposal out of the question. We went very carefully into the matter at the time, because we were anxious to improve the shipping facilities,

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197. The Minister came to the conclusion that the present bridge was in such disrepair that he would not be warranted in expending the large sum required to put a new swing span in? That is so.
198. *Mr. Trickett.*] What regulations are there with regard to the traffic over the Glebe Island Bridge at the present time? There is no limit to load, if that is what you are referring to.
199. But is there any limit to the pace at which the loads can be conveyed across? No.
200. If the bridge is in such a shaky condition, would not some regulations seem to be advisable? Our experience is that it is very difficult to enforce such a regulation; in fact you might almost say that it is impossible to do so. The advantage gained, therefore, would be inconsiderable.
201. I ask you this question, because when you were examined before the Committee in 1894, you said you thought it inadvisable to allow swift traffic over the bridge? I recollect that at that time I limited the traffic for a certain period. Some portion of the bridge was being altered, and I was particularly concerned at that time as to the speed of the traffic. We were altering the portion in the middle, which you may have noticed yesterday. We cut some piers out of the arched portions, and put in two new iron girders at each end. This work having been done, and finding, as we did, that the police were not very successful in their efforts to keep vehicles at a walk, we allowed the traffic to proceed as before.
202. Do you think that in the interests of the safety of the structure you should still allow the drivers of vehicles to go as they please over the bridge? I think we could get through safely, if we had not to keep the bridge open for more than another three years.
203. In reply to Question 120 in 1894 you said that you had limited the pace but that you had not limited the load. Does it not strike you that if it was necessary in 1894 to limit the pace it would be quite as necessary to do so in 1897. If it be necessary, surely the Government can enforce the regulation as to pace, in the interests of the safety of the bridge and of the public who use it? I did limit the traffic for a time, but since the beginning of 1896 we have so strengthened the centre spans, where there is the greatest vibration, as to alter the circumstances to a certain extent. I presume we could insist upon the pace being lessened, but it would be very difficult to do so, and it would at the same time be very inconvenient to the public.
204. If I am rightly informed there are a good many swing bridges in use where the traffic has to be limited in pace. In many of the American bridges that is found to be very necessary? In America they regulate the pace on many railway bridges also. Traffic is made to go very slowly over bridges there, the bridges being of light construction, and their life very short.
205. This bridge has always been looked upon as designed weak, to use your own words? Yes.
206. In the interests of safety, do you think the traffic should be allowed to go over the bridge without any regulation? I think it might be allowed now until we put up a new bridge. I say so on account of the alterations which have been made to the centre of the structure since I gave my evidence in 1894.
207. The alterations cause the bridge to vibrate less than it did before? Yes.
208. Yesterday we saw the effect of the ravages of white ant at one end of the bridge;—can you tell us whether the piers of the bridge are suffering to any great extent from cobra? As far as I can ascertain from the examination made by the divers the last time I had them examined there is not much cobra in the piers. But I might say that cobra is very difficult to detect. We have frequently drawn the piles of an old bridge which have been coppered, and upon which we have thought there was sufficient protection, and have found them very badly eaten. We had bored the piles in two or three places, but we had missed the worse places by accident.
209. The cobra do not go in any regular line? No; and they leave no mark on the outside worth speaking of.
210. In the case of a bridge built over salt-water, is it not a very necessary part of the examination to ascertain whether the structure is affected by cobra? Yes; but the examination is not altogether satisfactory. It is rather difficult to be quite certain about cobra.
211. What steps do you take to ascertain the existence of cobra? Sometimes when they are very bad in the piles we discover them with the auger, in other cases we get a broken pile from a snag coming across it and smashing it. A glance at the place at which it has been broken will sometimes disclose the fact that the pile is full of cobra.
212. Have any of the piles which you have had to replace in the Glebe Island bridge been weakened by cobra, or by reason of the ravages of the white ant above water level? I have not taken any out of the main bridge. Where we touched any at all we cut them off above the covering and spliced on a new piece of timber to stiffen them.
213. You have not examined them below water-level? I had them bored by the divers.
214. The diver's examination did not disclose any danger? No, they were not in peril of collapsing.
215. You are sure of that? Quite sure.
216. Have the white ant run along the bridge to any great extent? They went right through the particular girder I showed you from end to end. They have followed along in a straight line from the point at which you were standing to a point past the centre opening. I got large quantities of them alive yesterday.
217. You were using a chisel, and were actually sweeping them out? Yes.
218. Underneath the bridge there is a lot of iron tie-rods;—I suppose their efficacy would be much impaired if the white ant were to get into the wood into which they are screwed? They would be weakened very much. They were not put into the bridge originally.
219. They were put in to stiffen it up? Yes. I presume that, as traffic increased, the Department began to be anxious about the bridge.
220. But as long as the timber remained solid, I suppose these tie-rods would be a great factor in the stability of the bridge? Not much so. They are very light; they are quite small rods. From time to time I have had the tie-rods collapse with the girders.
221. Would that be with the weight of the girder? The traffic would come altogether on to the tie-rods, and they would break.
222. They are of wrought-iron? Yes.
223. During the last three years the bridge has been under your watchful care? It has been under constant observation.
224. You have patched up the weak points and made the best job you could of it? Yes.
225. You now consider that the bridge has arrived at such a stage that it is absolutely necessary, in the interests of the safety of the public, that a new structure should be put up? I am of that opinion.

226. *Chairman.*] The effect of your evidence is this;—first of all, you say that the bridge, by reason of its construction, is not suitable to carry the traffic which it has to carry; secondly, that if you were building a new bridge to carry such traffic, it would be two or three times as strong as the existing bridge;—then, as to the steamer traffic, you say that the swing is so situated that it presents a serious difficulty both to the road traffic, on account of its construction, and to vessels, which find it difficult to approach its entrance;—you further say that the bridge is defective, not only on account of its weak construction, but on account of the piles and girders having seen their day;—that is the effect of your evidence? Yes.

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Stephen Edward Perdriau, Surveyor, Department of Lands, sworn, and examined:—

227. *Chairman.*] You are a surveyor in the Lands Department? Yes.

228. *Mr. Fegan.*] Do you produce plans? Yes. I have two sheets of the map of Sydney and its environs, covering the district under consideration.

229. You are well acquainted with the approaches of the proposed bridge? Yes.

230. Are they both through Government land? There is Government land on the Glebe Island side but not on the other side.

231. Then resumption would be necessary? A portion on this side would have to be resumed.

232. I understand that you have prepared a statement for the Committee? Yes. I have a description of Blackwattle Cove and Rozelle Bay, comprising part of Port Jackson lying southward of Glebe Island Bridge. It is as follows:—

S. E.
Perdriau.
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This sheet of water is in shape an irregular oblong, longest in an east and west direction, the bridge being about in the middle on the northern side. The water is about $1\frac{1}{2}$ mile in length with an average width of about 15 chains. The area is about one-third of a square mile, and the shore-line about 3 miles, measured along the limit for reclamations where the same has been determined, and without following the sinuosities of high-water line.

The eastern portion is called Blackwattle Cove, and the western portion Rozelle Bay, Glebe Point, located about midway on the southern shore forming the division.

The various municipalities delimited by this waterway are, on the north side Sydney (Pymont) and Balmain (including Glebe Island), and on the south The Glebe and Annandale. Within about a mile are Sydney proper, Redfern, Camperdown, Petersham, and Leichhardt. The interests of all these municipalities are of course considerably affected by the facilities for trade afforded by water-carriage to this part of the harbour.

The above-mentioned municipalities, already populous, are still rapidly increasing, and they comprise immense areas at present unused, which, owing to their proximity to the city, must in the near future be required for business and residential occupation. In view of these facts, I conclude that, with the exception of Circular Quay and Darling Harbour, there is no more important inlet in Port Jackson than that now under description.

This opinion is strengthened by my intimate knowledge of the development here. During the last fifteen years this foreshore has been continuously under my observation. In that period I have surveyed nearly the whole of it in connection with reclamations made by the Crown and by private individuals. With the exception of the frontage of Glebe Island reclamations, extending as far out as Government would allow here, have been effected on nearly the whole of the foreshore. The principal business carried on is in timber and road metal. The exceptionally large areas of flat land reclaimed from the harbour render it superior even to Darling Harbour for the timber trade, and the trend of that business has been in this direction for some time, and now timber-yards are located at intervals all along the foreshore. My work for the Department of Lands is largely in connection with water frontages, and I am constantly visiting all parts of the harbour, and during recent years on no other equal length of foreshore, except in the city proper, has there been as much money expended for reclamation and wharf building, nor as many new and important businesses established, and the conditions indicate inevitable further development if due facilities are afforded for access from the main harbour.

BLACKWATTLE COVE.

Blackwattle Cove lies between Pymont and the Glebe; it is within $1\frac{1}{2}$ mile of Redfern Railway Station, and $\frac{3}{4}$ mile of the nearest point on the railway at Darling Harbour.

The water-frontage land on the northern shore of the cove is nearly level, being reclaimed land. It forms part of the Harris estate, and access to the water is very convenient from Bank-street and Cippis Crescent, which bound the water-frontage allotments. About half the total length of the foreshore, which is about 2,500 feet long, is leased to various persons, and used principally as timber yards. The freehold value of these allotments varies with their position and depth from about £30 per foot near the bridge to about £70 per foot at Pymont Bridge Road.

The southern foreshore of the cove is about the same length as the northern, but is much steeper, the gradients of the roads leading to the water being very severe. The southern shore is inferior to the northern shore for business, and the design of subdivision of the locality is inconvenient for access to the water, consequently land values are much lower than on the northern side. There is one large timber yard on this side of the bay at the Pymont Bridge Road, and about half the remainder of the water-frontage is occupied for businesses of less importance, and the rest for residential purposes.

The Government wharf at the head of the bay lies between the Pymont Bridge Road and the cove. It is 1,075 feet long, all in one straight line, and forms the head of the cove. The wharf is used for discharging road metal from vessels carrying up to about 320 tons, and was built when the natural head of the cove was reclaimed from the harbour and formed into the recreation reserve called Wentworth Park.

Direct access from Blackwattle Cove to the city is provided through Pymont, and thence by the bridge to Market-street; but the gradients of the roads traversed and which cross the backbone of the Pymont Peninsula are somewhat steep.

The gradient is easy from Blackwattle Cove, *via* Wattle-street, to Redfern Railway Station.

The Glebe Island bridge connects that Island with Pymont, and obstructs the natural access to the cove. The bridge opening is situated at the Pymont end, and is sufficient to allow of vessels up to 34 feet beam passing through. In the opening there is a depth of 12 ft. 6 in. of water at low tide. I was informed that a new pile recently driven at the western side of the opening required to be 50 feet long to reach the rock.

On the 21st November, 1894, the Public Works Committee, after inquiry, reported against the replacement of the bridge by a new structure.

DEPTH OF WATER AND BORINGS TO ROCK.

The depth of water in the cove is from 7 feet to 13 feet at low tide; in a few places it reaches 20 feet. This is sufficient for the present requirements, *viz.*, for vessels up to about 400 tons burden, laden with the timber and road metal referred to above.

The dredge is now at work in the cove lifting mud which is taken to the large reclamation work in progress about half a mile away, at Johnstone's Creek, Rozelle Bay.

Soundings north of the bridge show a depth of from 18 to 19 feet. Seventeen borings upon two longitudinal sections extending across the bay show a depth varying from 21 feet to 86 $\frac{3}{4}$ feet in the middle of the bay. At one place there were only 8 $\frac{1}{2}$ feet to rock. These sections were located respectively north and south of the bridge and distant therefrom about 100 feet. Borings have been taken to test the depth to rock throughout the bay.

GLEBE POINT.

Glebe Point is so well known as a first-class residential locality that little need be said of it here, except that the building of expensive residences has continued even during the depression. Communication with the city by tram and bus is so frequent that for this purpose water access is not of great importance, but the wharf at the end of Glebe Point Road is a place of call for ferry steamers.

ROZELLE

ROZELLE BAY.

S. E.
Perdriau.
18 June, 1897.

Between Glebe Point and Annandale, and between Annandale and Balmain, the flat foreshores of Rozelle Bay at the mouths of Johnstone and White Creeks have recently been reclaimed from the harbour.

These areas, which were formerly objectionable and foul-smelling mud flats, are to be formed into public parks, but the water frontage portions for a width of about 200 feet from the sea-wall will be retained by the Crown for wharfage; the lengths of same are about 1,700 feet and 500 feet respectively.

No doubt these places will soon be used, and consequently the Government possessing these two large wharf frontages, as well as that at the head of Blackwattle Cove above referred to, will be studying its own interest by providing uninterrupted water access thereto.

The remainder of the foreshore of this bay, except that of Glebe Island, has now all been reclaimed by the owners of the various freeholds adjoining.

With one or two exceptions they are in actual use for business purposes, mostly in connection with the timber trade, as before described.

I have not been able to procure a plan showing soundings and borings in Rozelle Bay, but judging by the size of the vessels I have seen there, I should say that the depth is equal to that in Blackwattle Cove.

The following is a description of Glebe Island:—

Glebe Island comprises an area of about 34½ acres, being about 34½ chains long and about 10 chains wide. It extends into the harbour north-easterly from Balmain at a point near the south-western end of the borough, and was, as the name implies, an island. It is now a promontory, the greatest height being towards the north-east. Many years ago a causeway about 1 chain wide was built, connecting it with the mainland. Within the last few years an area of about 12 acres, lying to the north-west of the island, and joining it with Balmain for a length of about 12 chains, was reclaimed from the harbour by the Crown. The reclamation was effected to abate the nuisance caused by the stench from the mud flat. The land is not used, except a small piece railed off for a cricket ground. The two areas combined are about 46½ acres. The island is bounded on the north by White Bay, dividing it from Balmain; east by Johnstone's Bay and Blackwattle Cove, dividing it from Pyrmont; and south by Rozelle Bay, dividing it from the Glebe and Annandale.

The total length of the water frontage of the island, including that of the reclamation, is about a mile. The reclamation is, of course, level; but the whole of the island has a bold, rocky foreshore—in fact, the solid rock shows freely all over the surface, and at a few yards back from the shore line a height of 15 feet above high-water level is reached, the height rapidly increasing by rugged, rocky slopes until the highest point is reached, which is 90 feet above high-water level.

The central portion is a plateau from 70 feet to 90 feet above high-water level. Stone for Government works elsewhere is now being quarried at the northern end near the water.

The island occupies a peculiarly central position. It is within comparatively easy reach of the city and nearly all the populous suburbs.

From the city it is approached *via* Market-street, Pyrmont Bridge, Pyrmont, and Glebe Island Bridge, and is distant about 1½ mile by road from the General Post Office.

The nearest point on the Darling Harbour railway is within seven-eighths of a mile of the island, in a direct line, and Petersham railway station is within 2½ miles by road. The main Sydney road from the Ryde and Hunter's Hill districts, *via* the four bridges called Five Dock, Long Cove, Glebe Island, and Pyrmont Bridges, crosses the southern portion of the island, and forms the frontage road of the Abattoirs.

The Abattoirs.

The Abattoirs for the Sydney and Metropolitan District occupy the area of about 7 acres lying southward of the road, and the small space on which the mutton houses are erected, northward of the same.

The desiccating works situated at the southern extremity of the island are now disused, the blood and offal being conveyed to sea in punts.

There are six dwellings of various sizes and material scattered over the more northern section of the island, all occupied by officials connected with the Abattoirs.

The small Post and Telegraph Office located here was closed a few months ago owing to the insufficiency of business.

Upon the high land northward of the road, and immediately opposite the Abattoirs, there is a large tank or reservoir hewn out of the solid rock. It is about 240 feet x 35 feet, and 20 feet deep. Water for flushing the slaughter-houses is pumped from the harbour into this tank. The pumps are said to be capable of lifting 40,000 to 50,000 gallons per hour.

There is no permanent occupation of any part of the island excepting in connection with the Abattoirs. The Abattoirs are said to be thirty-six years old and antiquated, and it is held that nothing short of entirely new and much larger and higher buildings could bring them up to present requirements.

There is no railway to the island, and the cattle and sheep, &c., are driven here from the sale-yards at Homebush, a distance of from 7 to 8 miles; and as the total for the year is between 900,000 and 1,000,000, it is evident that the objections raised in the populous suburbs *en route* against the cattle-driving nuisance are not without foundation. It is considered by those competent to judge that no other site in the metropolitan district presents such advantages for abattoirs as Glebe Island. Its central position has already been referred to.

It is all high land, and being almost isolated by the surrounding broad stretches of salt water, objectionable odours are dissipated before they reach the surrounding residential districts. (Complaints have, however, been made from time to time with regard to the unpleasant smells, particularly at Glebe Point; but there does not appear to have been any sustained effort by the public for the removal of the Abattoirs.)

Such extensive deep-water frontage affords unequalled facilities for the shipment of meat for foreign countries.

An advantage of a very peculiar nature is that the island is entirely free from blow-flies. It is said that none have ever been seen there.

Cattle are sometimes brought by sea to the island, whence they have to be driven to the sale-yards at Homebush to be sold. They are then driven back and slaughtered.

A light line of railway leaving the main line at Stanmore station, *via* White Creek—a distance of a little more than 2 miles—has been suggested to overcome the nuisance arising from cattle-driving, and the reclaimed land might be used for sale-yards; but those engaged in the trade state that if the Abattoirs were removed any considerable distance from the city the result would be an increase in the price of meat.

For many years no blood nor offal have been allowed to go into the harbour, but no doubt pollution occurs to some extent from the surface drainage.

Soundings and Borings.

Commencing at the bridge on the east side and thence northerly and round the eastern end of the island, the depth of water at 100 feet out from high-water mark is from 7 to 15 feet at low tide, deepening to 19 feet in the middle of the bay between the island and Pyrmont; but that depth is not reached within 600 feet from the northern portion of the island towards Balmain. Along the north-western foreshore the water is shallow. At 200 feet out from high-water mark it varies from 5 feet to 12 feet in depth at low tide.

Borings to rock were taken in 1881 on the foreshore extending from the bridge north-easterly and round the eastern end of the island. These show that at 200 feet out from high-water mark rock is reached at a depth of 20 feet, and less from low-water level.

The officer in charge of such work is, however, doubtful whether the plan affording the information *re* borings stated above is correct.

From about the middle of the sea-wall of the reclamation above referred to, a pile jetty about 240 feet long and 30 feet wide has been thrown out into the harbour.

The locality of the jetty had previously been dredged, as well as a channel to the same from the harbour, so that now vessels drawing up to 20 feet of water can be accommodated.

Apparently no soundings nor borings have been taken on the south side of the island from the bridge.

233. You have not seen a plan showing the depth to which various bores have been put down in Blackwattle Cove and Rozelle Bay? No; I understand that the borings are not yet complete in either Blackwattle Cove or Rozelle Bay.

234. And that is the reason the plans are not in hand? Yes.

235. Can you give us any information of the inconvenience resulting from the driving of cattle to the Abattoirs? I have ascertained that at the present time there are not so many coming down the Bullock Road on the southern side of Balmain as used to come down that way. There is only one paddock there now—the other paddocks are out towards Five Dock, and it is from that direction that the cattle come mostly.

236. Do you not think that some steps should be taken to minimise this nuisance to the public? I certainly think something should be done.

237. You do not think the reasons adduced by those interested in the Abattoirs are enough to justify any delay in protecting the public from this great inconvenience? I made some inquiries when I was over there. One man, an old resident of the locality, told me that if he saw a mob of bullocks coming he never remained in the road, or near it. The bullocks are made so wild by being harassed by men and horses, and by being driven, that they are really dangerous.

238. And you think the time has arrived when this danger should be lessened? Yes.

239. Can you give us a description of the stock route? Yes; I have not yet had time to go into that matter.

240. The resumption necessary in connection with the proposed bridge has not come under your notice? No.

241. *Mr. Humphery.*] Have you any means of ascertaining the area of available water to a depth of 20 feet which could be obtained by dredging in Blackwattle Cove and Rozelle Bay? That can only be ascertained by boring; but judging from such information as we have at hand, it appears highly probable that a great portion of Blackwattle Cove and Rozelle Bay can be dredged to a considerable depth, and be made available for shipping.

Gerald Harnett Halligan, Chief Surveyor, Department of Public Works, sworn, and examined:—

242. *Chairman.*] You are Chief Surveyor in the Department of Public Works? Yes.

243. *Mr. Hassall.*] You produce some plans showing the depth of water round about Glebe Island, and in the neighbourhood of the proposed bridge? Yes.

244. Will you explain it to the Committee? Yes. The plans submitted show the soundings in Blackwattle Cove, Rozelle Bay, and Johnstone's Bay. The depth varies from 2½ to 3 fathoms. If you take the average all over Blackwattle Cove and Rozelle Bay above the bridge you will get about 13 feet. The depth at the head of Rozelle Bay would be about 1½ fathom; at the head of Blackwattle Bay it runs to 1½ or 1¼ fathom. In Johnstone's Bay there is a depth of 2 fathoms alongside Glebe Island. That runs to 3 fathoms at Glebe Island Point. There is an average in the bay of about 3 fathoms.

245. Those soundings are to the mud? Yes.

246. Have any borings been taken? Only here and there. We have not gone over the whole area. We have taken borings at the head of Rozelle Bay, off the Abattoirs, over at Glebe Point, opposite Harris' property at Pymont, and at the head of Blackwattle Cove. If these places were dredged we could obtain 18 feet at low water on a hard clay bottom. You could excavate so as to give a depth of 18 feet at low water over an area of about 160 acres. That would include Rozelle Bay and Blackwattle Cove. Eighteen feet would be the average, but in regard to 100 acres, you could have a depth of 30 feet. That is only an approximate estimate, of course.

247. As to the clay, is it very stiff? It is Hawkesbury sandstone clay. It would be very difficult to remove, but it is a splendid holding bottom.

248. I suppose that below the bridge you would have a greater depth of water? Yes; and the further you get out towards the harbour the easier the excavation would be. The same thing applies to the whole harbour. At the heads of the various bays there is a stiff clay bottom, but as you get out further into the waters of the harbour there is more ooze and mud, which of course is not so difficult to remove.

249. *Chairman.*] What sort of approach is there to Johnstone's Bay? There is a depth of about 18 feet—it is a mud bottom.

250. *Mr. Hassall.*] There would be no difficulty in making a deep channel below the bridge? No; there is ample room, and it could be easily excavated.

251. You think that if a new bridge were constructed to Glebe Island it would be advisable to leave sufficient space to enable vessels of 600 or 700 tons to get through? I should think it would be wise to do so.

252. If such vessels could get through the swing of the bridge they could traverse the waters of Blackwattle Cove and Rozelle Bay, the depth being improved by excavation and dredging? Yes.

253. You think it is a very valuable sheet of water, considering the position it occupies? I think it is highly valuable.

254. There is a good deal of business in the timber trade carried on in that locality? A good deal is carried on at the head of Rozelle Bay, at the southern side of Pymont, fronting Blackwattle Cove, and also at the head of Blackwattle Cove.

255. Have you any knowledge of the extent of the traffic to Glebe Island? Only from casual observation.

256. The traffic is pretty extensive, is it not? Very extensive.

257. You think it is necessary to make better provision for it than now exists? I am sure it is.

258. The present mode of transit has outgrown its usefulness—it no longer meets growing wants and requirements? It is quite inadequate.

259. You think that a new structure is required to meet both present and future requirements? Yes.

260. What is the area of reclamation in White Bay? About 40 acres. All the western end of the bay has been reclaimed. There is a reclamation wall in front of the reclaimed area, and the bay has been excavated to an average depth of 18 feet at low water over the whole area. That was done with the object of giving access to the wharf at the head of the bay. There is a wharf running into the bay from the reclaimed portion, and it is largely used in connection with the wants and requirements of Balmain.

261. In view of the increasing population of Balmain, you think the wharf is very useful? Yes; we have only had it up for about six months, and it has scarcely ever been idle.

262. Leaving White Bay, the water gradually deepens as you get to Johnstone's Bay, Darling Harbour, and the Fair Way? Yes. I may mention that at the entrance to Johnstone's Bay and opposite the Sugar Company's works there is a depth at low-water of 18 feet, and in mid-channel you carry the same depth up to Glebe Island Bridge.

S. E.
Perdrian.

18 June, 1897.

G. H.
Halligan.

18 June, 1897.

THURSDAY, 24 JUNE, 1897.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERT.	CHARLES ALFRED LEE, Esq.
The Hon. JAMES HOSKINS.	JOHN LIONEL FEGAN, Esq.
The Hon. CHARLES JAMES ROBERTS, C.M.G.	THOMAS HENRY HASSALL, Esq.
The Hon. WILLIAM JOSEPH TRICKETT.	GEORGE BLACK, Esq.
The Hon. DANIEL O'CONNOR.	FRANCIS AUGUSTUS WRIGHT, Esq.
HENRY CLARKE, Esq.	FRANK FARNELL, Esq.

The Committee further considered the expediency of constructing a New Bridge at Glebe Island.

Captain John Jackson, Manager of Public Wharfs, made an affirmation, and was examined:—

Captain
J. Jackson.
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263. *Chairman.*] What position do you hold? I am Manager of Public Wharfs.
264. Have you seen a plan of the proposal to replace the bridge to Glebe Island? I have.
265. And you fairly well understand the nature of the proposal? I do.
266. *Mr. Lee.*] You are familiar with Glebe Island Bridge? Yes.
267. In 1894 you gave evidence before the Public Works Committee on the same question? Yes.
268. Have there been any developments in that part of the harbour since that year to cause you to change your opinions? None whatever.
269. What is your opinion to day—first, as to whether a necessity exists for constructing a new bridge; and, secondly, if a new bridge is to be constructed, how it should be constructed so that the water traffic could be carried on? I can only speak from the standpoint of the wharfs I am in charge of up there.
270. What is your knowledge of the working of the bridge? There has been always a very great difficulty for vessels to get through the bridge, owing to the opening being on one side of it. Vessels have to my knowledge frequently sustained considerable damage in going through it;—they object to go through it.
271. In any case I presume the class of vessels trading there would be of small tonnage? At present they are, because no large vessel could get through it.
272. If sufficient provision were made for the passing of large vessels, would there be sufficient water to enable them to get through? It could always be deepened.
273. It would have to be deepened? Yes.
274. To what extent? To 24 feet, to allow large vessels to go up there.
275. But would there be a fairway from (say) the centre of the bridge with sufficient water to enable large vessels to go there? Do you mean where the bridge stands.
276. Suppose that a proper entrance were given about the centre of the present bridge, is there sufficient water now at that point to enable large vessels to go through? No.
277. In any case the passage would have to be dredged? Yes.
278. The inner portion of that part of Darling Harbour would have to be dredged? Yes.
279. In fact the whole of it would have to be dredged to enable vessels to get in and out, and to go to the various wharfs? The whole of the bay would require to be dredged.
280. Would that be a costly matter? I do not think so. I think they are dredging a great portion of it now for reclamation purposes.
281. Which is also answering a double purpose—reclaiming the land and giving deeper water? Yes.
282. Are you of opinion that a new structure is required for the convenience of passengers there? I do not know about a new structure, but I am strongly of opinion that the swing should be in the centre of the bridge. Whether they could put the swing in the centre of the present bridge or not, I am not prepared to say.
283. Has it been reported to you, or do you know of your own knowledge, that there is a certain danger to the present bridge if a vessel strikes the piers at the swing? I do not know it from my own knowledge, but I know that the bridge has on several occasions been slightly damaged there, and that vessels have been damaged in going through it.
284. In consequence of that difficulty being likely to arise has not the Department placed gates on either side of the swing, so as to regulate the traffic? I do not know.
285. Were the gates put there simply to cut off the traffic while the span is open? I do not know.
286. You cannot tell us very much about the bridge itself, or the traffic over the bridge? No.
287. All you wish to tell us is what will be required to admit of proper navigation in that part of the harbour? Yes.
288. You were suggesting that if a new bridge is to be erected the swing should be put in the centre? Yes.
289. What would you consider a fair opening for that swing? For many years, perhaps, 40 feet would be sufficient; but I would suggest that it should be made 60 feet.
290. Inasmuch as the life of a wooden bridge will practically be 50 years, and the traffic is likely to increase very largely, what would you consider a fair width to adopt in the new bridge? I think 60 feet.
291. That will be 60 feet from the centre? From side to side.
292. That is 30 feet on either side of the central point? Sixty feet for the swing.
293. Suppose it is swung from the centre, the opening on either side would be 30 feet, less the space taken up by the pier? Yes.
294. What would be the width of the passage required? Sixty feet in the clear.
295. No matter how the opening is provided for? No. I strongly recommend that it should be 60 feet. Some vessels are about 54 feet beam, and they could not go through Pyrmont Bridge.
296. What class of vessels and trade passes through the bridge to Blackwattle Bay? Stone vessels and timber. That is all that go through at present.
297. For what purpose are these vessels taken into that inner portion of the harbour—what trade is it to supply? The trade of different boroughs. There are, I think, five municipalities nearer to Blackwattle Bay than to the city.
298. And consequently it is made their depôt for metal, timber, &c.? Yes.
- 299.

299. Are there any timber merchants there who receive large consignments of timber? Yes.
300. But a good deal of it is foreign timber? I do not think that much foreign timber goes up there, because a large vessel laden with foreign timber could not go through the bridge.
301. The class of timber which would come in from foreign countries would be sawn timber? Yes; and it would come through there by lighters.
302. Owing to the insufficiency of water and the pier of the bridge, only lighter vessels can go through, and which are chiefly employed in the colonial trade bringing long timber? Yes.
303. But if this opening were given, and Blackwattle Bay were dredged, you are of opinion that the vessels which discharge timber at Woolloomooloo Bay would discharge at the other bay? Vessels discharge timber at the wharfs at Pyrmont; no timber is discharged at Woolloomooloo Bay at present.
304. It used to be? Yes.
305. That could be taken into Blackwattle Bay? No doubt it could.
306. Is all the foreshore of Blackwattle Bay in the hands of the Government? No.
307. How is it held? It is held by private people. Only the head of the bay is held by the Government—about 1,400 feet.
308. What scope is there for the erection of Government wharfs and the receipt of an income from them if the proposed improvements are made? The income from Blackwattle Wharf itself would be very much greater if larger vessels could go up there. I have always had an idea, and I think I am right, that if vessels could go up there it would become a large produce depôt.
309. What is the frontage to the present Government wharf there? 1,400 feet.
310. The annual revenue from that wharf is how much? Last year it was over £600.
311. Do you remember the cost of that wharf? I think it was £7,000.
312. What is the cost for maintenance and supervision? £135.
313. It is rather a profitable expenditure? Yes.
314. Will you state exactly where that wharf is situated? It runs right across the mouth of the old bay.
315. Does it abut on to Wentworth Park? It is separated from that park by Pyrmont Road.
316. Do the Government own any other portion of that foreshore? Not that I am aware of.
317. Is it all let to private owners under reclamation schemes? I could not say that.
318. There is nothing, or very little, to reclaim there? It is bold water up to the rocks on each side.
319. If there are only 1,400 feet of Government wharfage there, and that cannot be extended, how are you going to provide accommodation for a large increase of shipping? It is not only for an increase of shipping at the Government wharf, but there are private wharfs there too.
320. If all this work is done by the Government, how are they going to obtain a revenue? They would not get very much revenue from the present Government wharf there; but there is also Rozelle Bay to be considered.
321. You draw a distinction between Rozelle Bay and Blackwattle Bay? There is no wharf in Rozelle Bay at present.
322. Is there any Government land there? They are reclaiming a large portion.
323. It is all Government land in that bay? Yes, a large portion is.
324. And a portion of it is now being reclaimed? Yes.
325. Would it be possible to dredge Rozelle Bay, and make it suitable? I have no doubt of that.
326. Of course the reclamation would have to be dredged out a longer distance into the stream? Yes.
327. Still it is possible to reclaim that, deepen it, and make it available? Yes; they have reclaimed a large portion of it now.
328. If a new bridge is erected with a proper span-opening in it, and the traffic is allowed to pass free of cost, and Blackwattle Bay and Rozelle Bay are deepened, to admit of ships going to the wharfs, are there any means by which the Government could impose a toll, in order to recoup themselves? Only the wharfage. Of course they could charge so much for going through the bridge.
329. But they could not impose a wharfage rate on private wharfs? No; private owners would have to do that.
330. Nor could they impose a tonnage rate without its being inconsistent with the practice of the port generally? They could only charge that at their own wharf.
331. Do you know of any reason why a rate should not be charged for the passage of ships through the bridge? If you were to charge for the passage of ships through the bridge they certainly would never go up there. They would go and land their cargo where they would be free of that charge.
332. It would appear that if some provision is made for the admission of shipping to Blackwattle Bay, in the course of time considerable trade would spring up there, and it would be a very great convenience to the people in those five boroughs, and would be of very great advantage to the boroughs themselves? I have no doubt of it.
333. But towards the expense of which they would not contribute anything? Nothing directly.
334. Do you think it would be to the interests of the community generally that these facilities should be given? I do think that there should be a new bridge or that some improvement should be made to the present structure.
335. Do you think it is wiser for the country to deepen that water and increase the wharfage accommodation than to fill up that extreme portion of the bay? I do.
336. Which is the wiser course to pursue? I think it would be sacrilege to fill up these beautiful bays.
337. If you hold the opinion that the water should be held for wharfage purposes, it follows, as a matter of course, that there must be sufficient accommodation given there for the shipping? Yes.
338. Are there any other reasons which might debar ships from going there, or which might prevent that locality from becoming thickly populated—such as the discharge of sewage into the water? Of course that is very objectionable at the present time, but I think it will be remedied shortly when the sewerage scheme is complete.
339. At present the discharge of sewage into that part of the harbour is very offensive to people? Yes.
340. Is it not a fact that when the western suburbs sewerage scheme is completed this practice of discharging sewage into the harbour will be discontinued? I think so.
341. Is not that the system which has been worked out? I am not in a position to say.
342. Now, in view of the possible removal of the Abattoirs from Glebe Island, and the possible reclamation of Blackwattle Bay and Rozelle Bay all round to the island, and not only a good road, but possibly a railroad,—

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railroad,—under conditions of that character do you not think it is possible that a time may come when the Glebe Island Bridge can be dispensed with altogether? That would put things in a different light. I believe a time will come when Glebe Island will be used for shipping coal. Of course a railway will be running there then, and if the Abattoirs were removed it is possible that Glebe Island Bridge could be dispensed with.

343. Do the Abattoirs contribute much towards the pollution of the harbour? I do not know.

344. Have you any Government wharfs in that direction? No.

345. Is it all held privately? I have a Government wharf up in White Bay, which is on the other side of Glebe Island.

346. Has your experience among timber wharfs in Port Jackson enabled you to form an opinion as to what will be the best class of bridge to put there? I would rather not say.

347. What is the effect of the cobra on the timber which you use in the piles? The timber which is used in Government wharfs is all coppered.

348. But how long does the copper last? Down at Circular Quay I have seen piles pulled up which had been down for about forty years, and the copper was still on them.

349. Were the piles sound? The piles were sound, but the copper was worn off.

350. Even with a thin layer of copper the piles were perfectly sound? Yes.

351. That portion of a pile which is between high-water mark and low-water mark is the worst place for the ravages of the cobra;—is not that the vulnerable point? Yes.

352. Do not the borers enter the pile at that point? Not at Government wharfs, because the piles are coppered.

353. Take any timber which is wholly or partially exposed to sea-water in Sydney Harbour, does it not, in course of time, become infested with the borer? Yes.

354. Therefore, if the piles are coppered only partially, it is only a matter of time when the cobra will get into the wood? Yes.

355. At what age do you estimate the life of a pile under these conditions, not being coppered? It would not last long.

356. If timber piles are used in the new bridge they must be securely coppered for a considerable distance above high water? Yes.

357. I presume that that copper must be carefully watched and kept intact, and that wherever it is bruised or broken it must be instantly repaired? It must be repaired within a month or so.

358. It is a fact that nearly every colonial timber we have is more or less infested by some kind of sea-borer? Yes.

359. No amount of tarring or preserving by other means will keep the borers out of the wood? No.

360. A covering of copper or muntz metal is the only thing which will keep them out? Yes.

361. Therefore, if a bridge is to be erected on wooden piles, to last a period of fifty years, extra precautions would have to be taken to ensure that it should last for that time? Yes.

362. *Mr. Fegan.*] What water frontage have the Government to Rozelle Bay? I could not say.

363. Could you not say approximately? No; I know there is a large frontage which they have reclaimed lately, and which they are still reclaiming.

364. And which they will continue for some time to reclaim? I think so.

365. A large frontage to Rozelle Bay will belong ultimately to the Crown? Yes.

366. By dredging Blackwattle Bay and Rozelle Bay, and erecting a strong bridge there, it will induce trade to go in that direction? I have no doubt about that.

367. The Government wharf in Blackwattle Bay has a frontage of 1,400 feet;—how many vessels will it accommodate? It will accommodate seven vessels of 200 feet each.

368. I suppose one may say that it will accommodate six or seven vessels? About six.

369. What rent do you get for berthing a ship? We charge a schedule rate. In the case of metal we charge 6d. a ton.

370. It is not according to the length of the ship or her carrying capacity? We do not charge the ship anything; we charge it on the cargo.

371. The larger the vessel is the bigger the payment is? It depends on what cargo she has.

372. Will you furnish the Committee with a copy of your scale of rates? Yes.

373. And also give the approximate frontage to Rozelle Bay belonging to the Crown? The Works Department will be able to give that information. I am not in a position to give it to the Committee; I am only in charge of completed wharfs.

374. Do you find a great inconvenience from the swing being at one end of the bridge? Very great inconvenience.

375. Did you hold your present position when the bridge was constructed with the swing at one end? No.

376. Several piers have been carried out recently? Yes.

377. Have you at any time previous to being examined by a Parliamentary Committee recommended that the swing should be placed in the centre of the bridge? Yes.

378. And your recommendations have not been given effect to? I have not made a special report on the matter, but on several occasions I have recommended that the swing should be in the centre.

379. You think that no bridge should be constructed without making provision for the swing to be in the centre? Yes.

380. And that it would be useless to have less than 60 feet, seeing that a large number of the vessels are only 50 feet wide? Yes; I am looking ahead thirty or forty years.

381. You are looking to the life of the bridge? Yes.

382. As traffic has increased, and as the size of vessels has increased within the last twenty years, you are looking forward to even greater progress being made in the next twenty years? Yes.

383. Therefore, to give facilities to shipping in the future, the swing in this bridge should not be less than 60 feet? I think that is the right size for the swing.

384. *Mr. Roberts.*] Can you state the tonnage of the vessels which passed through the opening in the bridge during 1896? No; but I could furnish a return of all the vessels which have been berthed at the Government wharf. The Auckland Timber Company berthed more vessels than were berthed at the Government wharf.

Captain
J. Jackson.
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385. Are you able to say whether the number of vessels passing through the bridge in Blackwattle Bay has increased or not;—has the trade there increased or not? The trade as far as the Government wharf is concerned has increased during the last two years.
386. As compared with previous years? I know that from the revenue I have received.
387. Has it increased to a marked extent? I think the revenue last year was about £200 more than it was two years previously.
388. Do you look upon that as a substantial increase? Yes.
389. Can you recollect what the annual revenue is? Two years ago it was about £450, and last year it was £612.
390. I suppose from observation you can say that there has been a substantial increase in the trade to the private wharfs? Yes; I have no doubt about that.
391. And that as the trade has increased so much you experience great inconvenience in getting so many vessels through the present opening? No. They object to go through the bridge because they sustain so much damage to themselves.
392. Notwithstanding that objection on their part the trade is going there more than ever it has done? Yes; but it is all done by small vessels. I do not believe that a vessel over 400 tons register goes up there.
393. They are principally timber vessels? Yes.
394. Have you of late examined the bridge at all;—would you like to offer any opinion on the bridge? No; because that is no part of my duty.
395. From your experience in your vocation, I should think that your opinion would be of value to the Committee? I do not know much about bridges, but I do know a little about ships.
396. *Mr. Hoskins.*] Are vessels allowed to be tied up or moored to Pymont Bridge or to Glebe Island Bridge? I do not know.
397. *Mr. Clarke.*] Is there any charge made at present for passengers or goods going over Glebe Island Bridge, or is it entirely free? I am not sure, but I think it is free to the public. I do not charge anything.
398. You do know what traffic goes over the bridge? No.
399. Are you aware whether the approaches on each side are Government property or private property? I could not say.
400. *Chairman.*] Can you tell the Committee the different kinds of private enterprise located on the foreshores of Blackwattle Bay and Rozelle Bay? I cannot.
401. And you have no record of the trade? No.
402. *Mr. Wright.*] At what height should the bridge to Glebe Island be erected? I think it should be between 20 feet and 30 feet.
403. Do you think that a height of 26 feet would give sufficient headway for ordinary purposes? I think a height of 30 feet would be better, because it would admit of the passage of lighters with a derrick without opening the swing in the bridge.
404. In the case of the bulk of the lighters, I suppose the derrick head is not more than 30 feet high? It is about that height.
405. Do you think that any large trade would spring up there if there were a better or wider opening in the bridge? I think so.
406. What class of vessels other than the present vessels are likely to go up there? Grain ships, I think.
407. Grain ships from other colonies and from America? I think so.
408. What is your reason for fancying that grain ships would go up there? I think that grain and produce would go there; I think the produce which would be consumed in four or five municipalities would be landed there, because it is the centre of five municipalities. My reason for thinking that is that cartage is a large item, and that they would pay about 3d. less for cartage from Blackwattle Bay than from Sussex-street.
409. You think that Newtown, the Glebe, and all those places would be likely to land their produce there? Forest Lodge, Leichhardt, and all those places.
410. All the suburbs lying nearer to the waters of Blackwattle Bay than to the waters of Darling Harbour? Yes.
411. Do you think that any other trade would be likely to be developed? I have no doubt the timber trade would go up there.
412. The timber trade to a large extent is there now? Yes; but it is not foreign timber; it is Colonial timber.
413. Do not the Kauri Company deal in Oregon? They do; but it is brought there by lighters from large vessels discharging at other wharfs.
414. Ships from Puget Sound go up there? They could not get up there; nor could they get through the bridge.
415. I think you said that even if the opening in the bridge were made 60 feet, no larger vessels could go up there than those which now go up there unless the bay was dredged? Exactly.
416. Do you know anything about the mud soundings in the bay? No; but it is very shallow—it is caused principally by the sewers.
417. But there is a considerable amount of mud overlying the bottom? Yes.
418. From your knowledge of the harbour, do you think that that bay could be dredged out sufficiently deep to accommodate ships drawing 24 or 25 feet of water? Yes.
419. Therefore it might become eventually a very important shipping centre? Yes.
420. Do you know what the water frontage of Glebe Island is? I do not know how much it is; but it is all deep water at the island.
421. A considerable amount of wharfage room could be provided round that island? Yes; a very large amount.

FRIDAY, 25 JUNE, 1897.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.
 The Hon. JAMES HOSKINS.
 The Hon. CHARLES JAMES ROBERTS, C.M.G.
 The Hon. WILLIAM JOSEPH TRICKETT.
 The Hon. DANIEL O'CONNOR.
 HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.
 JOHN LIONEL FEGAN, Esq.
 THOMAS HENRY HASSALL, Esq.
 GEORGE BLACK, Esq.
 FRANCIS AUGUSTUS WRIGHT, Esq.
 FRANK FARNELL, Esq.

The Committee further considered the expediency of constructing a New Bridge at Glebe Island.

Gilbert Curtis Murdoch, Mayor of Balmain, sworn, and examined:—

- G. C. 422. *Chairman.*] You are Mayor of Balmain? Yes.
 Murdoch. 423. Have you had an opportunity to see the plan of the proposed bridge to Glebe Island? I have just
 seen the plan.
 25 June, 1897. 424. You have a fair idea of what it is? Yes.
 425. *Mr. Hassall.*] Have you any statement to make with reference to the bridge? I have known the
 bridge for thirty-one years. I have resided in Balmain for that period, and as a youth I used to go there
 to fish sometimes. The traffic in those times was comparatively small compared to what it is now.
 Taking the figures which were arrived at in 1889, there was a decided increase in the traffic from 1889 to
 1894, and there has been a decided increase since that year. The reason I assign for there being so much
 increase in the traffic lately is the establishment of new industries at Balmain. For instance, Lever Brothers
 oil works is one of them. Phippard Bros. have been making there the whole of the iron and wood work in
 connection with the George-street markets. Of late years a box factory has been established. A bottle
 factory and a paint factory have also been established there. Large timber merchants, who do a lot of
 business with the town, have established themselves there. The traffic has largely increased as far as
 Balmain is concerned for those reasons, but the traffic has also increased largely from the western suburbs.
 Drummoyne, for instance, has gone very much ahead of late years, and from Five Dock, Gladesville, Ryde,
 the Field of Mars, and right on to North Sydney, the traffic has increased greatly from those districts.
 The people go across Balmain with their fruit and produce to the markets, and that has added to the
 traffic. It is a natural outlet by road for the whole of the western suburbs, and the traffic seems to con-
 gester at that particular spot.
 426. The whole of the traffic from Balmain, and of all the suburbs to the westward of it, which are
 increasing in population, has to go across the bridge? It congests there, because that is the shortest road
 to the city. A good many of the Leichhardt people go by that way as well.
 427. In addition to the Balmain traffic, you have a considerable portion of the Leichhardt traffic? Yes.
 428. And Forest Lodge? No; that goes through the other way. When the draw-bridge—which is the
 great bone of contention—is open I have known some people, sooner than wait on the bridge—that is,
 those who could get off—to turn round and go through Forest Lodge to do their business in town.
 429. Has the traffic by the present bridge to and from Glebe Island Abattoirs increased very largely?
 It has.
 430. Has it increased almost in the same ratio as the other traffic? I think even more so. Comparing
 the traffic in the early days to what it is now there is no comparison at all.
 431. Do you think the bridge is suitable for present requirements? Certainly not.
 432. What strong objections can you name against the bridge? In the first place, it is too narrow. The
 draw-bridge is antediluvian. It is a great nuisance there, considering that in olden times perhaps only
 two vessels would go up the harbour in a week, whereas now sometimes as many as twelve or thirteen
 vessels a day go up there. The bridge is open sometimes twelve or thirteen times in a day. I know that
 timber merchants—the Kauri Timber Company, on the Glebe side, and Swan Brothers, one on our side,
 and the box factory—send some of their wares away by water. The Federal Timber Company are
 established at the head of Rozelle Bay, and that is where we get all our blue-metal landed by our
 contractor.
 433. The whole of that shipping has to go through the present narrow opening in the bridge? Yes.
 434. The opening might be placed in a more convenient position? In order to do any good it should be
 in the centre of the bridge, I think.
 435. What is the width of the bridge? I cannot say. The carriage-ways are divided in the middle.
 There is barely sufficient room to allow a horse and cart to go along on each side of the bridge.
 436. Is it not a fact that after the bridge has been opened to allow the traffic to go through, the traffic for
 Sydney takes precedence of the traffic going the other way? I cannot say that; but I know that if ever
 an accident happens on the bridge through a restive horse, it will be very serious with that congested
 traffic, especially in the early hours of the morning.
 437. Do you know of your own knowledge that considerable delays to the traffic do take place? Yes;
 and so much so that some people have had to go, *via* Gordon-street, to Annandale, and through Forest
 Lodge to Sydney, to get their business done.
 438. You think it would be advisable to erect a wider and more convenient bridge, with a swing in the
 centre, rather than at one end? Yes.
 439. And that the bridge should be of such width that the traffic could proceed to and fro without having
 to wait until one line of traffic had got over before the opposite stream of traffic could get started?
 Yes; the approach on the Glebe Island side is very much too narrow. The roadway to the Abattoirs
 ought to be widened. The bridge itself, I think, is much too low; there is not sufficient headway for the
 punts and small steamers to go through.
 440. The new bridge should be provided with a greater headway? Yes; there is a good deal of traffic up
 there with timber barges.

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441. What is the largest one that you have seen there? I have no idea of tonnage, but perhaps Mr. Alderman Chidgey, who will follow me, will be able to give you the tonnage of the vessels that go up there. The "Resolute" that brings out metal is 500 or 600 tons.
442. Do you look upon Rozelle Bay and Blackwattle Bay as pretty valuable adjuncts to the trade of that locality? There is no doubt about that.
443. Do you think it will be desirable to deepen the water in these bays in course of time, in the event of a more convenient bridge being built so as to allow larger vessels to go up? Yes.
444. You think that larger vessels would take advantage of it? Yes. A good many vessels lie below the bridge, and discharge their cargo into punts which are towed up to the bay.
445. Do you think there is any prospect of businesses similar to those you mentioned increasing in the locality? I am certain that the businesses will increase up there.
446. The population is increasing there, and as it increases you think that the business is bound to increase also? Certainly.
447. Therefore, it will be only reasonable to provide better facilities to discharge cargo in this large area of water? Yes; so as to let the vessels go up.
448. Is there any objection on the part of the Balmain people to the presence of the Abattoirs at Glebe Island? None whatever.
449. Where does the objection to their presence come from? The objection has come mainly from, not the whole, but a small section of the people at Glebe Point, and from some of the Annandale people.
450. From people on the opposite side of the water, and not from the residents of Balmain proper? Yes.
451. The residents of Balmain do not look on the Abattoirs as a nuisance? No.
452. In fact, they think it is rather advantageous to have them there than otherwise? Certainly.
453. Is there any great objection to the cattle-driving nuisance on the part of the Balmain people? That is the only objection.
454. They would like better provision to be made for conveying cattle to Glebe Island? Yes. There was an accident to a child there only two mornings ago.
455. Do you know if the Abattoirs are equal to requirements;—have you any knowledge of them at all? Yes. I have been over the Abattoirs which, I think, could be much improved, although at present there is no offensive smell from them. I have passed the Abattoirs at night when it was most likely if there were any odours at all that they would arise, but I could never smell offal, blood, decayed meat, or anything of that description. The only smell you ever got was the smell of the animals, more particularly the sheep.
456. They are not unhealthy? No.
457. The offal and everything of that kind are discharged into punts, and taken away in order that no nuisance shall be created? Yes.
458. Your idea, I presume, is that, in any scheme to improve the Abattoirs, provision should be made to convey the cattle by rail? Yes.
459. Do you know if there is a fair depth of water in Johnstone's Bay, Roselle Bay, and Blackwattle Bay? There is plenty of water round the island and near the bridge, and it is only when you get close to the foreshore of Balmain that you get natural flats.
460. Is it pretty shallow? Only in patches.
461. I suppose you have practically to represent the borough of Balmain? Yes.
462. The evidence which you give to-day will be corroborated, I presume, by every alderman in the borough? Yes.
463. And by most of the residents of Balmain? Yes.
464. Do you think that steps should be taken to erect a new bridge in place of the old structure, and thus provide better accommodation for the traffic? Certainly; I do not look at it only from a Balmain point of view; I look upon it as an adjunct to all the western suburbs.
465. In fact, the business between the city and Balmain and the western suburbs has assumed such proportions that it is absolutely necessary that better provision should be made for its transaction? Certainly.
466. *Mr. Roberts.*] Are you of opinion that the time has arrived for the existing bridge to be replaced with a new one? Certainly.
467. Is it on account of the decayed nature of the timbers in the bridge that you have formed that opinion? That is one reason why I think a new bridge should be erected. Another reason is the inconvenience of the present bridge to carry on the traffic.
468. In what way is it inconvenient? For one thing it is too narrow, and for another thing the draw-bridge is a drawback. The new bridge should be built with more headway, so as to allow small steamers and barges to pass underneath.
469. Is not the bridge sufficiently wide to allow two vehicles to pass each other? The fairway is so narrow that there is barely room for them to pass now, and the foot-passengers have a very small space at their command.
470. Do you frequently travel over the bridge? Not of late years; but in the old days I used, as a boy, to go there a good deal. I have been over the bridge a good many times, and seen the state of the traffic.
471. Your great objection appears to be that the opening of the bridge is too near the eastern shore? It is not nearly wide enough for another thing. Only very small boats can get through the opening.
472. Are there larger craft going through now than used to go through in former years? Certainly; and many more of them, too. In old times perhaps two vessels would not go up there in a week.
473. Has the trade considerably increased? Yes.
474. What is the nature of the traffic? It is mostly timber ships.
475. I understand you to say that the traffic has increased to a very large extent during the last few years? Yes; the Kauri Timber Company, Swan Brothers, the box factory, and the Federal Timber Company all require vessels to bring their timber up there; in fact, some of the larger vessels have to stop below the bridge and discharge their cargoes into punts.
476. Is the vehicular and pedestrian traffic largely inconvenienced by the opening of the bridge;—does it take a longer period than you think it might take if more modern appliances were used to open the bridge? Much longer.
477. Is there a very large vehicular traffic from Balmain to Sydney over the bridge? Most of it are the butchers' carts, but of late years the traffic has got very great from the western suburbs, from Drummoyne,

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Five Dock, and right out to the Field of Mars. The fruit carters and even Leichhardt people use the bridge as a short cut into the city.

478. Is any toll collected on the bridge? No; but there used to be.

479. How long has it been a free bridge? Fully ten years.

480. You think that a bridge which gave greater facilities to the traffic, and was fitted with more modern appliances in regard to an opening in the centre, would prove a very great convenience to the people of Balmain? Not only to them, but also to the people of the various adjacent suburbs. A line of 'buses runs from Sydney through Balmain up to Gladesville; they go over the bridge.

481. The road leading from the bridge past the Abattoirs towards Balmain is very steep? Yes.

482. Is that considered objectionable by the people in any way? I have never heard any complaint made that it was objectionable in any way. The only objection that I can see is that you just smell the animals, not the blood, offal, or hides, but only the natural smell of the animals, more particularly of the sheep.

483. Has any suggestion been made by your Council that a new road should be made closer to White Bay, with a view to avoid the Abattoirs? There was some talk at one time of asking the Government to cut down the island and to take the road round it so as to avoid the Abattoirs, but I have never heard it said that it was suggested through any objection to the smell of the Abattoirs. I have been over the Abattoirs at night, when you would naturally suppose that if there was anything objectionable about them it would be smelt, but I did not smell anything which was objectionable.

484. Would you get a better grade for a road to Balmain by way of White Bay? There is no doubt that you could make a winding road of it.

485. Would it be any nearer for people to travel by? No.

486. Would you, as Mayor, recommend any improvement in the approach from the Glebe Island end into Balmain? What I should recommend is, if a new bridge is to be built, that the approach on the Glebe Island side should be widened.

487. Do you suggest the altering of the grade of the road? If the bridge were built with a higher headway for the boats you would not have such objectionable grades. The grade of the road would be lessened materially.

488. You recollect the site where it was proposed to erect a new bridge some years ago? Yes; on the Rozelle side of the existing bridge.

489. Assuming that that site should be selected, do you regard it as one of the best? I do not think you could have a better site than that.

490. You strongly approve of the opening being placed in the centre of the bridge? Yes.

491. Is not the grade of the present bridge objectionable? There is a rise in the centre to admit of the passage of small ferry steamers, but even now, from what I have seen, it seems to be a bit of a squeeze sometimes for the steamers at high water.

492. *Mr. Trickett.*] When the former Mayor of Balmain was examined before a previous Committee he suggested that the road should be lowered 12 feet in front of the Abattoirs, so as to separate the traffic to the Abattoirs from the ordinary traffic to Balmain, and also to avoid that steep grade there;—do you think that would be a good thing to do? I do not think that if we were to take 12 feet off the road there it would do.

493. The evidence I refer to is as follows: "You favour the Departmental proposal to put a good bridge across there with two swings? Yes; and to ease the grade of the road. We think it might be lowered about 12 feet in front of the Abattoirs. The bridge could then be put over the roadway, giving an independent road to the Abattoirs traffic. If that were done the traffic to Balmain would not encounter that traffic at all?" I cannot see that it would be practicable, for this reason: that the cattle are driven from Mr. Swan's place, just at the foot of the hill, and driven in at the side of the Abattoirs. The cattle are never driven in by the front gate.

494. How far is that place from the bridge? It is on the western side of the island. The meat traffic is taken out through the main gate of the Abattoirs, and that is where, I take it, the ex-Mayor thought of lowering the road.

495. That, I suppose, is not objectionable at all—the meat is all taken out in covered carts? Yes.

496. You do not see anything advantageous in that proposal? I cannot see the advantage of it.

497. If you took 12 feet off the road it would not make a very great reduction in the grade? I do not think it would, but it would interfere with traffic into the Abattoirs.

498. It would necessitate a separate entrance into the Abattoirs? Yes.

499. You, as Mayor, would not advocate that that should be carried out? I cannot say that I would.

500. Would it not be a great improvement to the through traffic if the grade of the road were lowered? There is no doubt that it would.

501. But if the bridge is going to be raised, and it can be carried a little further inland, that will be a means of reducing the grade of the road? Yes.

502. I suppose this road over the bridge is the only road to your borough unless you make a very long detour? Yes; there is no other access to the borough.

503. There are no transit boats to carry vehicles to Balmain? No.

504. So that carts, carriages, and waggons that go to Balmain have to go over the bridge? Yes.

505. And that is likely to continue to be done for a very long time? Yes; I am told that the Water and Sewerage Board would not allow the heavy pipes for the low-level service—pipes weighing 6 tons each—to be taken across the bridge to Balmain, and that they insisted upon the pipes being carted all round by the Parramatta Road.

506. They were frightened of this bridge? Yes.

507. Have you thought out the question whether, in constructing the new bridge, provision should be made for carrying a tramway? I had that idea in my mind when I said that the present bridge was very much too small for the traffic; I thought that some day we might get either a cable tram or an electric tram across that road, because the present tram service goes by such a roundabout way that it takes a very long time for a person to get there.

508. How many miles is it to Balmain by tram? A tram is supposed to take forty minutes.

509. I suppose it is 6 or 7 miles? Yes.

510. If it were taken *viz* Glebe Island, the distance would be very much shorter? Yes; especially when you consider that the Government are about to construct an electric tramway to Harris-street.

511. Could that be extended to Balmain? Yes.

512.

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512. The shortest way would be to cross Pyrmont and Glebe Island Bridges? Exactly.
513. Of course you prefer that the bridge should have a swing in the centre, and that it should be worked by hydraulic power? Yes; it would not take up so much time then.
514. Do the ferry boats run to Balmain all night now? There is not a night service; but they run up to 12 o'clock.
515. After midnight, the only means of getting to Balmain is by a vehicle? Yes; the trams run up to 11:30 p.m., I think.
516. There was a proposal made some time ago to connect the bridge with Glebe Point;—how do you favour that idea? I do not favour it at all.
517. It would be a very roundabout means of communication with the city? Yes; it would be almost as bad as having to go along Gordon-street and up through Annandale, as some people do now. It would be very inconvenient indeed.
518. *Mr. Lee.*] In the event of the Abattoirs being removed in the future, do you think that the traffic would then be sufficiently large to justify the maintenance of a superior bridge? Independent of the Abattoirs, the traffic is very large; but you can form no estimate of it.
519. Even if the Abattoirs were removed at any time, the traffic would be very large between Balmain and Sydney, and the suburbs west of Balmain? Yes.
520. Certain industries have been established about the foreshores of Balmain, and I presume they have to make use of the railways for the distribution of their articles? Yes.
521. Is it not a fact that all goods sent to the railway by dray from Balmain have to go by the Glebe Island Bridge to get to the railway station at Darling Harbour? Yes.
522. Suppose there was no bridge to Glebe Island, how would the people in your borough, and to the westward of Balmain, be able to get their goods to and from the railway station at Darling Harbour? They would have to go along Gordon-street and up through Annandale.
523. That would be a considerable detour? Yes.
524. It would be a very serious inconvenience to the people? Yes.
525. For the purpose of commerce alone, you appear to think that it is a necessity to keep up a direct line of communication with an important suburb like Balmain? Certainly.
526. Has your experience enabled you to say whether, in any new bridge, side-paths should be provided for pedestrian traffic? Certainly. The present ones are very narrow, and when the vehicular traffic is great, any vehicle more than a butcher's cart, or a little bit wider, interferes with pedestrian traffic, because it is too close to the people.
527. There must be side-paths to keep the pedestrian traffic clear from the vehicular traffic? That is a necessity.
528. Is Glebe Island in your municipality? No.
529. Do you think there will be any strong objection on the part of your borough, and of the adjoining borough, to undertake the maintenance of the new bridge if it is built? That I cannot say. We have no power under the Municipalities Act to spend any money outside the borough, and, as Glebe Island is not within the borough, we could not legally spend a penny there as you suggest.
530. I suppose all these boroughs have power to issue licenses? Yes. They have the power to make by-laws to do so.
531. Are the carriers licensed by the suburban boroughs or the city? By the city.
532. You derive no revenue from the carriers? No.
533. And inasmuch as no tolls are collected on any bridge now, you think it would be unwise to ask the municipalities to contribute towards the maintenance of the new bridge, because they have no source from which they could derive revenue other than the ordinary rates? I do.
534. Are you of opinion that a direct and important thoroughfare of that character should be kept open and maintained by the Government in the same way as they maintain other bridges in other parts of the Colony? I certainly do.
535. And you protest against anything in the shape of a toll or direct charge for the maintenance of the bridge? Yes.
536. You say that the interests of the people, and the increasing interests of the people, demand that superior accommodation should be given? Certainly.
537. And that it should be given in the same way as the Government gives it to other places? Certainly.
538. *Mr. Farnell.*] Have you ever thought of the question whether it would be desirable to have a wooden or an iron structure? No; that is a matter I would leave entirely to the Government. I would not ask them to do either one thing or the other, so long as they gave us the accommodation we want.
539. You do not care as long as you get something to relieve what you may term the disgraceful state of affairs which exists there? No.
540. Have you ever looked to the probability of a railway being constructed to Glebe Island? Certainly.
541. If it were constructed, would the necessity to erect a bridge still exist? Yes.
542. *Chairman.*] Have you any way in which you can divide the traffic over the bridge into the ordinary road traffic, and the traffic which is dependent on the Abattoirs alone? I have no figures.
543. Can you venture an opinion in regard to the proportions? I think it is about equally proportioned as far as I can gauge it. We have to take into consideration, not only the Balmain traffic, but also the traffic from the western suburbs, and this traffic I think equals what I call the butchers' traffic. This opinion is based upon my own observation of the traffic.
544. Do you know the number of cattle, or sheep, or pigs which go to Glebe Island? No.
545. Do you know the road by which they go? Yes; most of them go down the Western Road.
546. But there are three roads? I believe the majority of them go through Five Dock, and across the Iron Cove Bridge.
547. What are the other two roads by which some of them come? Some come by the Callan Park Road, and some come by the Bullock Road, which runs through Lillyfield.
548. *Mr. Wright.*] The balance come through Leichhardt? Yes.
549. *Chairman.*] Have you any idea of the proportion which comes by the Iron Cove Bridge;—does it represent three-fourths of the traffic? I would not go quite as far as that.
550. Does it represent between a half and three-fourths? Yes.
551. Do not the pigs come by the coastal boats? Yes; they go through Pyrmont.

- G. C. Murdoch.
25 June, 1897.
552. Then there is a fourth way by which some of the traffic goes? I was only taking the sheep and cattle.
553. Does only the pig traffic go through Pymont? Pigs and calves principally.
554. *Mr. Fegan.*] Have any representations been made to the Minister for Works or to the Railway Commissioners in reference to a shorter tram route to Balmain? Not that I am aware of.
555. So that it is first suggested to-day by Mr. Trickett's question to you? No, it has been talked about.
556. No suggestion has been made to the Government? It has been talked about.
557. It has been talked about, but no move has been made by your Council or other municipalities, and, therefore, nothing really has yet been done? No, not as far as Balmain is concerned.
558. What distance would it save? By taking the tram across the two bridges it would save 3 or 4 miles, half the distance.
559. That would be a great consideration to business people in a great centre like Balmain? Yes.
560. You have large iron-works there, and naturally you have heavy traffic, both pedestrian and vehicular? Yes.
561. Do you find on holidays any inconvenience to the traffic? I had an experience of that kind on Tuesday night. I got into a tram at Bent-street at 9.5 p.m., and I was landed at my place, which is close to the Town Hall, at 10.20 p.m., so that you can imagine what kind of delays we had in going across there. A cab, if it is taken here at Bridge-street, will land you at the Balmain Town Hall in twenty-five minutes at the outside. I have done it myself.
562. That is by the nearer route? Yes.
563. But a tram travels faster than a cab? The usual time for a tram from Bent-street to Gladstone Park is forty minutes.
564. That will really be a point for consideration in determining the width and strength of the new bridge? Yes.
565. What is the population of your borough? 30,000.
566. What was the population ten years ago? I suppose it was 23,000 or 24,000.
567. Have you had any new works put up there lately? Yes; Lever Brothers' oil works is a big industry there.
568. Which means an increase in the population as well as in the traffic? Yes. The coal-mine which is being sunk now means another increase in the traffic.
569. The opening of new works, the deepening of the frontage to the harbour, and the dredging of the harbour there, means the giving of great facilities to the people of Balmain? Certainly.
570. And you want a more permanent and a better bridge in order that greater facilities may be given to the shipping? Yes.
571. And a much nearer route to Balmain than you have? Yes.
572. Seeing that you have not such a very good tram service? Yes. Another thing is that on one grade if we have three carriages on we are almost bound to be stuck up, and have to go back.
573. What is the grade? It is the grade from Gordon-street to the Western Road. At one time I was run back to Mr. John Young's place in Annandale, where they detached one car, and took the other two up the curved grade.
574. What profession do you follow? I am a solicitor.
575. From your long residence in the borough you can speak with some confidence as to the requirements of the people of Balmain? Yes.
576. You state that the facilities which now exist are not ample enough for the convenience of the people of Balmain? I do.
577. You think that in considering the question of erecting a new bridge to Glebe Island the possibility of adopting a shorter route by tram ought to be considered? Yes.

Osborne Hickey Chidgey, Alderman of Balmain, sworn, and examined:—

- O. H. Chidgey.
25 June, 1897.
578. *Chairman.*] You are an Alderman of the Borough of Balmain? Yes.
579. Are you engaged in business there? I carry on the business of a timber merchant alongside the Iron Cove Bridge.
580. *Mr. Roberts.*] Do you travel over the Glebe Island Bridge frequently? On almost every business day, I do.
581. Does your business take you into its vicinity frequently? The main part of our business is over the bridge—it is vehicular traffic, and therefore I can speak very feelingly of the bridge.
582. In what way are you affected as a timber merchant? Our business lies across the bridge principally—to the railway station, to the city, and to the suburbs out in this direction. Our carters and vehicles are delayed very much indeed through the insufficiency of the accommodation of the bridge, and the difficulty of the swing, and the long delay when it is opened. We have eight drays in use.
583. Where do they come from? From our business place in Balmain over the bridge, and from the various business places in the city to our business place.
584. You are put to great inconvenience through the delay in the opening of the bridge? Yes; I reckon that every dray of ours in crossing the bridge loses on an average half an hour a day.
585. How many of your drays go over the bridge on an average during the day? I should think our drays would cross there on an average eight times a day.
586. So that there is a direct loss to you of four hours a day? Yes.
587. Is that owing to the swing being of such an ancient description? Principally owing to the swing. It is only a few years since a notice was posted prohibiting any loads over 2 tons from crossing the bridge. I do not know whether the notice is withdrawn. I know that when we have a load heavier than 2 tons I instruct the carter not to cross the bridge, but to go round by the Parramatta Road.
588. What difference in time does it represent to go by that way? With a heavy vehicle it represents one hour. With a lighter vehicle it would be very much less than an hour.
589. From the nature of your business you are probably a good judge as to the state in which the timber of the bridge is;—what is your opinion of its state? I never inspected it. I simply took the word of the Department that it was unsafe a few years ago, when they posted a notice at each end that you were not to go over with a load of more than 2 tons, and that you were not to go at other than a walking pace. I take it that a bridge which was defective five years ago could not be remedied to that extent that it would be safe now it was simply patched up.

O. H.
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590. Was it not remedied two years ago? Within the last five years it has been remedied once or twice.
591. Does it appear to you to be stronger than it was? I have only had a superficial view of the bridge. I have never been underneath it. I have never examined any of its timbers.
592. I think that when you were examined on a previous occasion you suggested that the road ought to go nearer to White Bay? Yes.
593. Do you still hold that opinion? I do, unless it would perhaps be more expedient and cheaper to widen the present roadway to almost double its present width.
594. You think the traffic is such as to necessitate the road being considerably widened? I do; and in spite of what our Mayor has said, there is an objection to the traffic passing the Abattoirs. My idea always was to get a road away from the Abattoirs.
595. Have you heard people complain bitterly of any offensive smell when passing the Abattoirs? Certainly, and I make the same complaint myself.
596. That is the reason why you suggest that a new road might be opened nearer to the shores of White Bay? Yes.
597. Would the road you suggest go through Crown lands? Yes, all the way.
598. Have you ever taken any steps, as an alderman, to have that idea carried out? Yes; a deputation from the Balmain Council, of which I was a member, waited on the Minister for Lands about three years ago.
599. Was the reply satisfactory from your point of view? The deputation wandered away from the subject. It wandered away to the question of constructing new bridges and of filling up bays, and consequently the Minister, as is usual in such cases, put it on one side. The little matter we went about was lost sight of in discussing works which would run into an expenditure of £200,000 or £300,000.
600. Have you, as an alderman, moved in the matter since that time? On every occasion I had a chance I suggested that it be done.
601. Do the majority of your fellow aldermen agree with you as to the desirability of altering the road? Either that or having the present road very much wider. I suppose the roadway is 30 feet wide at the Abattoirs, and there is no pathway; therefore, you can quite understand that the traffic is very much congested there.
602. Do you regard a footway as being absolutely necessary for the comfort and safety of pedestrians? Certainly, on the bridge.
603. Is there not any footway alongside the road leading from the bridge towards Balmain? There has been one cut out by Government day labour within the last three or four years. I should think it is about 3 feet wide.
604. In going towards Glebe Island, where is the boundary of your municipality? The "White Bay Hotel."
605. How far is it from the island? We run on to what was at one time the shores of the island. The island is not within the municipality; it is within the Balmain electorate.
606. By which way, as a rule, are the cattle which arrive by train taken to the Abattoirs? From the sale-yards at Homebush they are driven into paddocks as convenient to the Abattoirs as they can be got—at Five Dock in one case, and at Leichhardt in the other—and they are brought in the early morning through Balmain. One lot comes by what is called the Abattoir Road, and the other comes over the Iron Cove Bridge and by the Western Road, both being Government roads.
607. Is a mob of cattle ever driven during the busy portion of the day so that the safety of people travelling is in danger? It is hard to define what is the busy portion of the day. A busy time to some people would be a quiet one to others. I take it that any time in daylight is a busy time in Balmain, and the cattle are driven to the Abattoirs up to 8 a.m., which is the regulation hour.
608. Is that one of the reasons why you advocate a much wider road? The proposal for a new bridge does not affect the driving of the cattle. It will not have the slightest effect, because the cattle driving is actually done before you get near that point. The road which I reckon would come under the head of the bridge proposal is the road from the Glebe Island approach to the end of the gates, and from that to Balmain we have a very fair road.
609. Do you think that that road ought to be widened? Yes.
610. Is it as wide as George-street? There would be about 30 feet of driving room in it at the most.
611. How wide do you think it ought to be made? Sixty-six feet, at least.
612. If the proposed bridge were erected, have you any suggestions to make which would add to the comfort of vehicular or pedestrian traffic over the bridge? No; I did not study out the details of the proposal—I thought the Department would do that. It has been very often before the public in Balmain;—I suppose I have attended at least twelve public meetings, and four or five deputations on the subject. It has been before the people of Balmain for the last ten or twelve years.
613. You are prepared to leave the details of its construction to the Department? Yes.
614. You strongly favour the providing of a footpath for pedestrian traffic over the bridge, and for its continuation right up to the Abattoirs gates? Yes.
615. You think that there ought to be more head-way left for the shipping traffic to pass under the bridge? Yes; the shipping traffic has grown very materially during the last ten or twelve years.
616. Can you furnish any figures showing the increase of the shipping traffic through the bridge? No. I cannot give you the tonnage, but in round figures I may say there is a business done round Blackwattle Bay of half a million a year, and the whole of it is interested in shipping. In fact, the whole of their products must be fetched in the first instance in vessels. At present, they have to discharge their cargoes outside the bridge, and the punts are towed through to the bay.
617. Is that owing to the great delay which takes place? It is not sufficiently wide to allow the vessels to go through. There is not the depth of water for the vessels. There is a ledge of rock which bigger vessels have to cross, and captains will not take their vessels through there.
618. Do larger tonnage vessels go through now than did a few years ago? Much larger vessels have occasion to go through, but cannot. There are businesses up there which have oversea vessels fetching cargoes of 1,000 tons, and these cannot go through the openings. They have to lie in Johnstone's Bay. They lie out in the centre of the stream, and discharge their cargoes in lighters, which are then towed through the bridge.
619. Have you any figures showing the increase of trade there? No. I may mention that when the bridge was first constructed there was no bridge at Gladesville, Iron Cove, or Lane Cove, and consequently when

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when those three bridges were constructed the whole of the traffic to and from those districts which used to go by the Parramatta Road was diverted through Balmain over Glebe Island Bridge to and from the city.

620. That is one of the reasons why the traffic over Glebe Island Bridge is very much larger now than it was some years ago? Yes.

621. A large number of omnibuses go over the bridge? No; only the omnibuses to Ryde. When the bridge was first constructed the population of Balmain, I should think, was about 5,000 or 6,000 whereas now it is 30,000.

622. How far back are you going? About thirty-five years.

623. Is that the population of the Municipality or of the electorate of Balmain? Of the Municipality, which is divided into two electorates, namely, Balmain North and Balmain South. I take it that there are 50,000 people who are directly interested in the vehicular traffic across the bridge, and who have hardly any other means to go by land than over the bridge to and from the city.

624. Are a large number of people obliged to drive round by the Parramatta Road owing to the delay in getting across the bridge? It is a long drive round by that road. I have driven round by the road rather than wait when a vessel has been jammed at the bridge; but I cannot say that there are a great many who do. People will rather wait twenty or thirty minutes than drive round.

625. Are they called upon to wait that time frequently? Frequently.

626. You are perfectly clear that the time has arrived when a more modern and suitable bridge should be erected there? I am; and it is a wonder to me that the Government has let the present bridge remain there so long.

627. You think that the increased traffic undoubtedly warrants the erection of a new bridge? Yes.

628. And the convenience of 30,000 people, a large number of whom are constantly going to the metropolis? That is only taking Balmain; but you must also consider that the people of Ryde, Hunter's Hill, Gladesville, and all the other suburbs must go by that way.

629. Is there a very large traffic from Ryde and Gladesville through Balmain? Very large indeed. It all comes through Balmain. All the fruit-growers must use that direct road to the markets.

630. Do nearly all the fruit-growers come by that way? Yes.

631. There is a large buggy traffic, I suppose, from Ryde and Gladesville? It is the only way they can come, unless they go round by the Parramatta Road. It is now recognised to be the route.

632. Do you think that the traffic is of such a nature that the residents would be likely to ask for the erection of an electric tram to connect them more directly with the metropolis? That was talked of years ago in Balmain. At the time the present tram was constructed, our Members wanted a more direct route, which they reckoned would go across the bridge.

633. Do you think that, in the public interest, this Committee ought to consider the question that if a bridge should be constructed it should be built of such a size and such a strength as to carry an electric tram if it should be thought necessary in the future to construct one to Balmain? I do certainly. It has been agitated for for a long time, and as we have waited for so long a time, I think we might wait a little longer to have it constructed by that way.

634. Has the question been before your Council? On several occasions.

635. Has your Council ever approached the Government with a view to get it to connect Balmain with Sydney by a tramway over this bridge? Not since I have been in the Council.

636. Is it a question which is likely to come up for discussion in your Council;—have you heard it seriously talked of there? Our Council is in this position as representing Balmain and the views of Balmain: we want a bridge badly. The main thing with us is a bridge. We want increased accommodation. We reckon that Balmain is kept back through the present bridge.

637. Do you look upon the tram question as being somewhat out of your consideration? Yes; I would leave the tram question out of it. What we have asked for is increased accommodation in the bridge. We reckon that the present bridge is obsolete, and that it is time it was done away with.

638. Do you think if an electric tram were taken over the new bridge the traffic would be sufficiently great to cause the work to be remunerative to the Government? I do not, unless it did away with the other line. It is quite impossible for two trams to pay running to Balmain.

639. *Mr. Black.*] I understand you to say that the population of Balmain has grown from 5,000 to about 30,000 in the last thirty years—that is, at the rate of 1,000 people a year? Yes.

640. Then you said that Balmain has been kept back from the want of a bridge;—I presume you mean a proper bridge? I mean through this bridge, which I reckon is a great obstruction to the advancement of Balmain in a lot of ways.

641. In what way has it been kept back when it has grown so tremendously? In the way of factories. Now, if Mort's Dock have a casting or other piece of work which is over 2 tons weight they have to take it round 3 or 4 miles further than they could go by a direct route in consequence of this bridge.

642. I understand that it has not interfered with the growth of population so much as with the spread of industry? You can take it that way.

643. You do not know what the tram to Balmain cost? No.

644. I presume that if a more direct route were made the existing tram would be a loss to the Government? It is not possible to keep two tramways.

645. The present tram would have to be abandoned? That is my idea.

646. There would be no means of utilising it? I do not think so.

647. *Mr. Clarke.*] Do you think that if a better structure were erected than the present bridge it would be the means of increasing the trade and business in Rozelle Bay and Blackwattle Bay? I certainly do.

648. I suppose the present bridge is utterly unfit for the traffic? It is quite unfit. Everyone who uses the bridge or goes over in vehicles, particularly in my trade, is always grumbling about the state of it.

649. Would it be advantageous in the new bridge to have a wider opening for the passage of vessels? Certainly; that is one of the main points for which the new bridge is wanted.

650. And a much wider bridge? Yes.

651. Is it advisable if possible that the bridge should be higher than the present one, to permit of the passage of small vessels and punts without necessitating the opening of the swing in the centre? It would be very much better if it could be built sufficiently high to allow ordinary coasting vessels to pass underneath. It would save a lot to the Department, and it would be a great convenience.

652. The live stock go chiefly from Homebush to the Abattoirs? Yes; it is only the pigs which go through Pyrmont. You should have some other way of fetching the pigs to the Abattoirs. 653.

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653. I notice from the reports in the Press that there is an agitation to have a railway from Homebush to Glebe Island? There is, and has been for some time past.

654. Will that be a benefit to the public? It will be a vast benefit, as far as the cattle-driving nuisance is concerned.

655. I suppose it would also prevent accidents happening from the driving of cattle through the streets? Yes. Only yesterday morning an accident was caused by the cattle rushing a child.

656. You have been asked whether you think it advisable that the new bridge should be made strong enough to carry a railway or a tramway? Perhaps it would be advisable; but I did not go into that aspect of the question. What Balmain is asking for is increased accommodation at the bridge.

657. You have very fair accommodation now to various parts of Balmain by tram and steamer? We have very fair accommodation. We do not grumble, only we would like a more direct route. As a business man, I would not say that the Government should put down two lines of tram to Balmain.

658. *Mr. Humphery.*] Are you aware that the width of the present bridge, exclusive of the footway, is 19 feet, and, I think, 14 feet on the swing, and that the proposal before the Committee is to have a roadway 40 feet wide with footways 5 feet wide;—in your opinion, would that provide for all ordinary traffic? I think it would.

659. The original proposal was to increase the height of the headway under the bridge from 12 feet to 15½ feet, and the recommendation by a former Committee was that it should be increased to 20 feet;—do you think that a clear headway of 20 feet under a fixed span would be sufficient for small crafts? No; it would make it much more convenient if it were possible to arrange it so that a small coaster could go underneath by lowering her topmast. It would be very much more convenient if it was possible to get sufficient elevation by keeping the approaches up a bit.

660. Can you say at the present moment what headway would be sufficient? Not off-hand. It would have to be much higher than that.

661. How many times daily is the present draw-bridge used? I cannot say; but, unfortunately, every time I want to go across it is open.

662. Do you think that with a clear headway of 20 feet it will considerably reduce the number of openings? It would reduce them, but not very considerably.

663. Do you think the majority of vessels require more headway? Yes. It would be very small craft that would go under a bridge 20 feet high.

664. You are not prepared to make any suggestion as to the necessary height to be adopted? No. I know that it should be considerably more than 20 feet.

665. You think the interests you represent will be fairly met by the construction of a bridge, as proposed by the Department now? Certainly.

666. You are familiar with the details? Not with the details. I have just looked at the rough sketch on the case.

667. With regard to the deviation of road you proposed by way of White Bay, are you prepared to make any suggestion by means of which that road, without increasing its length, could be substituted for the present road? It would not be substituted for it. We should take it that even that road would be outside this bridge proposal altogether. I would not think that the two proposals would meet, because that is a little departmental matter which might be carried out at a small cost to the Minister without touching this bridge proposal.

668. In connection with the bridge, you do not suggest it as practicable? No. I would have the existing road very much wider than it is; it is not half wide enough for the traffic. The whole of the traffic is congested in an ugly little turning there.

669. A sufficient widening of the road in your opinion would meet all requirements? Yes.

370. *Mr. Lassall.*] You stated that you have been in communication with the Minister in reference to getting a road nearer to White Bay? We wished him to cut down a portion of Glebe Island and round the shores of White Bay to give us another road, so that we should not have all the traffic congested on the Glebe Island Road.

671. Would the construction of that road necessitate the erection of another bridge over Johnstone's Bay? No; it is simply a detour, an alternative road, which we could use if we did not like to pass the Abattoirs.

672. It would bring the whole of the traffic on to the bridge? Yes.

673. Necessitating a much better bridge than you have, and giving increased facilities for the traffic? The present bridge is obsolete.

674. Do you corroborate what the Mayor said as to the urgent necessity for making better provision for the traffic across the bridge? I have said so for ten years.

675. You find that it is very inconvenient, and that the inconvenience is increasing year by year? Day by day.

676. *Mr. O'Connor.*] Has not the bridge been altogether inadequate for twenty years? I would not go back so far; but I know that it has been for the last ten years, and within the last five years the Department evidently thought it was inadequate when it posted the notices I mentioned.

677. Apart from its strength, the width of the bridge has been altogether inadequate for many years? Independent of the Abattoirs traffic, which never ought to enter into the consideration of the matter at all, there are such a lot of other places depending on this bridge, that if the Abattoirs were removed from the island to-morrow, it would not have the slightest effect upon the traffic.

678. *Chairman.*] You heard the estimate given by the Mayor of the amount of traffic which goes to the Abattoirs, and the amount of the ordinary road traffic;—do you agree with that estimate? No; I think that only one-fifth of the traffic at present goes to the Abattoirs. I think he said that one-half of it goes there, but I am in a much better position to judge than he is. I am on the bridge almost every day, and our traffic is all over the bridge.

679. Did you hear the proportion he gave with reference to the various classes of stock which reached Glebe Island? Yes.

680. Do you agree with his estimate? I should think that about half comes along the Abattoir Road, and half along the Western Road, both being Government roads through Balmain. I think the pigs should be taken in a punt to the Abattoirs.

681. You think there should be another way of taking the pigs to the Abattoirs? I do; I think the pigs are driven to the Abattoirs two or three days a week.

682. Do you think it is practicable to take them by water? I do; and I think if the traffic gets thicker on the road that will have to be done. The pig and calf traffic goes through the heart of the city, and on the Pymont Bridge it is an awful nuisance.

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683. *Mr. O'Connor.*] The pigs were punted to the island thirty years ago? —
 684. *Chairman.*] Do you know the number of stock which go over the bridge to the Abattoirs? No.
 685. Is there any other point on which you desire to inform the Committee? No. I think it must be quite apparent to anyone that a bridge which was constructed thirty-five years ago is not suitable for the requirements of the present day.
 686. *Mr. O'Connor.*] You differ somewhat from the Mayor in your estimates;—do you think that your information is any better than his? I make my estimate from personal observation, for I am on the road almost every day.
 687. How long have you been driving over the bridge? Twenty years.
 688. Has it not struck you that the bridge was inadequate even at that time? I cannot say that I took much notice of it then. There used to be a toll on the bridge then, and that used to strike me as an obstruction.
 689. The bridge is rendered inadequate for the purpose for which it was intended principally by the fact that your great hamlet has grown into such large proportions? I would not take it from the local point of view. The construction of the Gladesville, Iron Cove, and Lane Cove Bridges has made that the direct route to all the western suburbs.
 690. Suppose that to-morrow the Abattoirs were abolished, do you not think that the communication between Balmain and all the surrounding suburbs would be entitled to have a better bridge? Yes; I do not think that the Abattoirs question should be considered at all.
 691. If the Government was to receive revenue from the Abattoirs elsewhere the large population of Balmain and surrounding districts is entitled to a better mode of communication with the metropolis? Certainly; if the old bridge is left there much longer it will fall down.

TUESDAY, 29 JUNE, 1897.

Present:—

THOMAS THOMSON EWING, ESQ. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.	CHARLES ALFRED LEE, Esq.
The Hon. JAMES HOSKINS.	JOHN LIONEL FEGAN, Esq.
The Hon. CHARLES JAMES ROBERTS, C.M.G.	THOMAS HENRY HASSALL, Esq.
The Hon. WILLIAM JOSEPH TRICKETT.	GEORGE BLACK, Esq.
The Hon. DANIEL O'CONNOR.	FRANCIS AUGUSTUS WRIGHT, Esq.
HENRY CLARKE, Esq.	FRANK FARNELL, Esq.

The Committee further considered the expediency of constructing a New Bridge at Glebe Island.

Henry Brisbane Swan, Alderman of Balmain, sworn, and examined:—

H. B. Swan
29 June, 1897

692. *Chairman.*] You are an Alderman of Balmain? Yes.
 693. *Mr. Farnell.*] How long have you been a member of the council? Nine years.
 694. But you have been a resident of the borough for a long period? All my life.
 695. You have had an opportunity to notice the increase of population in Balmain and surrounding districts? Yes.
 696. Were you a resident of Balmain prior to the erection of the Iron Cove and Parramatta River bridges? Yes.
 697. Do you remember which way the traffic, which naturally found its way to Sydney, went before those bridges were erected? From Ryde and Drummoyne districts it went by the Parramatta-road.
 698. Very little of it went over the Glebe Island Bridge? Yes. It did not go that way at all.
 699. We may conclude that the Glebe Island Bridge was built to meet the requirements of the people of Balmain? It was originally built for the accommodation of the Abattoirs. There was not much population in Balmain when it was built. Where I resided there was only three houses round the whole place.
 700. Since that time the people of Balmain have availed themselves very largely of the convenience of the bridge? Certainly.
 701. Added to that, since the bridges have been erected over Iron Cove and Parramatta River there has been an increased traffic from the districts lying to the north and north-east of the river? Undoubtedly.
 702. You have had an opportunity to compare the traffic at the time I first mentioned with the traffic of the present time, and to notice the great increase which has taken place? No traffic can go to Sydney or come from Sydney without passing my door.
 703. Have you noticed at any time the condition of Glebe Island bridge? I know that it is very inconvenient for the travelling public.
 704. Have you noticed that it does not meet the demands of the people? Nothing like their demands.
 705. Have you had an opportunity to examine the structure itself? Some few years ago when it wanted sheathing I put in a tender for re-decking it. It was in a bad condition at that time, which, I suppose, was 10 or 12 years ago.
 706. Will you be good enough to describe its condition at that time? The girders were becoming decayed. They have been renewed since that time; they have put girders alongside many of them. The white ants are into it at the present moment. If the white ants extend from the crown of the bridge to the Glebe Island shore I think it is pretty seriously riddled.
 707. Did you, twelve years ago, consider the bridge to be in an unsafe condition for the travelling public? It was unsafe then. They spent a good few hundred pounds on it then.
 708. Do you consider that the patching up has sufficiently strengthened the bridge to make it trafficable and safe for the travelling public? On top of that sum they have spent £3,000 or £4,000 in taking out some of the timber which they renewed then. The bridge is not fit for the present traffic. There are only something like five piles in each bay—and these are 30 or 35 feet apart from one another—and only four 12 x 12 girders running from pile to pile with tie-rods, and the bolts of the tie-rods are through the girders. There are not even head-stocks running as there should be, 10 or 12 feet long. I understand that the bridge was only constructed to carry the traffic to Glebe Island. It was not constructed for the traffic which goes over it now.

709.

709. If the girders became rotten, these tie-rods would be dependent on them and would be useless? Yes.
710. Do you consider that the bridge is really unsafe and does not meet the requirements of the public? Certainly, it is quite unsafe. The Government themselves realise that it is unsafe, because they will only allow you to go over in single file; they will not allow double traffic to go across the bridge at the same time.
711. Do you remember a notice being issued some time ago, allowing only loads of less than 2 tons weight to go over the bridge? Yes; we have had to go round by the road.
712. That notice was issued because the bridge was considered by the Department to be unsafe? Yes.
713. Is there much inconvenience experienced by people travelling to and fro with carts and horses, from the fact of their not being able to pass one another on the bridge? As business people we can speak very strongly on that point. We have to send a good deal of material by rail, and very often we get disappointed from the blocking of the bridge and do not get the number of loads to the railway that we should. Very often, right through the day, two hours are lost through the opening and shutting of the swing. It is not a proper swing—it is opened and closed very slowly, and if a southerly wind is blowing it must be on an average from two hours to two and a quarter hours through the year that that is blocked daily to the public. Furthermore, on the Balmain side the Government prohibit any vehicle from coming on to the bridge until it has been lightened of the traffic which is then on it, so that that causes further delay to people on the Sydney side. On the average you may say that it runs into three hours, which means a serious loss to us. It means that we have to pay a man for a whole day—for nine hours are lost in connection with the four or five drays we send to Sydney.
714. The bridge has to be cleared of traffic going towards Sydney before any vehicles will be allowed to cross from the opposite direction? Our men told us that when they were going to the railway yesterday the bridge was opened ten times during the time they were passing too and fro.
715. Is the approach to the bridge from Glebe Island a safe one? It is not a safe approach. It is very unsafe when the carts are racing, and they are pretty congested there on a busy day like Friday. It is not a straight run on to the bridge; there is a bend as you approach the bridge.
716. Would you suggest that a more direct approach should be made to any new bridge? Certainly; and of course a wider one.
717. How wide do you think it should be? It would have to be double the present width—treble if possible. The roadway should not be less than 60 ft.
718. And the footways? You should not have less than 10 ft., because there is a lot of foot-passengers now.
719. Do you think it desirable to have a footway on the bridge for the convenience of the passenger traffic like there is on the Iron Cove Bridge? No; but it would be all the better if they continued to drive small stock across the bridge.
720. You do not think there would be much danger to the public if the bridge were an open place? There is not much danger to the public. I have not heard of any serious accident taking place.
721. Where do you propose that the swing should be placed in the new bridge? In the centre of it.
722. At what height should the bridge be erected so as not to interfere with shipping going into Rozelle Bay or Blackwattle Bay? To save the swing from being opened too often I should say that the bridge should have a clear headway of 20 ft.
723. Do you think there is a possibility, if such provision is made, of Rozelle Bay and Blackwattle Bay being used for commercial purposes? Yes, very extensively. During the past two years Langdon and Hopkins have had 12,000,000 or 13,000,000 ft. of timber taken through that bridge. I think we have had about 7,000,000 ft. of timber taken through the bridge during that time, and during the past week we have had 200,000 ft. of timber delivered on to our wharf. The Kauri Company, I suppose, have had from 25,000,000 to 35,000,000 ft. of timber taken through the bridge during the last two years.
724. You think it would be a mistake to construct the bridge without giving due consideration to the future use of these two bays? Yes. The Government wharf at the head of Blackwattle Bay cannot be used. It would be used by several steam-boat proprietors now if they could get their boats through the bridge without carrying away the propellers.
725. Have you considered the question whether the bridge should be made of iron or timber? The question was raised in the Balmain Council at one time, and it was said that the bridge would cost over £100,000, which I thought was rather excessive. I suggested that two-thirds of the distance should be filled in from Glebe Island to the Pyrmont side, that we should quarry the rock from Glebe Island, and with it run out a causeway from each side.
726. Would that be less expensive than to construct a timber bridge right across from side to side? I should think so. You would make use of the island. The timber bond will be done away with at Pyrmont, and they will want a timber bond somewhere else. There is some talk about asking the Government to allow White Bay to be made a timber bond, but that would not be nearly large enough. You could raise the centre of the bridge and make an incline up to the centre. It would give you a good headway. It is better for a horse to travel on a macadamised road than on a bridge.
727. As regards the present bridge you have had some personal experience of being kept waiting while the swing was open? Yes.
728. How long have you been kept waiting on any occasion? On the average it is from thirteen to fourteen minutes, but I have had to wait there for half-an-hour, and I have seen the bridge blocked for three or four hours, sometimes half a day, when vessels have got stuck there.
729. Have you any idea of the number of vehicles which passes over the bridge each day? I know the number of vehicles which passed my business place on a day about two and a half years ago. When we were going to have a deputation to the Government, I put on a man to tally the vehicles for a day, and I think it was 1,900 vehicles which went to and fro on that day.
730. The traffic has considerably increased since that time? I should think it had.
731. You would not see all the traffic going over the bridge, because Glebe Island would take a good deal of it? I could not say whether all these vehicles went to the Abattoirs or direct into Sydney, but I know that they passed the place.
732. Still a good deal of traffic would go to the Abattoirs, which you would not see at all, because it would not go past your place? Yes.
733. *Mr. Clarke.* Are there many places of business in the neighbourhood of Rozelle Bay and Blackwattle Bay? Yes.

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- H. B. Swan.** 734. What particular trades are carried on there? Timber businesses principally, meat-works, glass-works, and iron foundries.
- 29 June, 1897. 735. Do you think that if the present bridge were replaced with a more suitable bridge, both in width and strength, it would be a convenience to those who trade in that locality? It would send more business there, and the population would increase. All the vacant places would be taken up, in fact, there are two sites there which would be let now only for the inconvenience of getting through the bridge.
736. Are you aware that the state of the present bridge, after being in use so many years, is positively dangerous to the traffic? Yes, it is for anything but light loads. About two months ago I happened to be under the bridge in my boat, and I noticed two trolley-loads of ironwork going from Phippard Brothers' place round to the new markets. They were bending the bridge, I daresay, to the extent of 2 inches, for the tie-rods seemed to sag down about 2 inches in the middle. It is quite dangerous for any heavy traffic. We have a new industry over there, and instead of loading in Sydney tallow, hides, and wool they go round with it to Balmain and load it there.
737. Does not a portion of the trade go across in punts? We have to use punts now.
738. If a suitable bridge were erected, you think that a greater portion of the traffic would go over the new bridge? Yes, it would be nearer to the city in every way.
739. Still a good deal of traffic will be carried on in punts and small vessels? Large vessels which cannot get through the opening have to lie outside. At this moment we have to lighten three large vessels which could not get through the swing. We have to lighten a vessel over 200 tons, before she can get through the bridge.
740. Would it not be a considerable advantage to the public if a larger swing were provided in the new bridge so as to enable larger vessels to get through to the bay? Undoubtedly. You want an opening of not less than 60 feet. When we have to punt we cannot put any long timber on the punts—some of the spars are 60 and 70 feet long—because the spans of the bridge are only 30 or 32 feet.
741. There is a considerable depth of water in the two bays? There used to be, but it has silted up.
742. Do you know what depth of water vessels draw which go through? Vessels drawing 14 or 15 feet cannot get through the opening. A vessel is not allowed to go through the opening which is drawing more than 12 feet 6 inches.
743. The water in both bays could be deepened by dredging? No; there is rock at the present site of the swing.
744. But that could be removed by blasting? Yes; but that would not remove the inconvenience to the travelling public. You can only go in single file over the swing at all times.
745. It is in the wrong place? Yes; it should be in the centre.
746. On the whole, you think that for the safety and convenience of the public, and the encouragement of trade in Rozelle Bay and Blackwattle Bay, a new bridge should be erected as soon as possible? Yes, and it should be constructed strong enough to carry a tramway.
747. *Mr. Hassall.*] You think it is absolutely necessary that better provision should be made for the present traffic and the large increase in traffic which must take place between Sydney, Balmain, and the western suburbs? Yes; and if you constructed the bridge strong enough for a tramway it would give a handsome return.
748. You think it is advisable to construct a bridge to carry a tramway, in addition to the road traffic? Yes; the population of Balmain has increased very much lately.
749. *Mr. O'Connor.*] How long have you lived in Balmain? Over thirty years.
750. Do you recollect when the present bridge was constructed? I do not recollect the bridge being built, but I remember that as a child I used to travel in the punts backwards and forwards.
751. I suppose there are very few men who know better than you do the great traffic there is from Balmain and outlying districts and Glebe Island into Sydney? Yes.
752. Do you not think that many years ago the traffic had increased so much that a new bridge was requisite there? Twelve or fifteen years ago it was requisite to have a new bridge there.
753. Do you know that with the enormous business which is done on Glebe Island, which is continually coming into Sydney, and with carts going back to the outlying districts—apart altogether from all Balmain—the traffic there is very great? Yes. What is lost sight of is the existence of Mort's Dock and several large industries in Balmain. The loads from these places are drawn on heavy trolleys, with six or eight horses, and after they get on the bridge it is almost impossible for one to get along. The trolleys are so wide that they take up the room on the bridge, and they go along so slowly that it is impossible for one to get along fast.
754. They take up nearly the whole of the bridge? Yes; I have had to follow at a slow pace after a four-horse trolley for the whole length of the bridge.
755. When the bridge was built it was ample for all that was requisite at that time? Only for Glebe Island; Balmain was never considered when it was built. It was simply built for the Abattoirs, because the incline to the Abattoirs was very steep then. They improved the approaches to the bridge in years gone by. They cut all the hills down and made easy grades for heavy vehicular traffic to approach the bridge, but they never made the bridge itself any stronger.
756. The bridge was originally intended for Glebe Island only? Yes.
757. It was never contemplated to be of use to any other place? No.
758. Do you remember that about twenty-two years ago the site of what is now called West Balmain was absolutely uninhabited? It was bush.
759. The population of Balmain was located down towards Darling-street? Yes.
760. And their only mode of communication with Sydney was by steamer? Yes.
761. It was never intended that the bridge should carry the great traffic, which is every day increasing, from that most populous district, besides outlying places, independently of Glebe Island? The first steamer which ran to Bald Rock averaged twelve passengers a day—that is twenty years ago—whereas now a steamer can take 6,000 over. At that time the fare was 3d., but it is now reduced to 1d. We were told that it would not pay at 1d., but we are paying 10 per cent. on these steamers.
762. From the White Bay Hotel, for a distance of about a mile, there was not a single house all round that district when the bridge was built? There were only our house, Mr. Steele's, Mrs. Moore's and Mr. Roderick's in Balmain West at that time. Ours was the first house west of Glebe Island. There was only a little track for the cattle to get to the island. The water originally went round the Island. At the bottom of our land they made it high water. They built up the roadway, which has made the approach

approach better for the travelling public. Originally it was only meant for the cattle to go on to the island. They fetched no meat into Balmain in those days. There was little or no population to serve there with meat; it was all in the city. H. B. Swan.
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763. Were you an officer at Glebe Island Abattoirs? Yes.

764. That bridge was intended wholly and solely for Glebe Island? Yes.

765. The traffic has been so increased by the surrounding populous districts that it must be altogether inadequate to meet the great wants of the present day? Yes. When they were taking night-soil from the surrounding boroughs it was pointed out that the bridge was originally built for the Abattoirs alone, not for the use of the municipalities, and we had to stop using the bridge for that purpose.

766. When the first public school was built in West Balmain it was thought that it would be useless, because it was so far away from Sydney? Some persons urged that the building of a bridge from Pyrmont to Glebe Island would increase traffic and encourage settlement, but it was considered even at that time that the bridge was only intended to carry the traffic to Glebe Island. I recollect that the Public School at West Balmain was considered by some a white elephant in those days, because there was no population, but now it is the largest school in the Colony.

767. That very portion of Balmain is now an electorate? Yes; it is South Balmain.

768. Have you considered the question whether the piles in the present bridge are safe? I suppose the piles, as far as they are in the mud, are perfectly safe. I daresay that if you pulled up the piles they would be found to be quite green where they were in the mud, but I should think that the upper portion is decayed. I noticed one or two of them were gone in the sap two or three years ago.

769. Do you imply that there is some element in the mud which would preserve the piles? There is something in the mud which preserves them.

770. Have they got a pretty solid foundation? I could not say. After you take off 8 ft. or 10 ft. of silt in the bay you get clay, so that the piles must have a good foundation. If any engineer or officer of the Government were going to construct a bridge at this moment, he would never hesitate for one moment to put down such a structure for the traffic.

771. Twenty years ago it was a common thing for men to fish along there, particularly on Sunday? Yes.

772. Have you noticed how the piles are holding up the bridge? About two years ago I did. They have put alongside the present girders another girder 12 in. x 12 in. There are only four 12 in. x 12 in. girders running longitudinally with the bridge. It is a very cheap temporary structure, which depends upon the iron tie-rods.

773. You have come to the conclusion that a new bridge is absolutely necessary? Yes. There will be a serious accident some day if the Government do not do something with the bridge. The Department is always painting up the bridge and making it look nice. I remarked to them one day: "Why don't you save the money and put it into a new bridge?" and they said, "We must make the bridge look nice, to keep the public from singing out."

774. *Mr. Wright.*] In the event of a new bridge being built, do you think that the grades to the island could be reduced? Yes.

775. The approach on the eastern side of the island is very narrow and very steep? Yes.

776. You think that either the approach should be raised, or that the island should be cut down so as to lessen the grade? When I was mayor of Balmain I suggested that a roadway should be cut half the width right from the bridge, past the Abattoirs, so that the public would not see the killing going on. It would be a roadway for the public.

777. Do you think that to make the traffic easy it is very necessary that the island should be cut down? Yes; and if you cut down the road you could use the material to make a causeway out towards the centre.

778. *Chairman.*] Do you think that the Abattoirs should be permanently located on Glebe Island? Yes; I believe that it is the best site in the world for abattoirs.

779. What area of vacant land is there on the island? I do not know.

780. The Abattoirs take up a very small portion of Glebe Island to the north of the road? Yes.

781. There are about 52 acres in Glebe Island. Are the desiccating works used now? No; the stuff is towed out to sea.

782. There is an ample area for wharfage round Glebe Island, provided that it did not interfere with the Abattoirs? There is plenty of room for wharfage. White Bay has been filled up, and there will be abundance of land reclaimed right round the island.

783. It will be a very large valuable water frontage? Yes.

784. If the island can be approached, there is room for wharfage, if abundant provision be made for the Abattoirs? Yes.

785. Is there anything else you desire to say? I was on the deputation which waited on the Minister recently in regard to constructing a railway to Glebe Island. I think the Abattoirs should be done away with if the Government cannot remedy the cattle nuisance.

786. *Mr. Wright.*] The cattle have to be driven through a populous district? That is the trouble.

787. It is a constant source of danger to the public? Yes; but the Abattoirs themselves are no nuisance to anybody.

788. *Chairman.*] Have you formed an opinion in regard to the best route to take for a railway to Glebe Island? Down White's Creek, they reckon, is the cheapest route to fetch it from Summer Hill. I had an idea that the railway ought to come from Darling Harbour on to Glebe Island by a tunnel through Pyrmont.

789. There is no third route which you could suggest? It must come either from Darling Harbour or from Summer Hill? From Petersham is, I think, the most expensive route. Another route I would suggest is down the canal in Iron Cove Bay, and through Callan Park which is Government land, and as far as the Iron Cove Bridge, and then tunnel from that bridge right on to Glebe Island. They would not need to resume any land in Balmain if they adopted that route.

790. Where would you leave the main line? You could leave the main line at Summer Hill, come down *via* Iron Cove Bridge, pass round the bottom of Callan Park, and tunnel through to the island.

791. You believe that these are the only three routes which are worth considering? That is a good route which is worth considering. You want to extend the electric tram across the two bridges, and it is a tram which would pay well too.

Henry Deane, Engineer-in-Chief, Railway Construction Branch, Department of Public Works,
sworn, and examined:—

- H. Deane. 792. *Chairman.*] You are Engineer in-Chief in the Railway Construction Branch of the Department of Public Works? Yes.
- 9 June, 1897. 793. You have been asked to consider certain questions bearing on the construction of a bridge to Glebe Island? I have.
794. Have you prepared any statement for the Committee? No; I have brought a map of Sydney, drawn on an 8-chain scale, to show what connections could be made with Glebe Island. We have surveys and explorations on the western side for connecting with the railway, but nothing has been done on the eastern side, that is to connect it with Darling Harbour. It would be a very simple matter to make such a connection, for there are no engineering difficulties to encounter. A connection could be made with the Darling Harbour line, near the head of Darling Harbour, by tunnelling through the hill under Harris-street and coming out on the lower ground on the Blackwattle Cove side, or a connection could be made by tunnelling from Darling Island, or from the lines which will be constructed over the newly resumed area in Pyrmont Bay. There are no sections taken to test the practicability of it; they are not necessary, but a section would be required if an estimate were wanted. Before an estimate could be made, it would be necessary to decide how the connection should be made, because the cost of connection between the lines on Darling Island and Glebe Island, would be very different from that of the connection from the Darling Harbour line at the head of Darling Harbour. The distance in the latter case would be so very much greater, and that of course would affect the cost.
795. How many lines of railway is it proposed to extend over the resumed land in Pyrmont Bay and towards Darling Island? There will be two main lines of rail and there will be sidings in addition.
796. Supposing that the two lines were extended to Glebe Island;—by taking that basis you can tell us approximately what the tunnelling for the two lines would cost? I do not think I could tell you the limits of the tunnel with any attempt at accuracy.
797. How far is it? Making a connection with the line at the head of Pyrmont Bay across to Johnstone's Bay, there would be, speaking approximately, about 30 chains of tunnel.
798. In all probability it would be an easily-constructed tunnel? Yes, it is all sandstone.
799. Roughly speaking, what would two lines of railway in tunnel cost approximately? The cost of the tunnel—30 chains—would be about £50,000 approximately. That would bring you to the water. The bridge ought to be a separate structure from the road-bridge.
800. You have no doubt on that point? I think there is no doubt whatever about that. You could not make the two hang together. It would be a very awkward bridge if you made it wide enough for both. The approaches would be very awkward if you made it a double tier bridge with one on top of the other. I doubt very much whether any saving would be effected.
801. And it would be unsuitable for traffic purposes? Yes. I think that a separate bridge a little to the north of where it is proposed to put the road bridge should be built.
802. Have you any idea of the cost of carrying, say, two lines of rails? I can give you only a very rough idea of the cost.
803. We do not regard it as anything else? I think a bridge to carry a railway would cost about £130,000, with an opening in the centre. I should propose to adopt the bascule style, and have a suitable opening in the centre to allow vessels to pass through the bridge.
804. How long is the bridge? About 924 ft.
805. You have estimated roughly that the railway bridge would cost about £130,000? A little more than £130,000.
806. An expenditure of about £200,000, allowing £20,000 as a margin, would bring you pretty well across to the island? That would do.
807. In your opinion, would a railway bridge immediately north of the traffic bridge seriously impair the approach to Blackwattle Bay and Rozelle Bay? I do not think it would seriously impair the approach to the bays, but the two swings should be open at the same time.
808. We have now dealt with the salient points in a connection from the east to Glebe Island? Yes.
809. Will you now describe the route which goes pretty well due west from Glebe Island? Surveys have been made to connect with the main southern line at Stanmore and Petersham, and an examination of the country and a compiled section have been made of a line joining the main line at Summer Hill.
810. Any other? No, that is all.
811. Will you explain the Petersham connection first? The construction would be of a somewhat difficult character, as so many roads have to be dealt with; otherwise, there is no difficulty in it. That remark applies to both. It would mean, unless you went to considerably more expense, the adoption of stiffer grades than there are on the main line.
812. Would there be heavy land resumptions on the connection from Petersham? Yes.
813. Have you any idea of the cost of them? No.
814. Will you state the cost of construction? The cost of constructing the Stanmore-Petersham connection would be between £60,000 and £70,000. The cost of constructing the Summer Hill connection, which is longer than the other, would be about £130,000.
815. That does not include the cost of land resumptions? No; in neither case. Those surveys have been connected with the two fast lines. The matter has not been very much discussed—scarcely discussed at all—with the Railway Commissioners, because neither of these projects has arrived at a sufficiently forward stage. But I think it would be found necessary if a connection were made to pass under or over the fast line so as to join on to the other side. That would mean a little extra cost, perhaps another £10,000,* which I would like to add to my estimate, making it in the one case from £70,000 to £80,000, and in the other £140,000.
816. But you can give us no idea of the cost of the land resumptions? No; I have not any idea of their cost.
817. You think it will be a heavy item? Yes.
818. What will be the grade on either of these lines? It would be about 1 in 60.
819. With a fall, of course, towards the water? In either direction, I think you may say.
820. What height is Petersham above Glebe Island? The rails at Petersham are about 100 feet above high water.

821.

* NOTE (on revision): I find on going into the matter that the sum would not be sufficient. It would probably have to be doubled.

821. In your opinion, which is the better connection to make—from Petersham or from Summer Hill? I should say from Summer Hill, for the reason that it avoids a good portion of the main line. The sooner you get off the main line the better. H. Deane.
29 June, 1897.
822. Presuming that the cost of land resumptions between Petersham and Glebe Island will be the same as the cost of the land resumptions between Summer Hill and Glebe Island, then the cost of the Petersham or Stanmore connection is roughly £60,000 more than the cost of the Summer Hill connection? £55,000 or £60,000 more.
823. Notwithstanding that, you think it would be better to turn off the main line at Summer Hill? I think so.
824. Of the Summer Hill connection, which you regard as the better one, and the Darling Harbour line, which do you think would be the better connection to make? The western connection would be the better.
825. Why? You would avoid going through the neck, and I think eventually it would possibly be a better thing for the Darling Harbour goods traffic. That might all be brought round in that way, if in addition to the western connection the eastern connection with the island were made.
826. Does it not appear that if anything were done with it at all it would be very much better to connect from Summer Hill or Petersham—that is, from the better of these two starting points—and make it a sort of loop-line into Darling Harbour? Yes.
827. That would be really the right scheme? Yes; it would be a way of getting the goods traffic away from the entrance to Redfern station, which has been looked upon as a desirable thing to do.
828. How long would be a direct tramway from Balmain to Sydney, taking it across Pyrmont and Glebe Island bridges? From George-street to the point where the present Balmain tram enters Weston-street, it would be, approximately, about 170 chains, which is virtually 2½ miles.
829. There is another route which would be possible by using Glebe Island Bridge for tramway purposes, and going along by the Harris-street electric tram route, and down by the George-street tram route, by which route you would reach the same point which you have scaled? Yes.
830. What would that length be? It would be 110 chains, or nearly 1½ mile longer than the other.
831. How much longer is the present tram route to Balmain than the direct route? About 120 chains, or a mile and a half.
832. The approach to Balmain, *via* George and Harris streets, and thence *via* Glebe Island Bridge, will be approximately the same length as the present tramway? Yes.
833. Therefore, it follows, unless there be some other reason as far as Balmain is concerned, a connection at the termination of Harris-street in the saving of time would not be very material? No; it would not be anything.
834. But if it be possible to bring a tram direct by the two bridges, then there is a very material saving of 1½ mile? Yes.
835. If it were constructed over the Pyrmont Bridge from the foot of Market-street, it would be a strong competitor with the Harris-street line? It would depend upon how much the Harris-street line picked up at this extreme end. It does not follow that all the traffic on that line would be between Sydney and Pyrmont. It might be between Redfern and Pyrmont.
836. The best approach to Balmain would be from Market-street across Pyrmont Bridge to Glebe Island Bridge, and to Weston-street? Yes.
837. In your opinion, must we consider the question from the basis of a trolley system of electric tramways? Yes.
838. Therefore, if an electric tramway be constructed by the route we have particularised, it will be on the trolley system? Yes.
839. Do you regard it as difficult to carry a tram run on the trolley system over bridges with swings in them such as it is proposed to construct? There will be no difficulty whatever.
840. Except that the tram would have to wait while the swing was open? That is all.
841. But you could establish your connection at once when the bridge was shut? You might make it absolutely automatic.
842. The connection would not be on the trolley wire overhead, but on the side of the bridge, and it could be made automatically;—you have considered that question? Yes; and there is no difficulty at all.
843. If the street be wide enough to carry the traffic and the tram, any bridge as wide as the street will be wide enough to carry the traffic and the tram? Yes; a 40-ft. roadway between the kerbs is a very good width for the bridge.
844. It would be a capital approach from Market-street to Balmain? Yes; it would compete with the present Balmain tramway.
845. There is a very large traffic growing on that tramway? Yes.
846. *Mr. Hoskins.*] There are two large lines of steamers running to Balmain? Yes.
847. If the bridge be made sufficiently strong to carry the ordinary road traffic, such as would go to the Abattoirs or Glebe Island, would it also be sufficiently strong to carry the cars? It could easily be made so. I think it is highly probable that it would be quite strong enough as designed.
848. Have you a copy of the joint report which was made in 1890 or 1891 in regard to a connection from Glebe Island *via* Pyrmont Bridge to Sydney? Yes; I will let you have a copy of the report.

WEDNESDAY, 30 JUNE, 1897.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.	CHARLES ALFRED LEE, Esq.
The Hon. JAMES HOSKINS.	JOHN LIONEL FEGAN, Esq.
The Hon. CHARLES JAMES ROBERTS, C.M.G.	THOMAS HENRY HASSALL, Esq.
The Hon. WILLIAM JOSEPH TRICKETT.	GEORGE BLACK, Esq.
The Hon. DANIEL O'CONNOR.	FRANCIS AUGUSTUS WRIGHT, Esq.
HENRY CLARKE, Esq.	FRANK FARNELL, Esq.

The Committee further considered the expediency of constructing a New Bridge at Glebe Island.

George Waddy Shelley, Inspector, Glebe Island Abattoirs, sworn, and examined:—

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849. *Chairman.*] You are an inspector at the Glebe Island Abattoirs? Yes.
850. *Mr. Black.*] Do you think the site of the Abattoirs is a suitable one for the public health and safety? No; it is too confined.
851. Your reason for holding that opinion is that there is not sufficient space? Yes.
852. Is that a fault which cannot be got over? Not in that position.
853. Is it not possible by resumption or other means to devote a larger space there to the purpose? In the first instance it was built just on the point without cutting down, and you cannot extend it in any way.
854. From the nature of the ground it is impossible to increase it? Yes.
855. That does not apply to the island generally, I suppose? No. I mean just in the position of the Abattoirs.
856. To one particular site? Yes.
857. Is there any objection on the ground of sanitation;—is it likely by pollution of water or atmosphere to affect the public health? I do not think so in its present condition.
858. Is there any interference with the public safety by driving animals through the streets to the Abattoirs? Not when they are confined to small animals, as they generally are. It is only once in three months that we have anything which is beyond three years old, and, when it comes to them it is not safe. I speak of animals coming from the Corporation yards, not from Homebush at all.
859. What do you kill at the Corporation yards? It all comes from the Corporation yards. The calves and pigs all go over the Glebe Island Bridge.
860. No large horned stock? Perhaps once in six months they may get one or two from that direction.
861. *Chairman.*] The big stock comes straight down from the saleyards at Homebush without crossing the Glebe Island Bridge, and only the pigs and calves go across the bridge? Yes.
862. *Mr. Black.*] But the cattle are a source of danger to the people? They are a source of danger in coming from Homebush to Glebe Island.
863. Under certain circumstances there is some danger to the public from the driving of horned cattle through confined streets? Yes.
864. Are the Abattoirs well situated as regards cattle breeders? That is a wide question which I cannot answer.
865. Speaking generally, do you think the position is a good one for them? I think not.
866. For what reason, speaking broadly? As regards the condition of the meat, the driving and the trucking and the knocking about the cattle receive from the time they are driven from the station until they are finally dealt with, more especially with the trucking and driving after they leave the saleyards.
867. Do you think that if Glebe Island were in direct communication with the railway the position would be improved in that respect? No; I have always maintained that the slaughtering should be done in the country.
868. Your objection would apply to any abattoirs, no matter where they might be situated? Yes, for large animals, but not for small ones.
869. Yours is an objection in general, not in particular; you simply say that it is preferable to the growers of meat that the animals should be killed in the country, and deported in a dead state to the city? Yes.
870. That does not apply to the Glebe Island Abattoirs, but simply to the method of conveying meat to market? I will give my reason for holding that opinion. From the time the cattle arrive at the trucks, say, at Bourke, until they are finally dealt with at Glebe Island, they are probably three weeks without ever getting anything to eat, and that is detrimental to the meat in every way.
871. And nothing to drink? They only get water.
872. There is not likely to be much fat on your sirloin under those conditions? No; there is a continual wasting, especially with cattle which are eight or nine months on the road before they get to the railway. It is not like cattle which may be loaded and slaughtered daily.
873. Practically, what you would require is the construction of country slaughter-houses in large centres of meat-producers? Yes.
874. And the conveyance of the meat in refrigerating cars? Yes; the difficulty to be met is at this end.
875. Is there anything in the air or situation of Glebe Island which is prejudicial to the meat industry— which is especially liable to taint or to anything of that sort? No, nothing in that direction.
876. Is it a fact that you are almost free from the visitation of the blowfly there;—that it is hardly known over there? I have not noticed a blowfly there. It is only in certain places that they do.
877. How is it situated in regard to the carcase butchers? It answers them very well. It is handy for them.
878. But dismissing altogether the idea of country slaughtering, would it be an improvement to the Glebe Island Abattoirs if they were directly connected with the railway? To sell the cattle at the Flemington saleyards and then to re-truck them to Glebe Island would not do at all.
879. You mean to have saleyards at Glebe Island? Yes; for the cattle get knocked about too much as it is.

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880. Is there sufficient land available there for the construction of saleyards and new abattoirs? Not in the one piece, unless the arrivals by train were regulated so as to have so many cattle for each sale day.
881. That is to say, if you were to construct saleyards and abattoirs in close proximity, the saleyards would be only capable of accommodating a limited number of animals at any one time? Yes.
882. Do you think it would be advisable to have the live animals and the dead animals brought so near, with all the dust there would be? There is not sufficient space there for the live animals to be in close proximity to the abattoirs. They would have to be away in some of the reclaimed portions. There is not sufficient room for them together.
883. What do you mean by saying that there is not sufficient room for them together? I mean not sufficient room to take the cattle out of the saleyards into the slaughter-houses.
884. At the beginning of your evidence you said that they were not suitable for saleyards, because of the smallness of the area of the ground? That is in the present position. If they were extended to the northward then I do not think it would be sufficient. There are only about 25 acres there.
885. How much of that area would you require for the abattoirs? Ten acres at least.
886. You think that 15 acres would not be sufficient for drafting and saleyards? No.
887. I suppose the present position of the Abattoirs in relation to the bridge is a very unsuitable one;—you find some difficulty from travelling animals over there on account of the density of the traffic and the fact that the bridge is closed from time to time? Yes; it is a great drawback.
888. These delays, I suppose, at times are very dangerous? Yes.
889. Some of the disabilities under which you labour there can be got over, I suppose, by the erection of a wider bridge with a swing-span in the middle of it? I do not know about a wider bridge—there is quite sufficient room for one to pass; but a swing in the centre of the bridge would be a vast improvement.
890. Do you think the present bridge is wide enough? It is quite wide enough for two vehicles.
891. Suppose that two vehicles are going in one direction, and a herd of pigs is coming from the other direction, is it wide enough then? If the stock are regulated to arrive at certain hours, which can be done, instead of at all hours, it is.
892. Given a sufficient area, and the establishment of cattle-saleyards at Glebe Island, with direct railway communication, are you of opinion that Glebe Island is a suitable place for the maintenance of abattoirs? I have always maintained that the country is the place where the cattle should be killed; but putting that view on one side, then Glebe Island would be.
893. Do you know of any place more suitable than Glebe Island? No. If the northern portion were levelled down, and extended so as to deal with White Bay, I think there would be plenty of ground there.
894. What you require, then, are a better bridge, direct railway communication, and the construction of saleyards and new abattoirs on a larger type? Yes. The bridge is on this side of the island, and it is only small stock which would cross the bridge in any case. Last year we had 65,000 pigs and about 15,000 calves across the bridge.
895. You want an improvement on the bridge, not only for the bringing of stock, but for the taking of the meat away, for the convenience of those who carry the meat? Yes.
896. I suppose there is sometimes great delay there? They are delayed when the bridge is opened, because the opening and closing of the swing is a very slow process.
897. I suppose in the meat trade, in summer, time is of some value? Yes.
898. It does not improve the meat to stand there in the sun and dust? No. It has not been delayed to the extent that it would interfere in that way with the meat.
899. Do you think not? No; it has not been half a dozen times in the year when they have been delayed for more than twenty minutes, and that is on account of the water not being deep enough for a vessel heavily laden.
900. *Mr. Hoskins.*] I understood you to say that the Abattoirs are too small—that there is not sufficient room there for the work? No.
901. Would there not be plenty of land if the island were levelled down to extend the Abattoirs? There are over 20 acres of land on the northern portion of the island which have not been utilised, except for residences. If that portion were levelled down, the Abattoirs could be extended.
902. All that land belongs to the Crown? Yes.
903. Have the authorities at the Abattoirs reported to the Government that that land ought to be utilised for extending the Abattoirs, making them more adapted to modern systems—that is, by providing lofty, well-ventilated buildings? It has been reported to the Government, but I cannot remember how long ago it was done.
904. Has the Colonial Architect's Department ever inspected the place, with a view to building new abattoirs there, or to improve the existing Abattoirs, or to extend them? Not at present.
905. *Mr. Clarke.*] You approve of the cattle being killed in the country at various places, in preference to bringing them to the Abattoirs here to be killed? Yes; on account of the knocking about they receive in the trucking and driving.
906. Would that be as convenient to the public of Sydney as to slaughter the cattle on Glebe Island, which is so close at hand, and so easily approachable by those engaged in the butchering business? If it could be established it would be preferable.
907. It has been tried at Orange, Tenterfield, and other places in the Colony, and discontinued;—can you give any reason why it has been discontinued? I think it was discontinued because they are not unanimous in dealing with it at this end.
908. *Mr. Hoskins.*] It does not pay? No. There are no chill-rooms or markets to receive the meat. They are all trying to vie with one another. Instead of being unanimous, and trying to deal with it at this end and bring it in, each man tries to take advantage of the other.
909. Is there any danger or inconvenience to the public in small stock, such as pigs and calves, being taken across the two bridges to the Abattoirs? Only in cases where there may be some stock two or three years old, and it may be only once in four months that any stock of that age would go across the bridge. The larger ones go by the steamers.
910. Between what hours are the cattle from the Homebush sale-yards driven into Glebe Island? From 6 a.m. to 8 a.m. in the winter, and from 5 a.m. to 8 a.m. in summer.
911. Is there any considerable danger to the public in driving the cattle from Homebush, even at those early hours? There is danger to the public, especially on the Iron Cove Bridge.

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912. Do you think it would be advisable to construct a railway from Homebush saleyards to Glebe Island in order to obviate that difficulty and danger to the public? No; I think it would be better to let the cattle come in in the night.
913. If a direct railway were constructed, and the cattle were trucked from Homebush, would it not be less dangerous than to drive them at any time? To re-truck them at Homebush would not do at all. The animals are knocked about sufficiently as it is.
914. The difficulty would then be that they would have to be sold as they are now at Homebush, and then re-trucked to the island? Yes.
915. And that you think it would not be advisable to do? No.
916. In the old times, when the slaughter-house was situated in Sussex-street, the cattle used to be driven down Sussex-street in the middle of the night? I believe so.
917. *Mr. Clarke.*] Would that get over the difficulty? If the cattle were driven in the night-time it would. I remember that in Melbourne we were not allowed to go in before midnight or after 3 a.m., and we never had any trouble.
918. Are there any offensive smells proceeding from the Abattoirs at Glebe Island? No.
919. Has that been obviated of late years? Yes, by abolishing the desiccating works, which originated the nuisance.
920. Have you desiccating works there now? No.
921. How are the blood and offal removed? Large quantities of offal are taken out now by market-gardeners and poultry-farmers, and the refuse is taken out to sea twice a week.
922. The desiccating works have not been a success, I presume? It costs about £5 a ton to manufacture the article, and the last surplus sale we had realised 7s. 9d. a ton.
923. From a financial point of view it has been a failure? Yes.
924. Is that the reason why it was abolished? Yes; as well as on account of the nuisance it created. Since the first day of July last year we have been taking everything to sea, and there has been no complaint made.
925. *Mr. Wright.*] Did I understand you to say in answer to a question by Mr. Black that you disapproved of the Abattoirs existing where they are? Taking a broad view of the question, yes. I believe the meat could be delivered in better condition if it were slaughtered in the country.
926. You think that all meat should be slaughtered nearer to the pastures? Yes.
927. Have you had a long experience in connection with the slaughtering of cattle? From my youth.
928. Consequently you have had a very large experience? Yes.
929. You think that the cattle are deteriorated by the trainage and the knocking about which they receive? By the trucking and knocking about on the railway. We get very many cattle, from Queensland which have never seen a white man from the time they were branded until mustered to be sent to market. These cattle are in a state of fever from the time they are handled until they are finally dealt with. When cattle which have never seen a yard in their lives come to be put in a truck, you can imagine what state of fever they will be in.
930. Under any circumstances the cattle will have to be driven for a considerable distance from the pastures to the various country slaughter-houses? Yes.
931. With careful droving the beasts are not knocked about, and they do not deteriorate? Not so much.
932. In an ordinary season, I suppose, they do not lose much in weight? Not much—just inside.
933. The serious aspect of the question to you is the present knocking about, and the half-starving which the beasts receive from the time they get to the railway? Yes. We have had cattle arrive in such a condition that the moment the knife has been taken from the tail it has dropped. We have had to condemn the carcasses in consequence of the trucking and trampling.
934. Provided that a modern system is adopted, you cannot improve on Glebe Island as a site? We have no better site.
935. You spoke about the non-desirability of providing railway communication from the saleyards to Glebe Island? I referred to the re-trucking of the cattle. They would have more difficulty to get the cattle into the trucks than they had in the first instance.
936. The cattle would have to be liberated from the trucks at Homebush for the purpose of being inspected and sold? Yes.
937. If a railway is constructed from the main line at Homebush to Glebe Island, is there sufficient space on Glebe Island for saleyards? If the northern portion of the island were levelled down to White Bay, I suppose there are 25 acres which have been reclaimed at White Bay.
938. You are aware, I suppose, that the island comprises an area of 34½ acres? About 7 acres are taken up by the Abattoirs, and there is the road between the Abattoirs and the northern portion, which, I suppose, measures about 20 acres. It is very shallow round the foreshores, and the northern portion could all be levelled down to meet White Bay.
939. If the island were properly prepared, do you think it would be a good plan to establish saleyards on the island, and let the cattle come right through to be slaughtered? It might be done, I believe, with advantage.
940. You think it advisable that it should be done? Yes, if all outside slaughter-houses within a certain area were compelled to go there.
941. If all the slaughtering within the metropolitan district were compelled to be done there? Then it would pay.
942. What branch slaughter-houses are there now? I think within a radius of 8 miles there must be seventeen or eighteen suburban slaughter-houses.
943. Have you any idea of the system of inspecting these outside slaughter-houses, or is there any inspection at all? It is very crude, and it is left to the sanitary inspectors or the police.
944. There is a danger, I suppose, of cattle infected with pleuro-pneumonia or cancer being killed in these outside places? I think they are taking advantage of them at present. I may safely say that advantage is taken of the opportunity to take inferior qualities of cattle to outside slaughtering-houses.
945. That may very seriously affect the health of a large number of people? Especially in the suburbs.
946. There would be considerable security to the public health if all the slaughtering were done at one place? Yes.
947. Do you make the inspection at Glebe Island yourself? I have half a dozen sub-inspectors under me.

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948. Each of them, I suppose, is competent enough to distinguish pleuro-pneumonia? Nothing is condemned unless I see it.
949. Do you think that the reason why so comparatively few beasts are condemned there is that diseased cattle are taken to other slaughtering-places? They are drafted at Homebush. You may get a draft at Glebe Island which are all right, and the same quality of cattle will go on elsewhere without any inspection.
950. I gather from your evidence that you think it will be more convenient for the trade, and will better ensure the health of the public, if the slaughtering business is concentrated at Glebe Island under the supervision of yourself and your staff? Decidedly. There are a good many leaving the Abattoirs; they say that they cannot put up with the inspection—that there are outside slaughter-houses with no inspection at all.
951. They cannot put up with the fact that you condemn diseased cattle? Yes; especially since they have got nothing for them.
952. What is done with the diseased cattle? Most of them are taken to the boiling-down places.
953. Are they allowed to be taken away? They are thoroughly scoured with kerosene, and then taken to the boiling-down places.
954. The condemned carcase is put into such a condition that it cannot go into human consumption? Yes.
955. As far as cattle and sheep condemned on the island are concerned, you are satisfied that there is no means by which the carcase butchers can palm them off on to the public? Yes.
956. *Mr. Hassall.*] How many cattle are slaughtered at the Abattoirs in a year? Last year 75,000 horned cattle and 1,159,000 sheep were slaughtered.
957. The whole of these carcasses, or practically the whole of them, are conveyed across in vehicles from the Abattoirs to the city of Sydney? Not all would go across to the city; they would be distributed—going to Balmain, Leichhardt, and out to Marrickville by the Abattoir Road.
958. What percentage of the carcasses would go across to Sydney? Quite 75 per cent.
959. And the whole of that traffic has to cross the present Glebe Island Bridge? Yes.
960. Do you know how many vehicles leave the Abattoirs daily with meat for Sydney? No; I have never taken any record of them.
961. Have you any idea of the approximate number? No; I tried to ascertain yesterday by asking some questions through the telephone. I telephoned to one man and he said, "Upon my word, I cannot tell you. I have two waggons. One has been over the bridge four times this morning, and it may not go over again, and one has been over the bridge once. Perhaps the two waggons will not go over the bridge half as many times to-morrow."
962. Is it all conveyed in waggons and carts? In both.
963. How many carcasses will a waggon carry? From four and a half to five carcasses of cattle, and from fifty to seventy carcasses of sheep.
964. What will a cart carry? A cart will carry up to forty sheep, or about two bodies of cattle; sometimes more if they have only a short distance to go, or if they are in a hurry.
965. I suppose you pass over the bridge pretty constantly? Yes.
966. What is your opinion of its capacity to meet the requirements of the traffic? The only delay is in the opening and closing of the swing, and the rise in the bridge is dangerous.
967. How long is a vehicle delayed when the swing is open? Twenty minutes is a long time. Occasionally very heavily-laden vessels may miss the tide and get stuck in the channel, and keep the bridge open for a number of hours. But since I have been there I do not think that has happened half a dozen times.
968. Generally the delay is about twenty minutes? That is a long time.
969. Does that occur often during the day? No; ten minutes is generally the time.
970. How many times would it happen during the day as a rule? I have known it to happen six or eight times. Twice this morning I was delayed ten minutes.
971. Is not the swing very narrow for the requirements of the traffic? Only one vehicle can pass at a time.
972. If it were made a double road it would lessen the delay materially? Yes.
973. If a more convenient bridge were constructed with a wider roadway, and with a swing double the width of the present one, it would do? If the swing were wider it would meet the requirements, I think. They could go backwards and forwards without delay.
974. Has that traffic increased very much while you have been Superintendent at the island? Yes.
975. Has it increased materially? Yes.
976. Does it still show signs of increasing? Yes.
977. Do you think it is necessary that another bridge should be built which will give greater facilities for the traffic? I think that if the bridge were altered and widened it would be quite sufficient at present.
978. There seems to be a deal of objection to the swing being at the end of the bridge. It is said that a swing in the centre would be far more convenient? A swing similar to that in the Pyrmont Bridge would be. The rise in the bridge is very dangerous.
979. In the event of the roadway over the swing being widened you think it would be necessary to move the swing to the centre of the bridge? It would be far preferable in my opinion.
980. Do you think the Abattoirs will have to be enlarged to carry on operations as time goes on? Yes.
981. You could not possibly carry on if they were all compelled to go there to slaughter? No.
982. You are getting crowded up there now? Yes.
983. Is the number of stock slaughtered increasing yearly? It has up to last year. It has decreased for the last eighteen months.
984. Consequent, practically, on the bad season we had? On the very bad season we had.
985. I suppose the killing in the country has also an effect on it? It affects us a little. Last year there was a decrease of 16,000 head of cattle and 21,000 pigs.
986. But the increase during the years you have been Superintendent has been gradual? Yes.
987. It is considerably more than it was eight or ten years ago? It was considered then a large number to kill—5,000 horned cattle in a month. It has been up to 9,000 since that time. But we have not been up to over 8,000 head during the last twelve months.
988. And the same increase, practically, in sheep? The sheep are increasing.
989. In your opinion it will be necessary, if Glebe Island is retained as a killing depôt, to make further provision for the stock that will have to be slaughtered? It must be made.

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990. You say the ground is available on the northern side of the island? Yes.
991. In the event of increased accommodation being necessary, the land is there to enable larger accommodation to be given? Yes.
992. *Mr. Roberts.*] Do large numbers of cattle arrive over sea from Queensland? There used to be, but there has not been for the last two or three years. The last twelve months' return for wharf rates at 9d. was £19 for the number of stock which arrived by sea for the year.
993. Are they discharged from the steamer direct on to the island? Yes; there is a wharf at the Island.
994. Does the steamer go through the swing in the bridge? No; it unloads the cattle on the northern side of the island. In that very dry season we had in 1886 some yards were erected there for the purpose, and, I think, in eighteen months 15,000 head of cattle arriving by sea were landed there.
995. To what cause do you attribute the falling off in the shipment of cattle from Queensland to Sydney? To the cost.
996. Does the railway successfully compete with the steamer? They drive the cattle.
997. Are they driven down to Homebush or are they driven direct to the island? Most of them arrive at Bourke, whence they are trucked. Others are trucked from Dubbo and Nyngan.
998. Could cattle be landed more cheaply if brought in that way than they could if taken to Brisbane and shipped from that port, or in fact from any other port in Queensland? Yes; from Rockhampton I think it cost them £4 a head, and when the cattle came here, they did not realise as much as £6 a head.
999. What is the cost per head of bringing cattle from Bourke to Sydney? It is so much a truck, and the truck is limited to so many head.
1000. Would it be less than the cost of bringing the cattle by steamer from Rockhampton? I think so.
1001. As a rule the cattle are brought down by whichever is the cheaper way? Yes.
1002. From which district does the greatest number of cattle come to Sydney to be slaughtered? It must be from the northern district.
1003. Do you keep any record of where the cattle come from? No; that is all done by the agents at Homebush.
1004. You think they come from the north on account of its proximity to Queensland? Yes. They are all sheep stations in the west and north-west of this Colony.
- 1004-5. When you say that the cattle chiefly come from the northern district, you include the Queensland cattle? Yes.
1006. You think it would be an improvement if the Abattoirs were not located in Sydney? Yes.
1007. Can you make any suggestion to the Committee as to what steps should be taken to improve the cattle which are supplied to the people of Sydney? Until they do bring the supplies from the country I think there is a place near Belmore (where there is plenty of land available) which could easily be connected with the western sewerage system. It is quiet there. There are no buildings about.
1008. If new abattoirs at that place were connected with the sewer, would it be an improvement upon the existing state of things? Yes.
1009. Is there not a sewer at Glebe Island that you make use of? No; everything goes into the reservoir, from which it is run into the punt twice a week and taken 10 miles out to sea—I mean the refuse of the offal and blood.
1010. Do the waters of the bay suffer in any way from the presence of the Abattoirs? No; for nothing goes into the harbour. For the last six months, even the drainage which used to go into the harbour, goes into the punt.
1011. If the Abattoirs were removed to Belmore, or to that neighbourhood, you would be able to make use of the sewer? Yes; and it would do away with the driving of the cattle through a large population. It is no distance across from Flemington to Belmore.
1012. Could not the difficulty as regards the driving be got over by connecting Glebe Island with the railway system of the Colony? Not if they had to re-truck the cattle at Flemington.
1013. Would they not have to be re-trucked if they went to Belmore? No; they could be driven over at night. It is no distance; I do not think it is more than 3 or 4 miles from Rookwood.
1014. Have you ever made any report to the Government as to the desirability of removing the Abattoirs from Glebe Island? No; but I believe the Board of Health has.
1015. Do you report to the Board of Health on the state of the Abattoirs;—do you communicate with the Board in any way? The Abattoirs are under the control of the Board of Health.
1016. Have you ever reported to the Board that Belmore would be a suitable place for the abattoirs? Yes.
1017. How long ago? Within the last few months.
1018. Have you heard anything from the Board? I did not make an official report; I simply expressed an opinion to that effect in a conversation with the President.
1019. *Mr. Hoskins.*] How long is it since the authorities at Glebe Island discontinued the use of the desiccators? Since the 1st July of last year.
1020. How long had they been in use before they were discontinued? They were closed in 1887, and reopened in the middle of 1889, and continued up to last July.
1021. Why did you discontinue the use of them? Because we could not get any sale for the article. It was a financial failure. The last of our surplus stock brought 7s. 9d. a ton, although it cost from £5 to £6 a ton to manufacture it.
1022. *Mr. Lee.*] That is not the desiccated blood? Blood and offal.
1023. There is a great demand for that on the Richmond? It has been falling off. We could not get any sale for it. It was advertised for sale.
1024. *Mr. Hoskins.*] Do they not use desiccators at the Sydney Meat Preserving Company's establishment at Rookwood? I believe so, but I have not seen them. They are on an improved plan to those we have at Glebe Island.
1025. The desiccators you had at Glebe Island were of the original style, and therefore it was very expensive to work them? Yes.
1026. The modern desiccators produce an article of commerce at a cheaper rate? I have heard that they do.
1027. Is there not a graziers' meat company at Parramatta which is going to use extensive modern desiccators? I have heard so. I have not seen them.

1028. Do the Sydney Meat Preserving Company dispose of the article they produce with their desiccators from blood and offal to market-gardeners or to people in the neighbourhood, or is it exported? I could not say. I suppose a great deal of it is sold locally.

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1029. When the desiccators were in use at Glebe Island great complaints were made by the people in the neighbourhood of the smell arising from them? Yes; it was very offensive.

1030. *Chairman.*] Notwithstanding the fact that there may be slaughtering establishments in the country, and that the meat may come down to Sydney in chilled cars, still for any pigs or calves—in fact, for cattle coming by water—you would still require to slaughter close to Sydney or to send this stock away from the metropolis to slaughter-yards? We would require a small metropolitan slaughter-house.

1031. Notwithstanding the fact that you would have a large chilled meat trade with the country? Yes. All the small animals, especially pigs, would have to be slaughtered in the metropolitan slaughter-house, because they nearly all arrive by steamer from the rivers.

1032. If cattle were landed eventually on Glebe Island, or wharfs were erected there, they would still, under present arrangements, have to go out to Homebush to be sold, and then come back again? Yes; they do at present.

1033. Small stock are sold in Sydney? Yes; in the Corporation yards and at Inglis' yards. Cattle which land by steamer are taken at night to Flemington, and brought back again.

1034. If it is not possible to walk the cattle from the sale-yards to the slaughter-yards, they must be put again into the railway trucks? Yes.

1035. That is an expensive and a troublesome operation? Yes.

1036. Therefore, if it became necessary for the sake of the public health that stock were not permitted to walk from Homebush to the Abattoirs, you would require to build a railway to bring them down. If you have a train to the island, and still sell at Homebush, you have the re-loading? Yes, and it is very detrimental to the cattle.

1037. That seems rather to point to the fact that at some future time, and at no very great distance, when the population does become sufficiently great along the route of travelling, the Abattoirs will be an unsuitable place? They will have either to make sale-yards at the Abattoirs or to establish abattoirs at Belmore.

1038. Should the sale-yards and abattoirs be together, or as close together as possible? They could not be together, because there is not enough land available.

1039. Glebe Island comprises over 34½ acres? In that case they would have to limit the supplies by rail.

1040. Are not 34½ acres sufficient for sale-yards? Not for sale-yards and abattoirs.

1041. Therefore sale-yards and abattoirs cannot be together at Glebe Island? No.

1042. *Mr. Wright.*] What is the size of the sale-yards at Flemington? I do not know.

1043. Do you think they cover 7 acres? I think they must cover more than that area. I have not been up there for some considerable time. Unless the supplies are limited by train, what is sold to-day must be killed before next sale day.

1044. *Chairman.*] In your opinion what is the best thing to-day in regard to the abattoirs and the meat supply of Sydney—you say "kill the cattle in the country, and bring down the meat in refrigerating cars"? Yes.

1045. Are you aware that at one or two places—at Orange and Tenterfield—that operation has been tried? That was some time ago.

1046. Do you know why the operation was not continued? I think the failure was at this end.

1047. Perhaps it was owing to heavy railway rates? There was no place to receive the meat.

1048. *Mr. Lee.*] They are going on in winter? They go on in winter, but in summer the difficulty arises.

1049. *Chairman.*] In your opinion with all the horned stock, a great proportion of the meat supply for Sydney could be killed in the country and brought down in refrigerating cars? That is my opinion. We will never get any good meat until it is done.

1050. In your opinion calves and pigs will still be killed at the Abattoirs? Yes.

1051. Would you bring the sheep to the Abattoirs, or would you kill them in the country, too? I would kill them in the country.

1052. Have you watched the meat trade of the American States? No.

1053. Have you watched the comparative improvement of the dead and live meat trade, as they call it, there? No; I have not seen any reports.

1054. Your opinions are formed from your own experience, not from what has happened in other places? No, just from the quality.

1055. Have you any figures in regard of the gradual growth of the various trades? No.

1056. Have you brought any figures with you? No.

1057. Is there anything else you would like to say? I do not think there is anything more I can say.

Joseph Levy, Carcase Butcher, Glebe Island, sworn, and examined:—

1058. *Chairman.*] You are a carcase butcher, trading in the City of Sydney? Yes.

J. Levy.

1059. *Mr. Hoskins.*] Have you been engaged long in that business? For a great many years. Ever since the slaughter-house has been on Glebe Island I have been butchering there, and my father was butchering there before me.

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1060. Do you receive much live stock from Sydney by way of Glebe Island Bridge? Not of late years. Very little stock comes by that way now.

1061. Only small stock from the sale-yards in Sussex-street? Yes. We do not deal in small stock.

1062. You get all your live stock from Homebush? Yes.

1063. I suppose a good deal of the meat you send to Sydney and the suburbs is taken over the Glebe Island Bridge? All of it has to go over that bridge.

1064. What is the weight of the load you generally send in each van? In the waggons from 35 cwt. to 2 tons.

1065. Have you felt that the bridge has not been very secure to carry loads of that weight? It has not been what it should be, but it has been secure enough to carry that weight so far.

1066. Is there much vibration in the bridge when a load is taken over? Yes.

1067. Are the approaches to the bridge on either side at all cramped, or do they make the bridge inconvenient of access? Yes.

1068.

- J. Levy. 1068. Are the approaches so narrow and awkward as to make access to the bridge very inconvenient? They are both inconvenient and dangerous.
- 30 June, 1897. 1069. Why? If one cart is going this way, and one is going the other way, and you want to go between, there is hardly room. I consider it is dangerous on that ground.
1070. Is there not room for one vehicle to pass another? Yes; but if one is walking at a slow pace, and a person is in a hurry to get by, there is hardly room to pass.
1071. Is any inconvenience experienced from the bridge being too narrow? I think it is too narrow altogether. That is the great fault of it, I think.
1072. Have you observed whether the business at Glebe Island is increasing? I think the business is increasing and the traffic is increasing too.
1073. Is the traffic to the Abattoirs? Yes. There is other traffic, too, which is increasing.
1074. The greater portion of the traffic to the Abattoirs is over the bridge? It is all over the bridge.
1075. In addition to the Glebe Island traffic, there is also the traffic from Balmain, Ryde, and other suburbs? Yes.
1076. That traffic goes over the bridge too? Yes.
1077. Do you consider that, in order to afford proper facilities for the increasing traffic on the Glebe Island Bridge, a wider and more secure bridge should be erected on a modern design? I think it is quite necessary. These suburbs will expand, and there will be more traffic and more population. I think the present bridge is not fit for the traffic, even at the present time.
1078. Do you know whether there is frequently or otherwise a block in the traffic, occasioned by the approaches being inconvenient and the bridge being narrow? Yes. I have had to wait a quarter of an hour and sometimes half an hour when the swing was being turned. Perhaps a vessel will get jammed in the opening. The swing may have done for twenty or thirty years ago, but for the present time I think it is quite out of place.
1079. The block in the traffic has been occasioned by the swing being opened to let vessels go through? Yes; and vessels have been jammed in the opening. I have known the swing to be jammed for three or four hours—half a day at one time, and we had to go right round. It stopped the traffic altogether.
1080. Do you think that the traffic is stopped, not only because the swing is open, but also because it is not in the best place? I think it would be much better if it were in the middle of the bridge.
1081. Can you say of your own knowledge, or as the result of your observation, whether the number of vessels going through the bridge has been increasing during the last five years? Most undoubtedly they have increased.
1082. They are increasing now? Yes.
1083. Are they increasing in number and in size? Yes.
1084. Are there many places up that bay where a good many vessels unload and load? The timber vessels do the greatest trade in the top of the bay. Just lately a new timber merchant has commenced business on the corner, and they appear to be getting a lot of timber in there.
1085. Are not vessels discharging broken stone in that bay for municipal bodies? That has been going on for years.
1086. And it is increasing? Yes.
1087. Are there not coal yards up there, too? Yes.
1088. Are there any fresh factories in the neighbourhood at which a number of persons is employed, and which vessels frequent? Yes; there are meat-preserving factories up that way, and the glass factory. They have to take up their coal.
1089. What meat-preserving factories do you refer to? Mr. Barnes'; and I think a new company is about to be started, but I cannot tell you the names of the promoters.
1090. They get meat from Glebe Island? From Glebe Island, Riverstone, and the Government market. They get their meat in the cheapest market.
1091. Considering the large expenditure which would have to be incurred to erect a new bridge, do you think that in the present circumstances of the Colony the Government would be justified in erecting a bridge to Glebe Island with a view to afford additional facilities to the trade in the locality? The suburbs are growing, and I think Glebe Island is sure to grow with the suburbs. My idea is that it is necessary to have a more modern bridge, and it should be a great deal wider than the present bridge; it should be at least as wide as the Pyrmont Bridge.
1092. And a great deal wider in the opening? Yes.
1093. Are the present Abattoirs of sufficient capacity to do an enlarged trade if it should arise? If more abattoirs were erected.
1094. The existing Abattoirs are not sufficient to do any large extent of trade? They are over-taxed at times in a good season. Of course, the present season is bad, and the stuff is not coming in so freely as it does in a good season.
1095. The Government owns 30 acres of land on the island to the north of the Abattoirs;—do you think it will be advisable, if the Abattoirs are retained on the island, to extend them by taking in some of that area? I think it would be a very advisable plan.
1096. Are the present slaughter-houses at Glebe Island of a sufficiently commodious and modern type—are the buildings sufficiently lofty and ventilated to carry on the business in a healthy and modern way? The beef slaughter-houses are, but the mutton slaughter-houses are not. I am in the beef line myself. From what I can see, they are very much cramped at the mutton slaughter-houses, and it is sure to increase in a good season.
1097. The evidence goes to show that the Abattoirs are not built on the most enlightened and modern principle, that the buildings are too low, that the ventilation is not sufficient, and that the drainage is not good enough? I do not think you could improve much upon the beef slaughter-houses, but the mutton slaughter-houses are not fit for any man to work in or do business in.
1098. You think that before a largely extended business could take place at the Abattoirs, it would be necessary to make considerable improvements in the buildings used for the slaughter of sheep? Yes; a very great improvement could be made.
1099. Do you know whether the carcase butchers have asked the Government for improved accommodation for slaughtering sheep? I believe they have made applications to the Board of Health, but the Board say that they have no money—I do not know whether it is a fact or not. The answer we always get is, "We have no money"; but I do not think the Government is in that state. 1100.

1100. Have you any suggestions to offer to improve the Abattoirs, or to increase the facilities and advantages for carrying on slaughtering operations, or to improve the road, the approaches to the bridge, and the bridge itself;—will you give the Committee your views on the subject? I am a butcher, not an architect. J. Levy.
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1101. I should like to hear your views on the subject, because I know you have for many years been a large carcass butcher? We have been butchering for fifty years in this country. Since 1813 my father was a butcher, and I came here, a little boy, with him. I think, as regards the mutton slaughter-houses, there could be a great improvement made. They ought to have been done away with years ago, and new ones put up. There are twelve or fourteen men working in them in the summer-time. I do not think the roof is above 12 feet high. It is a terrible thing for men to work there in hot weather, without a breath of air, under a slate roof. These slaughter-houses are not half big enough.

1102. And not half lofty enough? Not half lofty enough. There is no room for men to move about in them.

1103. Does not the slaughtering of cattle in adequate places, where so many men are employed in hot weather, tend to cause the meat to become putrid more quickly than it otherwise would do? Yes.

1104. Therefore the consumers of mutton may suffer, as well as those engaged in killing the sheep? Most undoubtedly. I do not think you could improve much on the beef slaughter-houses. If they were only kept in repair they would do for a long time yet.

1105. Are the gradients on the approach to the Abattoirs favourable, and do they afford sufficient room for vehicles wishing to have access to the buildings? No; it is very narrow, and when there is any rush of business you cannot stir in the lane.

1106. Have your people never reported that to the authorities? Yes. There is one set here and another set there, and the only way it could be done would be by pulling one lot down and making the buildings wider. The mutton slaughter-houses would have to come down. They could easily reclaim the land at the back and at very little expense. It is only a matter of filling in. The stuff they pulled out of the old mutton buildings could be utilised again.

1107. Have you ever contemplated the probability of the Glebe Island Abattoirs being done away with, and public abattoirs being erected in some other place? Yes.

1108. What is your view? I do not think you could improve on the site. I think that if you were to travel over every country in the world you could not improve on that site. It would make very little difference to me. Wherever they went I would have to go with them.

1109. Does not the presence of public Abattoirs on Glebe Island afford facilities for small butchers to go, without losing much time, and purchase the meat they require? Certainly. I think it is much better for the whole of the community, in this way: that if you kill at Glebe Island you always get a nice blow of air—no matter whether it is summer or winter, you will catch any breeze that is going. I think meat will keep longer there; but if it is killed 8 or 10 miles away in the country, it will not keep half as long as it does at the Abattoirs. Anything that is frozen never eats as well—I do not care whether it is fish or anything else—as it does in a natural state.

1110. Does not the presence of the Abattoirs so near to Sydney not only afford great facilities to small butchers to purchase what they require, and to inspect it too before they purchase it, which they could not do if the slaughtering were done a long distance from the city, but also greater facilities for the Board of Health to see that only healthy stock are killed? Yes; that is the only place where there is any inspection. At the outside places there is no inspection; they can kill what they like and put any sort of diseased meat on the market, and you have no way to detect them unless you keep a man for that purpose. I cannot kill one animal unless there is an inspection, and I do not want to kill one unless there is.

1111. *Mr. Hassall.*] Even in the country they would dodge the inspector if one were appointed? Yes; and they do it, from what I have been told.

1112. *Mr. Hoskins.*] Do you know, or have you reason to believe, that there is slaughtering carried on in private establishments within 10 miles of Sydney? Yes.

1113. Do you know whether there is any proper inspection by an officer of the Board of Health, or by competent persons, to see whether the stock is in a healthy condition? Yes; they have sent an inspector there, but he has not stopped there more than an hour or two. I know a certain party, whose name I cannot mention, to whose place the Board of Health sent an inspector, and he cut two or three of these bullocks down while they were killing, and the inspector said, "Kill away." "No fear," he replied, "we are not going to kill when you are here, but when you are gone we will kill them. You would cut our cattle down—you would condemn them." That is a nice state of affairs to exist.

1114. Is much dead meat sent from the country to Sydney and sold here? Any amount of it. There were 120 bodies down at the markets on Monday.

1115. *Mr. Clarke.*] From Riverstone? No.

1116. *Mr. Hoskins.*] Is the trade in country-killed meat, which is sent to Sydney, increasing in volume? The season is so bad that it is not increasing; but last year it increased very much. It is all according to the season. If they have a good season in the country, a lot of meat will come to the market. If it is a bad season, we get all the best of the cattle here, for the simple reason that they get a better price for it here.

1117. Which is better for the people—to get the chilled-meat or to get the live cattle? Which would you sooner eat yourself—an apple which was frozen, or an apple which was just plucked from the tree.

1118. I am talking of cattle, not apples? That is the best way I can answer your question. I think the best way to get meat is to get it as fresh as you possibly can, to let it set for four or five hours, to keep it in your shop to-night and serve it out to-morrow.

1119. And to have the beast killed here? Yes; because you get all the nutriment in it. The cold kills the nutriment in the meat.

1120. Seeing that Mr. Mort and others have established slaughtering-places in the country and chilling places too, how do you account for the fact that that business has not increased, but on the contrary that a great portion of the meat which is consumed in Sydney is sent down alive and killed here? Because it is much better. If it is frozen, you have not got the nutriment in the article which you will get if the animal is killed fresh.

1121. Do you think that the dead-meat trade from the country to Sydney will increase, or will the present practice of killing the animals at Glebe Island be continued? I think you will have local abattoirs in any

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any case, no matter where they fetch the meat from. People will send their small stock to the central market.

1122. What about the large stock? Homebush, or any local market, rules the market.

1123. Do not the stock greatly deteriorate through being in the trucks so many hours without food and water? It cannot do any good, but still it is better to do that than to starve them along the road.

1124. Is it better to do that than to kill the cattle in the country? Yes. Most people do not care about chilled meat. It is all right in England, where meat is 9d. and 1s. a pound. If they can get our meat for a third of the price, they are sure to go for our meat. You get a good bullock from the country and let him stand for a few days in a paddock, and you will find that the meat is just as good as if the beef had been killed in the country. It is much better to get an article without being frozen than to have it frozen.

1125. You believe there is every probability of the slaughtering of stock at Glebe Island increasing? Yes.

1126. And that if the business increases the facilities for reaching Glebe Island should be improved, including the erection of a better bridge? I think so. As our population increases our trade must increase.

1127. *Mr. Clarke.*] You stated that the buildings at Glebe Island, where the sheep are killed, are not fit for the purpose;—does that apply to the killing of calves, of which a large number are slaughtered? They are killed in these slaughter-houses too. They are not fit to kill either pigs or sheep in.

1128. A large number of pigs are killed for the purpose of bacon curing? Yes, a great number.

1129. There are several large bacon-curing establishments about Balmain? Yes; Barnes', McLeau's, and Murphy's.

1130. All the pigs are killed at Glebe Island before being sent to the bacon-curing establishments? Yes.

1131. You think that some alterations should be made so as to give greater facilities, and have a better mode for killing pigs as well as sheep? Yes.

1132. *Mr. Fegan.*] Are you inconvenienced in your business by the state of the Glebe Island Bridge? At times it gets blocked, and we have to wait there a long time. When the swing has been turned and a vessel has been going through, I have seen the whole of the bridge and half-way up the hill taken up with vehicles, and all that traffic has to be cleared away before any vehicles can go on the bridge from the other side.

1133. Is there any regulation to prevent that congestion? I do not see how you can prevent it. The two men employed on the swing are very good and attentive to their duty.

1134. They work the swing as expeditiously as possible? They do.

1135. One of the chief complaints of the carcase butchers is that the bridge is too narrow? Yes.

1136. You cannot get the quantity in the load which you would like to take on account of the condition of the bridge? Certainly not.

1137. If the bridge were perfectly safe you could take greater loads on the waggons? Yes, if it were level.

1138. It must mean a great loss of time to you? Yes.

1139. In your opinion, is there a better site than the present one to connect the two places? I do not see how you could find a better site.

1140. Do you think it is the best site which could be found? I think it is as good as any other way. I do not see any other way, unless you cut right through the hill to Harris-street.

1141. Are you well acquainted with the land surrounding the small township of Belmore? Yes.

1142. Would that be a good site for slaughter-houses? I think it would be a very bad one, because it would breed typhoid fever and every other fever. There is not sufficient water there, and it is too much closed in with the hills.

1143. You could not consider that position a favourable one for the erection of new slaughter-houses? I do not think so.

1144. Do you think that, with the erection of a new bridge, the Abattoirs at Glebe Island would meet all the requirements of the traffic for many years to come? I think so.

1145. You think the time has come when the present bridge should be replaced with a new and better one? Certainly.

1146. *Mr. Hassall.*] Do you think it would be advisable to remove the mutton slaughter-houses to the other side of the road? It would be advisable to shift them from where they are for the sake of the business and the men. Perhaps Mr. Elliott could give you more information about them than I can, because he does the business. From what I can see of them, I think they are very much cramped there.

1147. On the northern side of the road, towards White Bay, there is any amount of land which might be utilised for that purpose? It would have to be cut away and levelled.

1148. Would anything of that kind have to be done on the present site? Yes.

1149. It must be done to a certain extent if you want to increase the accommodation for slaughtering sheep? Yes. I think it would be a good thing to kill the sheep on the other side of the road. It would give us more room, and we could get more air for the beef.

1150. You would get all the air which is taken up with the mutton slaughtering-houses—and the air is to a certain extent vitiated; and you would have more room to carry on your beef operations? Yes.

1151. The site on the northern side would be as good as the present site, and the appliances for conveying the offal by barge would be equally as good? Yes. If they were to shift the mutton slaughter-houses to the other side they could enlarge the beef slaughter-houses if they wished to do so. They could carry them further forward, at very little expense, by knocking out the front and shifting the baulks further on.

1152. You are practically jammed in between the beef-killing houses and the mutton-killing houses? Yes.

1153. You think it is absolutely necessary that new slaughter-houses should be provided for the sheep, the present ones being too small, too inconvenient, and too crowded, and the air not being so pure? Yes.

1154. You have seen that trade grow up from your boyhood? Yes.

1155. Has the traffic along the bridge increased very materially during the last ten years? I think it must have been very nearly doubled during the last ten or twelve years.

1156. You know that the western suburbs have increased very largely in population, and that the great bulk of that traffic has to go across Glebe Island Bridge to get to Sydney? There is no other way to get to Sydney. None go round by Petersham now. They all go over the bridges from the northern suburbs.

1157. You think the time has arrived when the Government would be justified in erecting a larger and more convenient bridge to carry on the traffic? Yes. I think they ought to build a bridge to carry a tramway. I believe we shall see the time when a tramway will go down Harris-street over to Balmain.

1158. You think it is advisable to build a bridge which will carry a tramway if future requirements should necessitate the construction of a tramway in that direction? Yes. J. Levy.
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1159. You do not think that Glebe Island can be excelled as a killing depôt? I do not think it can be excelled in any part of the world.
1160. Is it a fact that the flies are never troublesome at the Abattoirs? We never see a fly except in summer-time, and no blowflies. I have worked in the Abattoirs at Melbourne, and I never saw such an unsightly place in my life. Three years ago I went all through their Abattoirs at Flemington. It is a terrible place. It is more like a gaol than an abattoir; everything is closed in. I do not know how they can keep the meat any time; they cannot keep it any time in summer.
1161. Do you think that at any time the improvement of the trade would warrant the extension of the railway from the sale-yards at Homebush to Glebe Island, so as to bring the cattle by rail instead of by road? I do not think they could ever improve that; the two truckings would never do. If you had to retruck the cattle, they would knock themselves about ten times more than they had done in coming to Homebush.
1162. You think that once you take them out of the trucks you had better leave them out? Yes; I would sooner travel a bullock 20 miles than truck him again.
1163. Do you think that some better arrangement might be made to bring the cattle from Homebush to Glebe Island in the middle of the night? Yes, that might be done.
1164. You think a regulation might be made that the cattle should be driven between 11 p.m. and 4 a.m., so as to be out of the way of the general traffic? Yes; between 10 p.m. and 6 a.m., because there are not many people out after 10 p.m., and if there are I think they ought not to be.
1165. The traffic is pretty thin after 10 p.m.? Yes.

THURSDAY, 1 JULY, 1897.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.
The Hon. JAMES HOSKINS.
The Hon. CHARLES JAMES ROBERTS, C.M.G.
The Hon. WILLIAM JOSEPH TRICKETT.
The Hon. DANIEL O'CONNOR.
HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.
JOHN LIONEL FEGAN, Esq.
THOMAS HENRY HASSALL, Esq.
GEORGE BLACK, Esq.
FRANCIS AUGUSTUS WRIGHT, Esq.
FRANK FARNELL, Esq.

The Committee further considered the expediency of constructing a New Bridge at Glebe Island.

John Ashburton Thompson, M.D., President, Board of Health, sworn, and examined:—

1166. *Chairman.*] What official position do you hold? I am Chief Medical Officer of the Government, and President of the Board of Health.

1167. *Mr. Hoskins.*] You are acquainted with the nature of this inquiry? Not exactly.

1168. The Committee has been appointed to inquire into the propriety of building a new bridge from Sydney to Glebe Island; it is reported, and the evidence shows, that the bridge is in a bad state of repair, and that it is an unsuitable structure; I presume you have come here to give evidence, not in respect to the bridge, but in respect to the Abattoirs? Yes.

1169. Have you any statement which you would like to make? The sole thing I have to say is that if any alteration is made in the road beyond the bridge—that is, on Glebe Island—it might and should be carried round, either on one side or the other—either to the left or to the right round the nob, and not be continued as at present it is, through the abattoir buildings, dividing them and raising dust, and attracting people who have no business there, and so forth.

1170. Are you of opinion that the Abattoirs at Glebe Island ought to be enlarged—or, in point of fact, do you think that they ought to be modernised; a carcase butcher has stated before the Committee that the mutton slaughter-houses are very defective and very small; that the roofs of these buildings are very low; and that the perspiring of the men in killing sheep in a building inadequately ventilated and incommodious in its character, tends to the speedy putridity of the meat? It is quite true that all the buildings at Glebe Island are now out of repair, that they were originally ill-planned, and that they are no longer large enough to do all the business that has to be done for the city. I gave evidence, in August last I think, before a Committee of the Legislative Assembly on this subject, and I then went into the matter rather fully. My fixed opinion is that these Abattoirs must be reconstructed, and the only question is, whether they should be reconstructed where they stand at present, or whether they shall be removed.

1171. What is your opinion as to the ineligibility of that site for a slaughter-house, or do you think that some other place should be selected? I think that there are many objections to the present site, and that a fresh place should be selected. As far as I see at present, the governing condition is the situation of the sale-yard. The Abattoirs and the sale-yards are concerned in one business, and should be near to each other.

1172. What are your objections to the present site of the Abattoirs? In the first place it is in a neighbourhood which now is populous; and it is too small, unless one could look forward to cutting down the island. That is a matter which has already been reported upon for another purpose, I understand, and would be an exceedingly expensive business. The main objection, perhaps, is the distance of the Abattoirs from the sale-yards, and from the resting-paddocks. Cattle which are brought in from the country should be deposited in the sale-yards, and after they are sold they should not have any distance to travel. They should go direct to the resting-paddocks or feeding-paddocks,—they need not be pasturages—and there stay until they can be walked quite a short distance to the place where they are to be killed as soon as they are cooled down and recovered.

1173. You think the Abattoirs should be a longer distance from Sydney than they are at present? I think it very desirable that the abattoirs should not be in the immediate neighbourhood of densely populated districts. I do not know, apart from every other consideration, that Glebe Island could not be

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adapted to hold the enlarged abattoirs, and that if that were done there would be no particularly sanitary objection to it—that is, regarding it as a site for the abattoirs alone; but, considering that the animals come in from the country, and are first sold in the sale-yards, it seems to me a round-about way and troublesome to have the abattoirs at a distance.

1174. Have you looked at the matter in this light: that, as the present abattoirs are so near to Sydney, small butchers can go there in the morning and purchase any quantity of meat, however small, they like, and that the tendency of this opportunity for small butchers to purchase from the carcase butchers at the slaughter-house is to allow men of moderate capital to engage in business; but that, if the abattoirs were fixed at a longer distance—say, 7 or 8 miles from Sydney—it would have a tendency to throw the whole of the trade into the hands of large capitalists, and the result would be that small butchers would not go out every day to get meat, and that might have a tendency to increase the price of meat to the consumer? I do not think there is anything at all in that.

1175. Will you tell me why? In the first place, there is round Sydney a very large number of people in a small way of business. They usually have their own slaughter-houses, and that is a very undesirable thing, because it renders inspection of the meat impossible. These small people, at all events, do not find it necessary at present to go to the Abattoirs to do their work, but they do do it actually in what may be called the neighbourhood of the sale-yards. The largest portion by far of these small slaughter-houses is scattered about Canterbury, Enfield, and that region. If the Abattoirs were moved a little distance out of town, then it appears to me it would be necessary to have some cooling accommodation at the Abattoirs to which butchers who live on the other side from Sydney, for example—say in the neighbourhood of the Abattoirs—may resort and get their supply of meat perhaps every day if they choose; and then there must be another freezing depôt here in Sydney, to which butchers on this side, and the butchers who belong to Sydney, may resort. I do not see any difficulty about that. I think the cooling of meat for our consumption should begin to become the custom of the trade, so that we might get our meat after it has been hanging for three or four days, or a week, which would be a great improvement.

1176. Do you know that to a certain extent that has been tried—that the Dibbs Government established freezing works at Pymont, with a view to encourage the bringing down of meat from country slaughter-houses, and selling it to the butchers, who used to go over there and purchase the meat; but, nevertheless, that did not tend to prevent the slaughtering of stock in a large way at Glebe Island? No. Can you tell me why it failed.

1177. I do not know; but I am inclined to think that it is because the carcase butchers have the command of such a large amount of capital that they can go into the country and buy large quantities of stock, and because they have so many retail butchers under their thumb? That is almost what I thought. There are so many questions connected with this, one does not quite know. There was no objection to the chilling, I apprehend. Meat can be chilled. In America, you do not have fresh meat. You always get your meat after it has been hung a few days in a chilling room. I do not see why we should not do that here. My interest in moving the Abattoirs, and seeing abattoirs established by some municipality, consists in this—that as soon as that is done, under the law the Board of Health will have power to proclaim an area around that abattoir within which there shall not be any private slaughter-houses; and, consequently, we shall by a simple step be able to bring the whole of the meat slaughtered in the metropolitan district under inspection.

1178. I suppose you are aware that there is a very strict regulation in force against the slaughtering of meat in private establishments about Sydney and suburbs—I mean in respect to inspection and drainage? Yes.

1179. One of your objections, I gather, to the present situation of the slaughter-house at Glebe Island is the increasing population in the neighbourhood? Yes; it is already very big.

1180. I suppose you have seen public abattoirs in Europe? Yes.

1181. You are aware that round the public abattoirs in Paris there is a large, densely populated neighbourhood? Yes.

1182. And that it is pretty densely populated around Islington in London? Quite so. I said just now that, regarding the single question of abattoirs, I do not know that the Abattoirs might not be reconstructed and continued at Glebe Island without any inconvenience or harm happening. I think it might. But I always have in view the other items of the business. I was thinking very much of sale-yards, and the need for resting the cattle which come in by rail from a long journey which, as a rule, lasts thirty-six hours, and sometimes much longer.

1183. May I take it that you have no great objection to Glebe Island as a site for a slaughter-house, always providing that every provision is made to prevent any injury to the public health, and to ensure cleanliness in the buildings? Yes.

1184. You have inspected the slaughter-houses at Glebe Island? Yes; I go there once a week at least.

1185. Do not you think that some of the slaughter-houses, especially the mutton slaughter-houses, are very defective and badly ventilated, and require to be replaced with more lofty buildings built on modern principles, and better suited for the purpose? Yes. I have, within the past three or four months, caused a considerable sum to be spent in improving the ventilation. Something has been done. It is enough for the cold weather, but when the weather gets warmer, it will be necessary to do something more. I may say, at once, that the whole of these buildings, in my opinion, are unsuited for the purpose. They cannot be improved; they must be pulled down and reconstructed.

1186. You are aware that the Government have about 30 acres of land on the island? I believe so.

1187. There would be no difficulty in the way of clearing the land with a view to extending the Abattoirs? I believe not.

1188. It was stated by a witness yesterday that nearly all the refuse, instead of being treated with the desiccators, is towed out to sea at great expense and dropped into the water, and the inspector said that the reason why the use of the desiccators was discontinued was because the public would not give a payable price for the manure;—has it not come under your knowledge that the use of desiccators is very largely availed of in abattoirs and meat-chilling places, and that they are usually attended with the prevention of any nuisance in the neighbourhood? Yes. I have myself insisted that some chilling works in the country should provide desiccating apparatus for that very reason; I considered that they could not keep their places free from nuisance unless they did. The reason given by the inspector is good, as far as it goes; that was the outcome. It cost us £7 a ton to make the manure, for which we could

could get only £5 a ton in the market. The reason was partly—but that is quite a subsidiary reason—that the machinery had become worn out and was obsolete. The real reason was the bad construction of the abattoir buildings, which results in the impossibility of catching the blood separate from the washing-down waters. The consequence was that there was delivered a diluted liquid at the desiccating works, all of which had to be evaporated. The quality of the residue was not what it would have been had it been pure blood, and the cost of evaporating made the difference of £2 a ton, which we could not get over.

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1189. Then the apparatus was old, worn out, and of bad design? Yes; there are better designs now. It may have been the best design when it was bought, but it is worn out. We decided that it was better to shut down the desiccating works than to spend money in the purchase of new machinery when we should have still to do all the expensive evaporation; we should never have been able to make it pay.

1190. Does not the meat preserving company at Auburn use desiccators of a modern type? Yes.

1191. Does not their use tend to prevent any nuisance arising in the neighbourhood from the works? Yes, of course.

1192. The reason why the desiccators at Glebe Island were discontinued was because the machines were old and out of date, and could not be properly utilised;—do not you think that if new slaughter-houses were erected, and more suitable desiccators were used—such as are used in Vienna, Berlin, and other large cities on the Continent of Europe—the whole of the offal and refuse might be so utilised that there might be a demand for the article, if not here, in Mauritius and other places where sugar is grown, and where they require good manure for their land; and profitable prices might be obtained? Certainly. The essential difficulty at the Abattoirs as they stand is in the construction, not of the desiccating works themselves, but of the slaughter-house, which is such that they cannot separate the blood, and get the blood comparatively pure to the desiccator, but you must have it mixed with an immense quantity of water. These slaughter-houses must be reconstructed before we can profitably manufacture manure as other big works manufacture it at the present time.

1193. Looking to the fact that if any other site were selected for public abattoirs within a reasonable distance of Sydney, the Government would have to purchase land as well as to erect the buildings, and that the conformation of the country would not offer such facilities for drainage as Glebe Island does; and looking further to the fact that that island belongs to the Government,—do not you think, all things considered, that if improved abattoir buildings of a modern stamp and better adapted to the purpose than the present buildings were to be erected, worse places could be found near the City of Sydney than Glebe Island? Well, that seems to me to be mainly a business question. I do not know whether my opinion is worth very much on that point. All I should like to say is, I do not quite see how you are to slaughter your meat under the best conditions as long as the slaughter-house is at a distance from the place at which the railway deposits the cattle when they arrive from the country.

1194. I presume you are of opinion, as you frequently visit Glebe Island, that if the slaughtering of stock be continued there, the bridge road and the bridge are not what they ought to be—that a new bridge, or a very great alteration of the present bridge, is required, and that the approach to the bridge should be widened? There is no doubt of that. I have here two little plans which I caused our consulting engineer to draw, which shows how the road might run either on the northerly side of the island or on the southerly side, so that it would no longer run through the abattoir itself.

1195. You are aware that the approach to the Abattoirs is also used by vehicles and persons going to Balmain and Ryde? That is my objection to the present road.

1196. *Chairman.*] Will you hand in the sketches to which you referred? I beg to hand them in. I may say there is a descriptive note on each plan.

1197. *Mr. Wright.*] Did I understand you to tell Mr. Hoskins that there is no offensive smell from the Sydney Meat Company's works? I did not say so.

1198. You are aware that a very serious nuisance is caused by those works? I am. I think Mr. Hoskins' question was whether the desiccating plant helped to prevent a nuisance.

1199. There is a desiccating plant at those works now? Yes.

1200. What is your experience of the effect of that on the surrounding atmosphere? None. The desiccating plant affords them a way of getting rid of wastes without nuisance, which would be offensive if they were kept. It is good as far as it goes.

1201. But it only partially cures the evil? Partly, certainly.

1202. The treatment of the refuse at the works on the Parramatta River still causes a very serious nuisance? Yes; but that is the soup from the digestors.

1203. They are not in a position to evaporate that? They will be in some weeks.

1204. The same difficulty which occurs with their soup has caused a large amount of fluid—blood and water from the slaughter-house—to get mixed? I think not. The liquid which causes the nuisance you are acquainted with is the result of boiling down the carcasses, and has nothing to do with the slaughtering, and nothing to do with the present question as to the Abattoirs. The desiccating plant there, as elsewhere, is used to deal with the blood and the guts, and it enables them to make something profitable out of these materials. It also enables them to put them into a condition in which they will not putrefy.

1205. Is there any method known to modern science by which fresh offal—the blood and the contents of the parts, and so forth—can be absolutely evaporated without causing any serious smell? Yes; by the desiccating plants, of which there are many different patterns.

1206. It is competent to do that without creating any nuisance? Yes. I have insisted on certain country freezing works putting in such an apparatus, because I perceived that without it they could not dispose of that class of waste without creating a nuisance. They had no means of getting rid of it. They might bury it, but they never would. I insisted on their manufacturing the refuse. They lose no money—in fact, they get some profit—and they also get rid of the nuisance.

1207. What was the value of the manure which you did produce at Glebe Island with the desiccators? The market price for that class of fertiliser was £5 a ton, and it was worth that price.

1208. The inspector has stated that a large quantity which was left there had to be sold for 7s. 9d. a ton? It was a forced sale. We wanted to get rid of it.

1209. You had to get rid of accumulated stocks? It was an accumulated stock, and was not worth the same money as it was when it was turned out.

1210. I suppose the exposure to the air had deteriorated the manure? Quite so.

1211.

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1211. Does it not strike you that £7 a ton is a very big price to pay for that material? I am only speaking from my general knowledge when I say that £5 a ton is the average market price for that class of stuff. Nobody ever did get £7 a ton for it.
1212. I understood you to say that it cost that sum to make the article? Yes; on account of the quantity of water we had to evaporate in order to get a dry residue. You may take it that it was the amount of water alone. Had it been a more question of machinery we should have replaced it like other people do, but the question of the water was an insuperable one.
1213. Would there be no way by which the whole of the water might be filtered off from the rest of the stuff? The proportion of water to blood is so large that it would all go through the filter together.
1214. Blood and all? Yes; because the water is in very large proportion.
1215. I suppose the principal fertiliser is the blood? Yes.
1216. And if that passed away the product would be of no value at all? Quite so.
1217. You referred to the necessity of deviating the road over Glebe Island, and you stated that the works were now divided by the road;—is there any slaughtering going on on the northern side of the road? Some mutton slaughter-houses are located there. We have used the building on the northern side for that purpose.
1218. You think that the very large traffic over the road causes impurities to fly about over the meat? Yes.
1219. You think it would be better if the whole of the slaughter-houses were concentrated, and a road could be made quite distinct from the Abattoirs? It would be much better.
1220. Would you prefer, if the traffic road is taken round by the southern side, that the island should be cut down so as to decrease the grade of the road? You would get a much better grade.
1221. *Mr. Fegan.*] You are well acquainted with the township of Belmore? Fairly well. There are not many houses out there.
1222. It has been suggested that Belmore would make a very good site for public abattoirs;—would you mind expressing your opinion on that point? I think suitable land might be found there—probably not very far from the end of the Marrickville-Burwood Road railway.
1223. It has also been pointed out that it is very strange that there is an entire scarcity of blowflies on Glebe Island and of smaller flies? I think there are very few.
1224. I understand that other abattoirs are infested with these flies? I think they are.
1225. That speaks very well for the present site of Glebe Island? Yes. Supposing it to be correct—I think, now that you remind me, it is so. It may be because we keep the island clean.
1226. At other abattoirs which are well supervised, they cannot keep these things away, showing at once that Glebe Island must be a very open place, to which plenty of air can get? Yes.
1227. You stated that, at some expense, Glebe Island could be made very suitable for abattoirs;—what would it cost approximately to do that? I do not know what it might cost. There would be some cutting down. The existing buildings are useless and would have to be pulled down. They are wrongly designed; they could not be converted. You would have to build new buildings from the ground.
1228. As the access to Glebe Island gets more populous, it would be a question whether cattle will be permitted to be driven to the Abattoirs? That is, of course, an important point, and one I have in mind when I recommend, as I have recommended, that the Abattoirs should be adjoining the sale-yards; and then there would not be any more driving of the cattle through the streets.
1229. Do you think there is a sufficient supply of water at Belmore or Flemington for the purpose? It is near to the pipe-line, and therefore there is no difficulty about the water.
1230. You use a great quantity of salt water at present to do your sluicing? We do, because it is handy, and in order to reduce the fresh-water bill.
1231. It is a consideration to the men employed in the trade to save as much as they possibly can? We pay the water bill.
1232. It would be impossible to get any water, except from the pipe-line at Flemington or Belmore? Yes.
1233. But taking all the circumstances into consideration, you think it would be much better to remove the public abattoirs from the present site? That is my opinion; but I am very well aware that there are a great many business considerations involved in that question with which I am not very well acquainted.
1234. Do you think the consideration which Mr. Hoskins pointed out as regards small butchers, is one which ought to be weighed? No; I do not think there is anything in that. That is a point I know something about.
1235. So that if the slaughter-houses were to be removed from Glebe Island, the Committee would not need to consider the question of building such a huge structure, or making such conveniences as they otherwise would if the abattoirs were to be continued at the island? You would have to build new buildings from the ground, whether you moved or whether you stopped. There would be no other proper way of doing it.
1236. *Mr. Hassall.*] You do not disapprove of the site at Glebe Island as being prejudicial to the public health in any way? No, not on that ground.
1237. The situation is pretty good for a trade of that kind to be carried on? Yes.
1238. That is, with the least nuisance to those persons who live in the vicinity of the Abattoirs? Yes.
1239. Do not you think that it would be difficult to get another place with so many natural advantages as this site possesses for the purpose of slaughtering stock? I do not see any difficulty on that score about a site, either in the neighbourhood of Belmore or in the neighbourhood of the sale-yards.
1240. As far as the trade itself is concerned, there are many things to be considered in reference to the removal of the Abattoirs? I admit that. I think it cuts both ways. Really what is wanted is a decent place to do the slaughtering, and then to get all the slaughtering done at the place, so that we can have reasonably complete inspection.
1241. Even if you had the slaughter-yards at Homebush? Small butchers would buy cattle there and drive them to the local slaughter-house and treat them just the same as they do now? As a matter of fact, as things are, if the new Abattoirs, or the same Abattoirs, were built by the Government, that would be possible. If, on the other hand, these Abattoirs, or new Abattoirs, were handed over to the City Council, and they became municipal abattoirs, then at once the Board of Health would be able to forbid slaughtering within such a radius as they thought the central abattoirs would serve.
1242. You think it would be advisable, in the interest of the health of the community, that the City Council should have control of the Abattoirs as well as sale-yards? I would rather say I think it advisable in the interest

interest of the community that the slaughtering should be done at a central place. As the law stands, no doubt it would be necessary that Glebe Island should be handed over to the municipality, because the law says that the Board shall have the power mentioned only when the municipality or combined municipalities erect a slaughter-house. If, however, the Government decided that this Sydney slaughter-house should still be a Government establishment, it would be very easy for them to alter that provision in the Noxious Trades Act. Therefore, I would rather say that the point is we want all slaughtering to be done at a central place, because in no other way can you secure reasonable inspection.

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1243. A considerable number of cattle is slaughtered outside Glebe Island? I think a very great number.

1244. To a great extent these outside slaughter-houses escape inspection? They largely escape inspection, because they can slaughter at any hour of the day they like. The inspectors are the inspectors of nuisances and the officers of police, and these have a great many other things to do.

1245. So that the inspection is only intermittent? It is intermittent. It is properly done when it is done, but it is not systematic.

1246. Have you any knowledge of the traffic over Glebe Island way? I only know that there is a great deal. I go over there at least once a week.

1247. Do you ever suffer any inconvenience from the delay which takes place from the opening of the swing, and from the difficulty of getting over the narrow bridge? Yes. Going there at 9:30 a.m. I am almost always stopped: the swing is almost always in use at that time. Then I find a collection of 100 or 150 vehicles—waggons and so on—waiting, and it takes me a very long time to get across. The entrance to the bridge will only take one vehicle at a time.

1248. Very great loss of time is sustained by gentlemen like yourself who have not a very great deal of traffic on the road;—as a rule when you do go, a deal of inconvenience is suffered from the delay which might be avoided if a more convenient bridge were built? Undoubtedly.

1249. You think it advisable, from what you have seen, that some steps should be taken to increase the facilities for traffic? I very often, indeed, thought the bridge was entirely inadequate to the traffic which I actually saw.

1250. And the swing is in a very inconvenient position? It is.

1251. If the swing were placed in the centre it would not be so bad, and it might be made wide enough to carry two lines of vehicles? Yes; that would be a great improvement.

1252. Judging from the traffic you have seen crossing the bridge, you think it advisable to erect a more convenient bridge at a reasonable cost? I have long been strongly of opinion that a new bridge was wanted.

1253. *Mr. Black.*] It has been given in evidence here that the most perfect method of slaughtering, because it would save the travelling of the cattle and the loss in weight, would be to kill in the country at central places, and to convey the meat to Sydney in refrigerating cars;—have you formed any opinion on that matter, or has it come before you at all? Yes; I think experience, as far as we have got, shows that for some reason or other it is not practicable. A great deal of meat is, and always will be, slaughtered in the country, and sent in as you describe. But still you must always have a slaughter-house in every town. One might, for instance, take Newcastle and that district. They are much nearer to a place where a great deal of slaughtering is done. The people thought of putting up a central abattoir, and one of the objections raised by some people was that they had not any security: that, though they might put up their central abattoirs, the Aberdeen Company would send meat down at once, and cut them out. But people who knew most about the matter pooch-pooched that, and they asked if it was not worth the while of the Aberdeen Company to send down meat now, why should they do it when an abattoir was put up. As a matter of fact, the Aberdeen Company does not send down any meat worth speaking of to Newcastle. A local slaughter-house, therefore, seems to suit the people better.

1254. Is there any objection to that system of country slaughtering on the score of careless inspection, of admitting cancerous meat, and so on, into consumption? Yes; as things are arranged at present there is an objection which would be removed as soon as establishments had attached to them an inspector, so as to put them on a footing with public abattoirs.

1255. You spoke favourably of Belmore as a site for abattoirs. May I ask you is it superior to Glebe Island in any way? I do not know that it is, but as part of an organisation which has the transit of cattle from the country in view, and then their slaughter, and next their distribution, I think it is.

1256. There would be no gain? There would be the gain of concentrating your business, and not carrying it on in two places 7 miles apart.

1257. Could not a similar concentration take place on Glebe Island? I believe that 50 acres of land might be rendered available at Glebe Island. That is my recollection of the evidence I gave in August last.

1258. Do you think 50 acres is necessary for the erection of sale-yards? I really think that that is a question to be put to some one in the trade, or to the City Council, who have the sale-yards at Flemington.

1259. Fifty acres would be a great space merely for abattoirs? I say I believe there are 50 acres on the island. You could put up some resting paddocks and sale-yards, but whether you could put up all that are wanted or not, I scarcely know.

1260. Do you think no less a space than 50 acres would be sufficient? Considering the area which is actually covered by buildings at this moment, and judging the area of the sale-yards from sight, I should say you want fully 50 acres.

1261. I gather from your remarks that you think one of the drawbacks to Glebe Island is the absence of direct railway communication? No, I have not expressed that opinion.

1262. You did not say so, but I drew that inference, which may be a mistaken one? I do not think I conveyed that opinion.

1263. You do not think it would be an advantage to have cattle conveyed by rail there direct from the main line? Cattle which are conveyed by rail are delivered after not less than thirty hours travelling during which they have been starved and had no water. You cannot turn them out to the slaughter-house. They ought to be fed though they are not; but they must rest at all events, and therefore you must have areas on which to rest them.

1264. If you had those 50 acres, would there not be sufficient room for that purpose then? I do not know whether there would be room or not. I am not competent to speak on that point.

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1265. You mean that there would be no benefit unless there were sufficient paddock space available to turn out the cattle to rest after their journey? That is what I mean.

1266. Such space being available, and an improved bridge being constructed, do you consider that Glebe Island would be a suitable place to maintain the abattoirs? If there were space, accessibility, and everything of that kind which is required, then I believe the only objection that could be raised would be either, because of the thick population surrounding the abattoirs, which would be much inconvenienced by the noise of cattle and dogs in the yards, or else on the score of position which might not be all that the trade would like—I do not know. But in the abstract from those surrounding circumstances, if there were room for the necessary resting yards, and so on, and if the buildings were suitable, I do not know that there is any objection, quite apart from those considerations.

1267. Mr. Fegan has said something in regard to blowflies. Now, if the resting yards and sale-yards were in close proximity to the Abattoirs, would you not be more likely to have blowflies in numbers than you do now? If the dung were not regularly swept up, and kept in covered vessels until it was disposed of, then it would be likely that you would have more flies.

1268. In the event of precautions being taken, there would be no increased trouble on that score? I should say not.

1269. *Mr. Hoskins.*] In the event of new slaughter-houses being built at Glebe Island on modern principles, such as you would approve of, and having an arrangement by which the blood could be saved and treated with the most modern desiccating machinery, do you not think that manure manufactured from the offal and refuse could be sold at less than £7 a ton, and at the same time leave a profit? Yes, provided there was a market.

1270. All the difficulties, then, in respect to the non-use of desiccating machinery, and the throwing of the products into the ocean, arose from the defective construction of the building, and also obsolete machinery? Exactly.

1271. *Chairman.*] Have you made an estimate of the cost of removing the Abattoirs? No estimate has been made, because it is not yet decided that the Abattoirs should be removed.

1272. *Mr. Hoskins.*] I suppose if it is considered highly desirable by the Government to erect new buildings there, you, as President of the Board of Health, would like to be consulted as to the kind of building and the arrangements to be made for the work to be carried on there, before the plans are drawn? Undoubtedly, I should expect that. I desire to add that having remarked on the large amount of traffic which I see once a week or oftener on the Glebe Island road, that that traffic does not appear to me to be to any important extent connected with the Abattoirs. The vehicles belonging to the Abattoirs, which I either know by sight or which have names painted on them, and can be identified, are a minority—a very small proportion of the great traffic which I see always going across there, and which, therefore, I suppose will always continue to go to Balmain.

1273. *Mr. Wright.*] Have you thought about the question of converting Glebe Island into sale-yards as well as a site for abattoirs? Yes. What I said was that I did not know whether or not there would be room enough for sale-yards.

1274. On Glebe Island there are 34½ acres of land, exclusive of the reclaimed land at White Bay. If it were possible to cut down the island, to erect sale-yards there, and to bring the cattle to them by rail, would there be any strong objection on sanitary or sentimental grounds? Supposing there were room, only on this ground, that there is a very large number of people around who would be disturbed all night by the lowing of cattle, barking of dogs, and shouting of men. I think that would be a rather strong objection.

1275. There are still greater difficulties in the way by the lowing of cattle when driven through the streets? Yes.

1276. It would minimise that danger and the deterioration of the cattle from the harassing which they get? It would.

1277. If there were room for sale-yards there, do you think it would be an improvement on the existing state of affairs to have a railway brought straight to the island? I think that to bring the slaughter-house and sale-yards together, wherever it was, would be an improvement.

1278. I have noticed that all through your evidence you have suggested that the slaughter-house and sale-yards should be side by side, so that the cattle could go in in a fit condition to be killed? I am strongly of that opinion.

Ernest Macartney de Burgh, M.Inst.C.E., Assistant Engineer for Bridges, Department of Public Works, sworn, and further examined:—

E. M.
de Burgh,
M.I.C.E.
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1279. *Mr. Humphery.*] Since your last examination you have made further inquiry into the present traffic over the bridge to Glebe Island? Yes.

1280. Will you state the result of that inquiry? I had the traffic counted from the 19th to the 29th June, and, omitting Sundays, I endeavoured to separate the Abattoir traffic as far as it was possible to do so. I find that the daily traffic across the bridge averaged 2,032 vehicles, 51 horsemen, 215 driven animals, and 1,295 pedestrians.

1281. Can you give the state of the traffic during a similar period previous to 1893? In 1889, which is the only other record I have, the figures were:—vehicles, 196; horsemen, 102; driven animals, 456; and pedestrians, 1,011.

1282. For what period in 1889? It was taken in December, 1889. It was not stated in the return from which I obtained this information how many days the average was computed from.

1283. Do you think it is a fair comparison between the traffic of 1889 and the traffic of 1896? I think so.

1284. Have you separated the Abattoir traffic from the ordinary business traffic, apart from the Abattoirs? Yes.

In the first place we may suppose, I think, that the bulk of the animals which crossed the bridge from Sydney were going to the Abattoirs. It is only an assumption, but I think it is a fair assumption, for this reason: that in a day we have 178 driven animals crossing the bridge towards the Abattoirs, whereas we only had on an average 37 driven animals coming back again. I think it is a fair assumption that at least 120 animals per day crossed the bridge to the Abattoirs from the Sydney side.

1285. Have you separated the vehicular traffic in connection with the Abattoirs? Yes. I find that, as nearly as possible, one-fifth of the vehicles crossing the bridge were, or might be supposed to be, going to the

the Abattoirs. In a great many cases we were able to stop the vehicles sufficiently to ask the man where he was going, and in a great number of cases we got answers from the men, so that we were quite certain of it: but there were a number of butchers' carts which went by so rapidly that we could not interrogate the drivers. What with watching them go over from day to day for nine days, and getting familiar with the carts, I think it is a very fair assumption that the whole of this one-fifth were going to or from the Abattoirs. The actual figures are: 201 from and 212 to the Abattoirs.

E. M.
de Burgh,
M.I.C.E.
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1286. Can you state the number of horsemen or pedestrians who went to the Abattoirs? I made no inquiry as to the horsemen or foot passengers. When I was previously before the Committee, I said I thought the traffic had increased since 1894. I wish to draw attention to the fact that there is an increase of 240 vehicles a day.

1287. How do you arrive at that conclusion? We have the figures which were taken in 1894, and which I gave on a previous occasion.

1288. An increase of 240 vehicles per day would be an increase of over 13 per cent.? Yes.

1289. *Mr. Lee.*] From the plans which have been handed to you, do you observe how the road through Glebe Island might be deviated round the northern side or round the southern side? Yes.

1290. These diagrams have been submitted to the Committee by an authority who has expressed the opinion that the road could, with advantage, be deviated in either direction;—do you know of any valid objection to a deviation of that kind? No; I am aware that the matter of cutting down portion of the island, so as to form a frontage available for wharf purposes, has been often considered, and considered as likely to be a useful and profitable scheme.

1291. If it were deviated to the south side of the island, it could be made to serve the purpose of a road and an approach to the wharfs which might be built on that portion of Rozelle Bay? Yes; but on the other hand, it appears to cut off the Abattoir water frontage where they get rid of their blood and offal into the punts.

1292. But that would not be a very great difficulty, provided that it did not interfere with any of their buildings? I take it that they could make other arrangements to get rid of their refuse, but at the present time that is their outlet.

1293. Suppose it is taken on to the northern side of the island, by that means you will give an approach to White Bay as well as a road away from the Abattoirs? I think it would be a great advantage to avoid the Abattoirs for the main portion of the traffic.

1294. The main object would be to avoid the Abattoirs? At present the traffic has to go practically right past the Abattoirs.

1295. Will you be good enough to consider that matter of deviating the road in connection with the design for constructing a new bridge, and give us your opinion later on? Yes; I have no doubt that the Engineer-in-Chief for Public Works when he brings down his designs for a bridge to the Committee will be in a position to speak about a deviation of the road.

Alexander Brown Portus, Superintending Engineer for Dredges, Department of Public Works,
sworn, and examined:—

1296. *Chairman.*] You are Superintendent of Dredges in the Harbour and Rivers Branch of the A. B. Portus Department of Public Works? I am Superintending Engineer.

1297. *Mr. Trickett.*] Do you think it is desirable or necessary that a new bridge should be constructed to Glebe Island? Much would depend upon whether it would be considered desirable to do away with the bridge altogether, and go across the land recently reclaimed, and make the crossing at Gordon-street at the head of Rozelle Bay. We have reclaimed about 40 acres of land between Glebe Point and Annandale. If the road were made from the Kauri Timber Company's place at Wentworth Park right across to the head of Gordon-street—of course a tunnel would have to be made or a diversion round about—that might obviate the necessity for a bridge. Whether it would be justified as far as expense is concerned, I do not know. It is a project which has been mooted.

1298. The expense would be very great? The expense of the tunnel would be considerable.

1299. And the distance round would be considerable? It would depend upon where you wanted to go. If you wished to go to Glebe Island alone, the distance from Pymont Bridge Road would be about twice as much by the new road as by the present bridge. If you had in view only the trade to Balmain, the distance would be about the same.

1300. What would be the road, say, from Sydney to Balmain? The present route; but instead of going along towards the bridge at Glebe Island you would go straight across by the wharf at Wentworth Park, and then straight through by a tunnel to the reclamation I have spoken of.

1301. Can you state the depth of the water at the site of the Glebe Island Bridge? It is about 14 feet. I have not taken any soundings there.

1302. Do you know whether it is soft bottom there or rock bottom? We have not come across any rock there. In dredging on the Sydney side of Glebe Island, where the cattle are shipped, there is not very hard bottom; the hard bottom is close in to the island, but about the middle of the bridge I would not expect to meet any hard bottom at 30 feet.

1303. What depth of water is there inside the bridge? In some places it is 7 or 8 feet, in other places it is deeper. Perhaps 9 to 11 feet would be the average depth.

1304. So that with the present depth of water, without very extensive dredging operations, only vessels of comparatively small tonnage can go inside the bridge? Yes.

1305. Have you noticed what kind of vessels generally go inside the bridge with trade? Vessels drawing about 12 or 13 feet of water, and up to about 300 tons register.

1306. What is the chief trade they carry? Timber vessels going to the Kauri Timber Company's works, and to Guy's saw-mill, and Swan's, and vessels with blue metal for roads.

1307. Mostly timber vessels? It is almost wholly a timber trade.

1308. Is the site of the swing in the present bridge a desirable one? It is not. It would be far better to have the swing in the middle of the bridge.

1309. It is quite behind the times, I suppose, with regard to its construction and its position? Yes; it is very slow.

- A. B. Portus. 1310. If a punt or a vessel of any size were moored alongside Brown's iron-works, which are just outside the swing, it would be impossible for a ship to get through the opening? It would be very awkward indeed.
- July, 1897. 1311. There would be a danger of colliding? Yes.
1312. In the new bridge, you think the swing should be put in the centre? Yes; and the opening should be wide. We require nearly 60 feet to take the dredge "Groper" under the bridge where the ferry boats pass through.
1313. What width do you suggest should be available to all vessels likely to pass through the opening? I should say that 60 feet would do very well.
1314. Do you mean that there should be an opening of 60 feet on either side of the pivot which the swing works on? I have not looked at the drawings, but I think it should be 60 feet in the clear, so that a vessel with 59 feet beam could get through the bridge.
1315. *Mr. Hoskins.*] Do you mean that there should be two openings of 60 feet each, or only one? As long as you have an opening of 60 feet in the clear it will do.
1316. *Mr. Trickett.*] Is there not a tendency at the present time to widen sailing vessels? Yes.
1317. What is the width of the dredge you mentioned just now? The "Groper" has a 50-foot beam; but there are projections on each side, and we would require about 57 feet. The span in the bridge where the ferry steamers pass was recently altered so that the "Groper" could get through. The width of the central span was about 40 feet, but about eighteen months ago the Department increased the width to 60 feet to allow the "Groper" to get through.
1318. Are there likely to be continuous dredging operations inside the bridge for some years to come? Yes; we have instructions now to deepen the whole area. It is a stand-by work. About 80 acres of land are being reclaimed on the shores of Rozelle Bay—that is, between Glebe Point and Annandale, and on the other side of Annandale—and material is required for that work. The dredge has been working there, and material from other parts of the harbour has been sent there and pumped ashore on to the land.
1319. You are likely to be engaged in dredging there for a considerable time? Yes; we have still about 300,000 tons to pump to complete the present reclamation. But if the whole place is to be deepened to a depth of 24 ft. to accommodate large vessels, the cost of the dredging will be very considerable, because the material will have to be sent to another reclamation, which would involve two operations, namely, the lifting of the material and the sending of it to a reclamation at some distance, to be pumped on to the land.
1320. To dredge out 300,000 tons; how long would it take in the ordinary course? From about nine months to a year. It depends upon the size of dredge employed.
1321. To get the stuff to do that reclamation inside the bridge, would you go on a uniform system of dredging? Yes.
1322. What would it increase the depth to to take out that quantity? About 18 ft. over part of it. We usually consider 18 ft. quite sufficient for present requirements; but, perhaps, in view of the new bridge. A greater depth would be left to accommodate a larger class of vessels.
1323. As the deepening goes on inside the bridge, will it be necessary outside the bridge to go in for dredging operations, or is there deep water there? Yes; for the larger class of vessels. Quite recently we have made a channel from Peacock's Point, opposite the old A.S.N. works at Darling Island, up to White Bay, where reclamation has been carried out. That channel, which is 200 ft. wide with about 22 ft. of water, could be availed of by vessels drawing 22 ft., but a branch to the opening of the Glebe Island Bridge would have to be made; that would not, however, be very expensive, for it is no great distance.
1324. What is about the average depth from the channel you mentioned up to the bridge? I should think it is about 18 ft., but I have not taken any soundings lately.
1325. So that, following the deepening of the water inside the bridge, you would have to dredge a channel to the opening in the new bridge? Yes.
1326. With regard to this expenditure for dredging inside the bridge, do you think it is likely to be beneficial to the wharfs around there? As far as any revenue to the Government is concerned the benefit would not be so great. If you could get a larger class of vessels to use the wharf at Wentworth Park it would be a distinct advantage.
1327. Suppose the Government wharf opposite Wentworth Park has a frontage of 1,400 feet, how many ships of the size which would be likely to use that part of the harbour could be berthed alongside that wharf without any piers being run out into the water? I think you might put the length of the vessels down at from 150 to 200 feet, and that would give from six to eight vessels. The number would lessen as the size increased.
1328. Having in view the wharfage dues which are charged by the Government, I suppose the return from these vessels would be a very small item in proportion to the expenditure which is going on in the way of reclamation and dredging? Yes, looking at it from that point of view alone, I do not think it would justify the expenditure.
1329. I suppose the revenue derivable by the Government from wharfage would not be very large? There is all that length of frontage recently resumed by the Government, and the reclamation areas would have to be added to that. It could all be converted into valuable land.
1330. Is it not contemplated to use that area of 80 acres as a recreation reserve? I think it would be most unfortunate for the country if land of that kind were to be given over for recreation purposes. It would be far better to utilise it for commercial purposes, or to sell alternate blocks, and thus recoup the Government for the expenditure incurred in dredging operations.
1331. Is it in a suitable position to be utilised for commercial purposes? Yes; it could be used for timber depôts or other purposes.
1332. Would it be used by people who carry on business in Sydney, or by people at the Glebe? Manufacturing industries would spring up on that side, just as they have done on the opposite shore, where you will see saw-mills, glass-works, a box-factory, and a canning establishment.
1333. You think that the establishment of manufacturing on this land, and the use of this wharf, can be kept in view as a factor to recoup the cost of reclaiming the bay and constructing the new bridge? Yes.
1334. You recognise that it is impossible to carry on much longer with the present bridge? It is impossible to carry on very long with the present bridge.

1335. It is very old and shaky and too narrow, and the opening is most unsuitable? Yes; it is quite inadequate to the requirements of commerce. A. B. Portus.
1 July, 1897.

1336. What height do you think the bridge should be, either in part or in whole, to enable small steamers or vessels to go under without having to open the swing? As high as you could possibly arrange. I should say that if you could manage to give 30 feet in the clear it would be very desirable.

1337. What class of vessels would that enable to pass under the bridge? I am speaking more for steamers and tugs going through.

1338. Sailing vessels, even ketches I suppose, would have to go through the swing? Yes; I do not see how you could very well arrange for them unless it was made much higher.

1339. For the purpose of ferry boats and a larger class of tugs? For such tugs as have no arrangement for lowering their funnels it will be desirable to have a height of 25 or 30 feet.

1340. Have you given any attention to the construction of bridges? No. I have not seen the design of this bridge.

1341. You would not care to say whether it is desirable or otherwise to have a bridge with a hump in the middle as this one has? I think it would be desirable. It would not be sightly, but it would be very desirable as far as the accommodation for vessels is concerned. The higher you can get it the better.

1342. I suppose that if the bridge were improved, and the swing improved in regard to its size, there is every possibility of the trade increasing considerably in that portion of the harbour? I think so.

1343. It is surrounded by a large population area? Yes.

1344. I suppose for filling in Roselle Bay you use sand pumps? Sand pumps, in connection with ladder dredges. The sand pumps are not available at any very great distance from the shore.

1345. How far can you eject the sand from the pump on to the land? The greatest distance we have sent it through pipes yet has been about half a mile. The dredge is moored generally about 300 or 400 feet from the shore; you require a number of pontoons and pipes to reach the shore and pipes only on the land.

1346. I suppose, in the case of a good deal of the dredging and filling-in which you have done, you have moved the dredges from where the stuff was taken out and then pumped it on to the shore? No; most of it has been material which has been dredged in other parts of the harbour—say, in Darling Harbour and other places—and sent alongside the suction dredges and pumped on to the land to be reclaimed.

1347. Suppose you went in for extensive dredging in this part of the harbour, could you moor your dredge half a mile from the shore, and by floating-pipes pump the stuff on to the place to be reclaimed? We could do that very well, but it would be a very expensive matter as far as the pontoons were concerned, for you would require a number of pontoons and pipes.

1348. You do not adopt that system then? No. In practice we moor at about 300 feet or 400 feet from the shore, and then we have pipes with flexible joints to the shore and ordinary pipes for the remaining distance.

1349. So that when you got some considerable distance away from where you are reclaiming, you would adopt the same system as you do when the silt is brought from a considerable distance? Yes, dredge, and then you tow your punt to the suction dredge, dump the contents, and pump ashore.

1350. Is there a retaining-wall all round this place which you are filling in? Yes, a stone wall.

1351. Is it so constructed that it could be utilised for wharf purposes, or is it simply rubble shot in? It is a rubble wall, and probably the best arrangement would be to drive in piles beyond the wall to form a wharf.

1352. What is the area of the water above the bridge? Mr. Halligan estimates it will be possible by dredging to deepen that part of the harbour above the bridge to a depth of 22 feet at low water over an area of 120 acres.

1353. How many tons of stuff would have to be removed? Mr. Halligan, the chief surveyor, in his minute, says:—

I ESTIMATE that it will be possible by dredging to deepen that part of the harbour above Glebe Island Bridge to a depth at low water of—

18 feet over an area of	160 acres.
22 " " "	120 "
26 " " "	100 "

and the amount of material to be dredged will be as follows:—

If dredged 18 feet deep	4,200,000 cub. yds. (say)	5,670,000 tons.
" 22 "	4,880,000 " "	6,588,000 "
" 26 "	5,500,000 " "	7,425,000 "

It would be hardly desirable to go to that expense. The better way would be to dredge a channel all round the shore 300 feet or 400 feet wide, and the cost of the dredging would be lessened by one-half in that way.

1354. You have not had recent soundings taken over that area? There has been no survey made by our Department. Mr. Halligan has taken this from an old Admiralty survey. There has been a good deal of filling up from sewage and deepening by dredging.

1355. If dredging operations were proposed to be carried out largely there, it would be quite sufficient to dredge a belt right round the wharfage area, approached by a channel from the centre of the bridge? Yes; and widen it out from time to time as circumstances rendered it necessary, making bays for very long vessels to turn at special places.

1356. Have you any other figures which you would wish to give? The dredging would cost about 7d. a ton if the material had to be taken to Homebush, as would have to be done with that quantity. To dredge it by a ladder dredge, and to convey it to the reclamation above Ryde Bridge, and pump it ashore there, would be an expensive affair.

1357. When you have shot in your 300,000 tons of silt, then, in case of any future dredging of the water inside the bridge, the silt will have to be taken to some other place? Yes; perhaps 4 or 5 miles away, or further.

1358. Which will involve an extra cost of 7d.? The total cost would be 7d., and it would be less than half that sum if we could get rid of all the material locally.

1359. How much a ton does it cost to put the stuff where you put it now? If the one machine were employed—merely a suction dredge—the cost would be about 2½d. a ton; but if you have to pump the silt half a mile, the cost is greater than for depositing at a short distance.

- A. B. Portus. 1360. Could you put down the cost of dredging and filling in now at about 2½d. a ton? It is a mixed up arrangement, because part of the original material is sent ashore, and the remainder is from dredging plant working elsewhere. We never send any material to sea if we can help it. We always put it on to land.
- 1 July, 1897. 1361. You cannot say what it costs? I will go into the matter. If it were desirable we could put 2 feet more on to the present reclamation, which would lessen the cost necessarily.
1362. Can you tell us what the cost of the present filling in has averaged per ton? You may say 2½d. per ton in one case, and about 7d. in the other; because there is the second dredge to be put to work, and the expense of towage from one place to the other.
1363. The cost of the present works may be put down as the mean between 2½d. and 7d.? Probably that would be a fair estimate, but I think if the reclaimed land is sold, the transactions, after paying for the dredging, will leave a large profit balance to the Government.

FRIDAY, 2 JULY, 1897.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHREY.	CHARLES ALFRED LEE, Esq.
The Hon. JAMES HOSKINS.	JOHN LIONEL FEGAN, Esq.
The Hon. CHARLES JAMES ROBERTS, C.M.G.	THOMAS HENRY HASSALL, Esq.
The Hon. WILLIAM JOSEPH TRICKEPT.	GEORGE BLACK, Esq.
The Hon. DANIEL O'CONNOR.	FRANCIS AUGUSTUS WRIGHT, Esq.
HENRY CLARKE, Esq.	FRANK FARNELL, Esq.

The Committee further considered the expediency of constructing a New Bridge at Glebe Island.

William Henry Austin, Carcase Butcher, Glebe Island, sworn, and examined:—

- W. H. Austin. 1364. *Chairman.*] You are a member of the firm of Austin and Windred, carcase butchers? Yes.
- 2 July, 1897. 1365. *Mr. Clarke.*] Can you give any reasons why a new bridge should be erected at Glebe Island? The present bridge, which has been up for a good many years, is in decay in places, and the swing is a great annoyance, causing great delay to the public. At times, it is open for a full quarter of an hour, and there is a string of carts reaching back to the top of Glebe Island hill and for the same distance on the other side. It must cause a great delay to everybody, more especially to business people. We sometimes send vehicles to catch a train or a boat, but the bridge opens and upsets our calculations.
1366. It must cause considerable delay to the passenger and goods traffic across the bridge? Yes. The swing is altogether too slow, and the bridge is out of date. In the new bridge I think the swing should be erected in the middle.
1367. Do you think the new bridge should be considerably wider than the present bridge? I think it ought to be constructed wide enough to allow two vehicles to pass on each side, with a 6-foot pathway on each side, and a swing of about 80 feet in the middle, giving a 60-foot fairway for vessels and allowing 20 feet for the swing to rest on.
1368. Do you think the bridge is unsuitable for the present traffic? In every sense it is. The only better way to accommodate the traffic would be to put up a good bridge from Glebe Point to Balmain. It could be done at a much less cost than the other, and I have no doubt it could be put across without having to use a swing, which, of course, will make a lot of difference in the construction of a bridge.
1369. Will you indicate on the map the bridge which you would recommend in preference to a new bridge to Glebe Island? I would recommend the erection of a bridge from Glebe Point Road to Mullens-street, Balmain, because it would cost far less than the other. If the road were brought round to Pymont Bridge Road it would be much nearer than to go down Glebe Island Road, and it would not be much further for us. It would give more space on the island. Glebe Island would be isolated; it would be out of the sight of the public, who complain of the Abattoirs and the smell and unsightly things they see. I think the bridge could be built at much less cost, and it would answer the same purpose as a bridge from Pymont to the island. It would serve another good purpose: In years to come you will have to run a railway or tramway to Drummoyne or Ryde, and by having the bridge I recommend you would have a straight road from here to Drummoyne and Ryde.
1370. Do you not think it would cost a great deal more to put up a bridge in that position than to erect one alongside the present bridge? Not at all, I think.
1371. There seems to be a large area of water to cross? No; the water would not be so deep.
1372. Would it suit the business at the Abattoirs as well as the present bridge? It would make a difference of about a minute and a half in going from there to the city.
1373. Do you consider that Glebe Island is a suitable place to carry on the butchering business? I do. As far as I know and have seen, it is second to none. I have not seen a site so suitable for abattoirs as this is. It naturally drains itself, and if the road were run away from the Abattoirs it would be isolated and out of everyone's way.
1374. Are the facilities at the Abattoirs suitable for the killing of horned cattle, sheep, and pigs? The Abattoirs are old, and no doubt it costs a lot to repair them at times. I think the time is not far distant when new ones will have to be built.
1375. In your opinion, are the present buildings and the present facilities for the butchers sufficient? No. Just now, when stock are rather short, they are big enough. Last summer we were a bit pressed for room, but there is ample room to make improvements in the size of the Abattoirs and the structure of the buildings.
1376. It has been given in evidence that the buildings for killing sheep, calves, and pigs are not sufficient—that they are utterly inadequate for the purpose? The sheep-houses are very small. To my idea, they are badly ventilated, and the roofs are very low. When they were built they were big enough. There was not nearly the same business done then as now. At the present time there is a lot of business done in these mutton-houses, and a lot of men are working among the sheep. The carcases all are hung together, and the place is not big enough at all.
1377. The same remark would apply to other small stock? Yes. The cattle-houses are fairly good at present; they are plenty big enough.

1378.

1378. The calves and pigs are generally driven from the Corporation sale-yards at Market-street? Yes. I think those yards should be on Glebe Island, and instead of small stock being driven from the city over the bridge, it should be landed on the island from the boats. The majority of this small stock comes from the boats. Some small stock comes from the trains; but it should be driven to the island and sold there in yards instead of at Sussex-street.

W. H. Austin.
2 July, 1897.

1379. Would not the same thing apply to the large stock? Yes.

1380. To cattle sold at Homebush? To cattle and sheep; but whether the City Council would agree to that I do not know. The City Council, who have a large capital invested at Flemington, would not care to relinquish their hold there unless they had some concession made to them at Glebe Island.

1381. Suppose that all large stock were trained from Homebush to Glebe Island;—is the area on the island sufficient to provide sale-yards there? Yes; I reckon there is ample room, and will be for 100 years for the city trade. There is another reserve at the head of Rozelle Bay, but beyond the tram-line. That swamp which has been filled in lately would make a capital railway yard for stock. It is a large area, and it will not be much good for anything else.

1382. Your recommendation is to have a sale-yard at Glebe Island, not only for pigs and calves, but also for sheep and horned cattle? I think all stock should be brought to Glebe Island that are likely to be wanted in the city and suburbs, and there sold and killed. There would then be no trouble about driving stock along the road. If a light line of railway were constructed down White's Creek from Petersham or Stanmore, I do not think the cost would be great.

1383. You think it would be better, in the interests of all concerned to provide sale-yards for all stock, whether large or small, at the island? Yes.

1384. Would there be sufficient room for paddocks for the cattle? We would not want paddocks; we would only want flats, the same as they have in other countries—that is, yards with a bit of a shed, water, and hayracks. There would be ample room, and the cattle would not be kept above twenty-four hours, or at the outside thirty-six hours, in the flats.

1385. If all the improvements which you and others suggest were carried out, you think that no better site could be obtained in the immediate vicinity of Sydney? No better site for an abattoir could be obtained anywhere. I have never come across a place like Glebe Island for abattoirs.

1386. What means have you to get rid of the blood and offal? If that were treated as it should be treated, as the Sydney Meat Company treat theirs, it could be turned into manure, and sold at a profit—it would be a valuable asset.

1387. Some time ago the offal was desiccated;—was that process a success? I think the method was a very expensive one. I do not think the Government availed themselves of proper machinery. I believe the Meat-preserving Company have a far better and cheaper method of treating their offal.

1388. You think that if a proper method were introduced the manure would pay for the expense of desiccating the blood and offal? It should do if it were properly treated.

1389. Hitherto it has not paid for the expense? No. Some time ago, all they seemed to be doing there was to cart coal to the boilers and put it through—it was a sort of thing for consuming coal rather than a desiccator. I think the manure should always pay for the cost of desiccating the offal.

1390. What is the present process of treating the offal? It is run into a punt and towed out to sea. It seems a funny thing, in a country where they want manure on the ground, to throw this manure into the Pacific Ocean.

1391. The Government has to bear the expense of taking the stuff in punts outside the Heads without getting any return? Yes.

1392. *Mr. Lee.*] Do you think the unpleasant sights and smells which the public complain of could be avoided if the road were taken round to the south along the foreshores, instead of going in a straight direction as at present? If it were run around on the south side, you would have to do away with the punt, or find some other method of treating the refuse.

1393. Could not the refuse be run into the punt at some other point? You could not get the punt to lie close to the Abattoirs unless you put it there. By leaving the bridge on the western side and making a detour to the north, round by the Inspector's house, and thence round towards Mullens-street, you would avoid the Abattoirs.

1394. If that route were adopted, the unpleasant sights at the Abattoirs would be avoided? Yes.

1395. Would it be very expensive to make that road? I do not think so.

1396. Would it necessitate much cutting down? I think they have been cutting down rock for a couple of years round that way.

1397. Suppose you had to choose between the present road and a road by the route you suggest, which would you adopt? A road round by the western side of the island.

1398. If the northern route were adopted for the general traffic road, then the existing road from the Abattoirs to the bridge would meet the requirements of the Abattoirs people, and the general public would be kept away from the Abattoirs? Yes.

1399. It is on account of the general public being brought in contact with unusual sights and smells that they offer such strong objection to the Abattoirs? Yes.

1400. And if they were kept away from the Abattoirs, they would not know anything about them? No, nor of the driving of the stock.

1401. You think that if a new bridge is built of sufficient width, and with a wide opening in the centre, and a detour is made in the road to Balmain, it will meet all requirements? I think so.

1402. *Mr. Hassall.*] How long have you been engaged in the trade? I have been a master butcher for twelve years, and I have been in the trade for twenty-one years. I have been connected with Glebe Island for twenty-one years.

1403. Does your firm do a large business? We do a large business in cattle.

1404. More in cattle than in sheep? Yes.

1405. Do you supply a very large number of retail shops in various parts of Sydney and in the suburbs? Yes.

1406. You also do a pretty fair shipping trade? Yes.

1407. You bring the bulk of your meat across the bridge? Yes.

1408. Do you take any meat out from the Abattoirs by the other way? Yes; to Leichhardt, Drummoyne, Marrickville, Newtown, and all those places.

W. H.
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1409. You do not cross the bridge in going to those places? Not as a rule; but at times we may do so in going to Newtown. Four-fifths of our meat should, I think, be brought over the bridge.

1410. How many trips a day do you average? Half a dozen vehicles a day.

1411. That is, half a dozen different trips? Yes.

1412. Do you suffer any great inconvenience from the delay in opening the swing, and from the narrowness of the swing? Yes, we suffer great inconvenience sometimes there, more especially on a busy day. Our busy day is Friday in summer, and Thursday in winter.

1413. Will you relate your experience as to the delays you suffer in going to and fro? The delay there sometimes is very annoying. The Abattoirs gate is shut at 6 p.m. Suppose we have a waggoner going back at 5:30 p.m. to load and get away before 6 p.m. If the bridge happens to be open, perhaps he misses the Abattoirs gate. Consequently, he cannot get his meat, and then there is a disturbance with the retail butchers as to why the meat was not delivered.

1414. Very often it causes great inconvenience to you and to others in the trade? Yes, to all business people.

1415. In your experience of twenty-one years, have you noticed any very large increase in the traffic? It has increased considerably, especially within the last five or six years. It is going on apace, and it will not be long before the bridge will only just do for carrying one vehicle to and fro.

1416. To what do you attribute that increase of traffic? To the increase of population and to the increase of trade in the locality. Since Lever Brothers started business at Balmain there is a deal of traffic—and heavy traffic too—to their factory, over the bridge. Every day I have noticed a number of trollies going to their works with tallow and other products. Of late years many factories have sprung up in Balmain. There is a lot of traffic to and from the Globe Canning Company, whose works are close to the island. Again, there is a lot of traffic in timber and one thing and another to all those factories down on Mr. Hutchinson's property. The traffic there is growing apace.

1417. The bridge, which was suitable for traffic six or seven years ago, is practically out of date now? Yes.

1418. I suppose that where you had one vehicle crossing the bridge in those times, you have five or six vehicles crossing now? We had one vehicle ten years ago, and we have thirty vehicles now.

1419. You think that a bridge should be constructed which would carry a double line of traffic, and with a swing in the centre? Yes; and it should be as wide as the road. The present swing is in the wrong place.

1420. On the present swing only one vehicle can go at a time? Yes.

1421. Would it be advisable to make it wide enough to carry a tramway, in view of the probable great development of those suburbs? Yes; a bridge to allow two carts on each side would be wide enough for a tram. The swing should be built strong enough to carry a tram. I should think it would be an expensive affair to put up a swing to carry a tram.

1422. A tramway would be a very great convenience to all those persons who do business at the island? Yes; and I think it would pay the Government.

1423. *Mr. Black.*] You prefer a bridge communication between Mullens-street and Glebe Point Road? Yes.

1424. Is the ground of similar height, or nearly so, on each side? Yes; I should think that the point where the bridge would abut on to the land would be 15 feet above high-water mark on each side.

1425. Is it an easy grade throughout on both roads? It is easier on the Mullens-street side than on the Glebe Point side? There is a bit of a pinch coming up Glebe Point.

1426. Would that road, if a bridge were constructed between those points, be as good to travel on as the present road? No; on account of the hills.

1427. Would not a bridge in that position interfere with an extension of the tram from Harris-street across the Glebe Island Bridge to Balmain? If a tram were brought from Drummoyne down the Western Road, and over the Glebe Island Bridge *via* Pymont, it would be a far nearer route than to go *via* Glebe Point, and it would be far more convenient to the public who would be travelling by tram that way. It would be nearer to the city.

1428. In that respect the proposed bridge would be more convenient and suitable than the bridge you suggest? The Glebe Island Bridge would be more suitable for all intents and purposes than a Glebe Point Bridge—that is, to ourselves, and no doubt to the public travelling to the city or the railway.

1429. You would also have to consider the matter of connection on the city side? Yes. Of course the Harris-street tram could easily be carried through to the bridge I purpose on the Pymont side, at the back of the sugar-works.

1430. But to carry a tram from Harris-street round the Pymont Bridge Road, and across your suggested bridge, would be rather a roundabout way? It would.

1431. It would be almost as bad as the route of the present tram to Balmain? Yes.

1432. *Mr. O'Connor.*] Did you mean to imply just now that you cannot send any meat from the Abattoirs after 6 p.m.? Yes; our business has to cease at 6 p.m. We are stopped from sending out meat after that hour every evening.

1433. Who made that regulation? I suppose the Board of Health did. They have made a lot of by-laws and regulations of late years—far different from what they used to be.

1434. It is a very serious interference with the trade of business men? Yes.

1435. Does it prevail all the year round? I believe it does. In former times they used to allow us to send out meat up to 7 p.m. on Friday night. I am not certain, but I believe that practice is done away with.

1436. It is not done to prevent the men from being overworked? I do not think so. Years ago, they used to close the gates, I think, at 7 p.m., and no doubt before that time they used to close the gates at any time they liked.

1437. How long is it since this rule was established? I think it has existed ever since the Board of Health took over the Abattoirs.

1438. The object of the rule is that the meat shall be inspected? The meat is inspected when it is killed, but we have to cease work there at 6 p.m. on ordinary days, and I think at 3 p.m. on Saturday.

1439. Who is the inspector of the meat? There are half a dozen inspectors. Two inspectors were discharged, and two fresh ones appointed this week.

1440. What are their duties? They inspect the meat as it is slaughtered.

1441. Do you know them? I do not know them by name.

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1442. Do you know the qualifications of the inspectors;—are they butchers? Not all of them.
1443. Have they had any experience of the butchering trade? One of them, MacDonald, is a butcher.
1444. Do you think he is a capable man? As he has been a butcher all his life, he must be a capable man.
1445. Are all these men under the control of the Board of Health? Yes.
1446. What is the distance from Glebe Island to the place which was formerly occupied by Mr. Tankar as a boiling-down place? I should think it about a mile. It is round on Bullock Road.
1447. Who owns the property round there? The greater part of it is owned by the Government. The ground which the Government have resumed runs right back to where Mr. Tester's place used to be. There is another reserve alongside Glebe Island which the Government resumed six years ago.
1448. Is there a water supply available for the cattle and sheep? There is the city water supply.
1449. The same facilities which are afforded at Flemington could be afforded to the surroundings of Glebe Island if sale-yards were established there? Yes.
1450. That would obviate all the trouble as to driving of sheep, cattle, and pigs in the busy portion of the day? The stock-driving nuisance would be overcome.
1451. The present bridge is altogether inadequate to meet the great demands made upon it from Glebe Island and the surrounding districts? Yes.
1452. Do you not think that in view of the importance of the locality, and the great business done there, the Government could well afford to go to some expense to construct a bridge with a swing strong and wide enough to carry a tramway to be laid down in the future? I think they could well afford to go to great expense, and build a good bridge which would carry a tram, and convenience the public generally.
1453. Do you not think that it would be a great source of revenue to the Government? Yes.
1454. You said that Glebe Island is one of the finest naturally-drained places in the world? I have visited a few abattoirs, but I have never visited a site to equal Glebe Island.
1455. By a fair expenditure of money it could be increased in value for present purposes, and made to accommodate all the business which would take place for many years to come? For the next hundred years.
1456. *Mr. Trickett.*] Do I understand you to say that the Abattoirs are very suitable? I say the site is very suitable for abattoirs.
1457. Did you ever see an abattoir for a large city on such an irregular and inconvenient site as Glebe Island? I have never seen an abattoir which had the same natural drainage.
1458. Are they not generally level in their arrangements? Yes; at Deptford, for instance.
1459. Is not that a disadvantage? Level abattoirs are an expense in pumping and driving water and refuse about in different directions, and in carting.
1460. Do you think that Glebe Island is a sufficiently large site for the abattoirs of a large growing city like Sydney? I do. Glebe Island, if a proper sea-wall were built all round it, could be made much larger than it is.
1461. In its present state, you do not think it is large enough? I do; but I point out how it could be made larger. Factories and stores could be built on the northern and western sides of the island, warehouses, and all that sort of thing, with a deepwater frontage.
1462. You look upon it as a suitable site as regards its accessibility for the purpose of sending cattle, pigs, and sheep there to be slaughtered? Yes; I look upon it as second to none for anything connected with the butchering trade.
1463. Do you think it is desirable that the cattle should be driven over that length of road from the railway? I think a light line of railway should be taken to the island.
1464. You do not think the present system of taking the cattle to the island is suitable? I am sure it is not. It is a great inconvenience to the public, besides being a nuisance and a terror in some cases.
1465. How should that be remedied? The only remedy you could have would be to construct a railway from Stanmore or Darling Harbour or Darling Island.
1466. You think it desirable that the stock should be trained into the Abattoirs? I think they should be brought direct to sale-yards at the Abattoirs. To re-truck the cattle at Flemington would never do. It would mean expense, cruelty to the animals, and all sorts of things.
1467. Does not that point to the fact that it would be better to have the abattoirs adjoining the sale-yards at Flemington? I should say it would be better to have sale-yards adjoining the Abattoirs at Glebe Island.
1468. Is there space to make large sale-yards? Yes; the same number of cattle would not come to Sydney as come to Flemington, because a lot of stock sold at Flemington go back to the country. Country buyers—for instance, from Wollongong, Parramatta, and different places—come to Flemington and buy stock. There was a buyer there from Goulburn yesterday.
1469. There could not very well be two sale-yards, because the stock are all sent to one place for sale. There may be some stock to send back to the country, and some to send to Glebe Island. It would not do to have two sets of sale-yards, because you could not separate the stock? If there were sale-yards erected near or at Glebe Island, you would find that that would be the market, and not Flemington, which would be only a sort of side show.
1470. The bulk of the animals come to Sydney for the purpose of being slaughtered? Yes.
1471. Do you regard the buildings on Glebe Island as being up to date? No; the mutton houses are not large enough nor ventilated as they should be. In hot weather they are not fit for men to work in. The beef-houses are certainly better, but great improvements could be made in them.
1472. If Glebe Island is kept going as a great slaughtering centre for Sydney, it will have to be improved as regards its arrangements and the buildings? Certainly.
1473. I understood you to say in answer to Mr. Clarke that Glebe Island is suitable for slaughtering purposes, because the cattle and other stock which are taken there do not have to go without water for thirty-six hours? The animals do not have to go without water. There is water for them as soon as they are driven there. At the present time in our bullock paddocks at Five Dock we have water laid on, and we have holes so constructed that they get filled, and if they go dry the city water is available. The stock when taken out of the train are well supplied with water up to the time they are slaughtered.
1474. How do they get on with regard to food? If the auctioneers hold them any time they feed them with lucerno hay, and if we hold them any time we do the same.

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1475. What do you call "any time"? I should say a week. I generally hold cattle a fortnight before I handle them.

1476. And you feed them all the time? Yes.

1477. Is there any foundation for the rumour which we hear sometimes that between the arrival of the cattle by rail and their despatch to the slaughter-houses a considerable time elapses without their having any food? I have heard that rumour ever since I was connected with the trade, but I have never seen it done.

1478. You do not believe there is any truth in the rumour? I am sure it is not true. All sorts of rumours get circulated about these things. If a person is not actually there when you feed a bullock, of course he never sees it fed, and it cannot be fed.

1479. As a carcase butcher, with a very large business, you deny the statement that the animals are left in a starving condition for a considerable time before they are slaughtered? I do.

1480. You think that Glebe Island will continue, or ought to continue, to be the central slaughtering-place for the meat supply of Sydney? I think so, because it is in the centre of the whole of Sydney. From Sydney we send to Manly, North Sydney, Willoughby, and all the suburbs; and likewise meat is sent away in the train. It is central for all purposes. The climate of Sydney is not like the climate of other cities, where they can kill meat in the country and let it hang for a time—perhaps two or three days or a week—as they do in parts of America and England. We have to kill the cattle, and the beef has to go into consumption very quickly, or else it goes bad.

1481. You still maintain the opinion that Glebe Island is a better site for slaughter-houses than a portion of what is known as the Wentworth Estate, which is close to the Flemington saleyards? I do. There is no other site to compare with Glebe Island in position or anything else, and no site more suitable for abattoirs than it is. As for myself, I do not care a fig if it were shut up to-morrow as far as the business goes; but if it were closed things would drift into a channel. The butchers would have a far better way to do business than they do now. They would have things more in their own hands. They would very soon form some rings, and do all that sort of thing; and the price of meat would go up considerably in the town.

1482. *Mr. Hoskins.*] They would have a better chance to kill cattle which might be diseased? Yes.

1483. *Mr. Trickett.*] That is another reason why you think it would be better to have slaughter-yards at some little distance from the sale-yards? Yes; I think the inspection at Glebe Island is perfect. In the interests of public health I think all meat should be inspected before it is put on the market. The same thing should be done here as is done in the United States. If a carcase butcher or a company—it does not matter whether it is in the city or in the country—puts up a lot of meat for sale, or sends it to a market, before that meat is allowed to be sold in the market a Government inspector gives him a certificate to the effect that the meat is fit to eat; and when he wants to sell the meat he can produce the certificate, which will clear him, and satisfy the public at the same time that the meat had been inspected. We know very well that there is a lot of meat sold in Sydney in different places which is not inspected. It is hard to inspect meat once it is slaughtered and dressed. It wants to be inspected when it is slaughtered. The inspector wants to be there, and to see the inside of the pig, beast, or sheep brought out. He can see then whether it is diseased. Sometimes the inside of a beast is diseased, but the carcase does not appear to be diseased; and if it is not inspected at that time it drifts along into the market and is sold, and nobody sees it or detects it. In a country like this, where we have an ample stock at most times—at present it is a bit short—that sort of thing should be carried out in its entirety. At Glebe Island, as the meat is slaughtered, there stands the inspector over it, and anything which is wrong with the inside he can detect.

1484. I think you said that the desiccating of the blood and offal at Glebe Island was a farce? There is no desiccating there now. It is all run into a punt, and carted away to sea.

1485. You have visited many slaughter-houses in other parts of the world? I have visited some.

1486. Have you ever been to Chicago? I was never in America.

1487. You have visited Melbourne? No; but I visited Marseilles, Depford, and Copenhagen Fields.

1488. As a general rule, when the blood and offal are converted into manure, it meets with a large sale? Yes.

1489. In Melbourne, I understand, it is a source of profit? Yes; I believe it is when it is properly handled.

1490. Would it not be advisable to do the same thing at Glebe Island? I believe it would. I think the manure ought to pay for the working of the desiccator.

1491. Have you seen any desiccating works? Only at Glebe Island. Two or three years ago the Sydney Meat Preserving Company imported a new desiccator from England, and an overseer there tells me that it works well.

1492. Is the process of desiccating offensive to the surrounding country to any extent? Not that I am aware of. I know that at times the smell from the desiccator at Glebe Island used to be offensive, but I think it could be overcome as is done in other abattoirs and in boiling-down places. You could make them condense the vapours.

1493. *Mr. O'Connor.*] As regards the smell at Glebe Island, is it not now to a very large extent destroyed compared to what it used to be years ago? A stranger may detect a smell there, but I cannot.

1494. Every precaution is taken to keep the place thoroughly clean, and the disinfecting process has been successful? Yes.

1495. Do you think that Glebe Island, as a great slaughtering establishment, is in any way deleterious to the health of the permanent residents in the locality? I do not. A number of people reside on the island, but I have never known of them to have any sickness which would arise from bad smells. For a number of years the gate-keeper has lived in a little place alongside the desiccating-house, right down among the drains, from which the Government derive some rent, but in which I would not like to keep pigs for a number of years, but I have never known him to have a day's sickness.

1496. Where do you reside? In Balmain, about a mile from the Abattoirs.

1497. Have you ever suffered in health from going to the Abattoirs? No.

1498. Have the members of your family ever suffered in health from going past the Abattoirs to and from Sydney? I have never known sickness to arise from bad smells or anything connected with the island.

1499. Have you ever heard of an epidemic breaking out among the large population immediately surrounding the island, or of people being very ill there? No. Taking Balmain as a whole, the people are the most healthy people about Sydney.

1500. Are the men who work at Glebe Island a healthy body of men? They are very healthy. The butchers, I suppose, are the healthiest body of men you could find.
1501. At what time do these men go to work? They start at 6 a.m. and leave off at 6 p.m. The advantage which Glebe Island possesses over any other place is that you can telephone from any suburb, no matter how hot the day is, for a body of beef, and the men stand up, down it comes, and out it goes, delivered in the shop within an hour. You could not do that if the Abattoirs were situated in the country. Although the men are at the Abattoirs from 6 a.m. to 6 p.m., often they do not work above three or four hours a day.
1502. In your opinion, the place is healthy for the men to work in, and the people surrounding the island have no ground to complain that they are inconvenienced by any smells? That is so. The only drawback to the men is, that the mutton-houses are not big enough to work in in very hot weather; but I never knew one of the men to become sick from working there.
1503. Is it not a fact that they pay a rent at Glebe Island for unhealthy places? That is so.
1504. The rents of the houses there are enormous? Very large.
1505. And the facilities for the working men, and even the employers, are very poor? Yes. We have not the accommodation for the working men we should have. There ought to be a good dining-room for the men. There is a very small place, but the men do not care to go into it. I think there is only one bath-room to accommodate all the men. There ought to be a bigger place for the men to undress in and hang up their clothes.
1506. The slaughter-houses are very narrow and poor? Very narrow.
1507. And the rents are very high? Yes.

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Daniel Sheehy, Shipwright and Contractor, Glebe, sworn, and examined:—

1508. *Chairman.*] You are a member of the firm of D. Sheehy and Sons, shipwrights and contractors? Yes.
1509. *Mr. Lee.*] Where do you carry on your business? At the Glebe, just above the bridge.
1510. In your opinion, is there a necessity to erect a new bridge to Glebe Island? I think you could do better without a bridge.
1511. What would you substitute for the bridge? One proposal is to make a road starting at the intersection of Pymont Bridge Road and Blackwattle Cove, tunnelling under Glebe Road, coming out at the junction of the Allen Estate with Rozelle Bay reclamation picking up the tram line at Johnstone-street, and following it to the junction of Abattoir Road and Gordon-street.
1512. That would practically bring you on to the tram-line? You can leave the tramway at Gordon-street and go along Abattoir Road.
1513. That would be a long way round for the people who use Glebe Island to get into the city from the Abattoirs? Only for the Miller's Point portion. It would be a short road, I think, to Paddington, Redfern, and all those suburbs.
1514. If they wanted to go into the heart of the city, it would be a long way round coming from Glebe Island? Yes; but you would do away with the bridge. You have a lot of valuable property there. I believe that if the bridge was open, you could go round by that way more quickly than you could if you waited till the bridge was shut. It would be a nearer route to Paddington and all the suburbs, and the city is growing out that way. It is only to Market-street and such places that the present bridge is any advantage.
1515. The construction of a tunnel from Pymont Bridge Road to the reclaimed land at Annandale would be a very costly undertaking? I went into the matter, but not minutely. I reckon that for the excavations, brick, and everything, it would cost about £50,000.
1516. From Glebe Point across the reclaimed land would be an ordinary road? Yes.
1517. Have you any idea how long the tunnel would be? Half-a-mile was the most I could make it.
1518. To carry the ordinary vehicular and pedestrian traffic, it would have to be of a considerable width? Yes; you could make the tunnel as big as you liked.
1519. Did you take that matter into consideration? No; I allowed for a width of 66 feet and a height of 20 feet.
1520. Admitting that that would be sufficient to carry the traffic, do you not think that there will be some very grave objections to taking a large traffic of that kind underground? I cannot see it. It would be a straight line right across to Balmain.
1521. I presume your main object is to keep the whole of Blackwattle Cove and Rozelle Bay intact for shipping purposes? Yes, without a bridge.
1522. And when it is dredged out, to enable vessels to come in and out at all times, and to allow ordinary traffic to go by the route you have described? Yes.
1523. Have you ever formulated this idea to people there, or is it a private scheme of your own? I have spoken about it to several, but they seem to object to the tunnel; they would sooner have a road. You could get a road cheaper than a tunnel. You could get a road by nearly the same way as the tunnel with about the same grade as there is in Charlotte-place for about £40,000, including the land resumption and everything.
1524. That would be to get a straight road? Yes.
1525. If it were necessary to have a road on your lines, could it not be done by picking up your line of route at Glebe Road, and following that up to Ferry-street, and thence across to Pymont over a bridge? You want to get off from the Pymont Bridge. From the end of Blackwattle Wharf, near the Glebe, you want to get off, and the best way to get off from there, I reckon, is with a tunnel, and then you could have a road as level as this floor: but if you got off that open road you would have to go a different direction, but not much. It would not make much difference.
1526. There would be only the angle of Cross-street, which, in point of time, would not increase the length much? It would not increase it by two minutes. Then you could go across the Glebe Point Road. At the tram terminus it would not interfere with the tram—and down on to the reclaimed land and across the head of the bay. If you were to visit the locality you would see the advantage of the proposal quite plainly, or you might get the route surveyed, and ask a practical man to give you his opinion on the proposal.

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- D. Sheehy. 1527. If the tunnel were made it would pass very largely under buildings? It would be well under the buildings, as the Glebe is very high land. I reckon that it would go somewhere under Toxteth House, or a little lower down.
- 2 July, 1897. 1528. How do you arrive at your estimate that it would cost £50,000? Excavation of a tunnel, half a mile long, 66 feet wide, by 20 feet high, 129,360 yards, at 2s., £12,936; and brickwork, 16,000,000 bricks at 40s. per 1,000 laid, £32,000.
1529. Suppose the tunnel portion of your scheme could not be carried out satisfactorily, could a road be obtained, say, from the Glebe Point Road to Pymont? You must start from the end of Blackwattle Wharf, which will come in for everybody and everywhere—you start from that point, and go across vacant land, and come up on an angle, and you get a good road, which I reckon, speaking roughly, could be made for about £40,000.
1530. Have you lived in that locality for any time? I have been there about three years, but I have only lived there about fourteen months.
1531. What do you think of a proposal to make a bridge from Globe Point to Mullens-street on the other side? That would not be a bad idea. You could get a good high bridge there—about 40 feet high I should think; but it would increase the traffic along Glebe Road a lot. That road is none too big now for the traffic. It is a very narrow road, and with a double line of tram a good wide cart cannot pass the tram, and if it pulls up against the kerb the tram has to squeeze by.
1532. Your objection would be not so much to the site as to the bridge? If the road could be widened the traffic of all the suburbs would go that way.
1533. The street as it stands would not be able to carry the traffic? No; it would be blocked all the time.
1534. If that idea were adopted, that road of necessity would have to be widened? Yes; it would not be much of a job to widen that road, because, in accordance with a condition in Allen's plan of subdivision, nearly every house along the road has been kept back 14 or 15 feet from the street. If you took that frontage it would make the road wide enough for the traffic.
1535. It would have to be resumed? Yes; I do not think it would be very costly to resume it.
1536. Supposing it could be carried out, do you think it would be a good route? It would be a very good route, and you would not block much water above that point.
1537. I suppose the vessels which will be accommodated in future at the top of Rozelle Bay, will only be small vessels? Small schooners and ketches.
1538. I suppose a bridge with a fairway of 40 feet would be sufficiently high to suit those vessels? Yes.
1539. You would want no swing in the bridge? A swing would not be necessary there. You would want the piers to be about 70 or 80 feet apart so that vessels could pass under the bridge.
1540. Are there any special reasons why the traffic should be kept away from Glebe Island, and brought in by a more direct route? Most of the traffic which comes from Glebe Island comes from Balmain. I suppose for one person who uses this bridge ten persons would use the other.
1541. Why would it increase the travelling public ten times? Because it would be a shorter route for the majority of them, for they nearly all go to the south. It is a short-cut only for the people about Miller's Point, but for Redfern, and all the big suburbs to the south, the other route would be shorter.
1542. But the fact remains that Balmain is a large centre of population? Yes.
1543. And it is also getting to be a manufacturing centre? Yes.
1544. The people who now come by that route to the city and to the railway at Darling Harbour and Redfern are compelled to use that road? Yes.
1545. Where would you find ten times more people go over the road you suggest? You have to come to the intersection of Jones-street and Pymont Bridge Road to get to the Glebe Island Bridge, and if you measure the distance by each route from that point, you will find that the route I advocate is shorter than the other.
1546. But the people of Balmain would not be in such direct communication with Pymont Bridge as they are by the present route? I beg your pardon, sir, they would; and if you measure the distance you will find that they will be just as close.
1547. Suppose they were equally close, what advantage would there be? The advantage of doing away with the bridge, and giving you just as good a communication. A bridge is an everlasting expense from the time it is erected until it tumbles down; and when it is open it is always a nuisance.
1548. Your opinion is that the day for a bridge to Glebe Island disappears, and in consequence of the reclamations and the opening of the road on the southern side of Rozelle Bay, the road should be made direct from Pymont Bridge Road, *via* Rozelle Bay, to Balmain? Yes.
1549. Which road would give communication to Balmain and other suburbs on that side, and also afford the necessary accommodation to the Abattoirs, and for the stock going to the Abattoirs? Yes.

TUESDAY, 6 JULY, 1897.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHREY.	CHARLES ALFRED LEE, Esq.
The Hon. JAMES MOSKINS.	JOHN LIONEL FEGAN, Esq.
The Hon. CHARLES JAMES ROBERTS, C.M.G.	THOMAS HENRY HASSALL, Esq.
The Hon. WILLIAM JOSEPH TRICKETT.	GEORGE BLACK, Esq.
The Hon. DANIEL O'CONNOR.	FRANCIS AUGUSTUS WRIGHT, Esq.
HENRY CLARKE, Esq.	FRANK FARNELL, Esq.

The Committee further considered the expediency of constructing a New Bridge at Glebe Island.

Henry Macnamara, Junior, Carcase Butcher, Glebe Island, sworn, and examined:—

- H. Macnamara, Junr. 1550. *Chairman.*] You are a carcase butcher, managing a carcase butchering business? Yes.
- 6 July, 1897. 1551. *Mr. Roberts.*] Does your business frequently take you over the bridge to Glebe Island? On an average about twice a day.
1552. Have you been journeying that way for many years? About fifteen years. 1553.

1553. Can you give, from experience, any reason why a new bridge should be erected? I do not think a new bridge should be erected there.

1554. Do you never experience any difficulty or great delay in getting across the bridge? Yes; delay is occasioned by vessels passing through the opening, and the delay is increased by the fact that only one string of vehicles can pass over the swing at one time.

1555. But notwithstanding an inconvenience of that kind, you do not think the time has arrived when a new bridge should be erected? I think if the swing were widened, so as to allow two lines of vehicles to pass at one time, the bridge is capable of carrying the whole of the traffic. I suppose we have thirty waggons and butchers' carts running to and from the island daily.

1556. Are you aware that the timbers of the bridge are said to be in a state of decay? I have noticed them repairing it for many years; but I do not see that it is getting any worse. I have not taken particular notice of its state.

1557. You did not form your opinion from any knowledge as to the state of the structure? No.

1558. Did you ever notice that it was at all rickety? Not lately; I did about two years ago, but since then it has been built up with iron girders in the centre. At one time they prohibited our trollies going to the wool-washing, tanning, and boiling places from carrying a weight over 4 or 5 tons.

1559. Has that restriction been removed? Yes.

1560. Vehicles can travel at any rate if they think fit? I travel over the bridge pretty fast, and I have never been stopped.

1561. You are not aware of any restriction as to the pace to be travelled? No.

1562. Would you recommend an alteration in the position of the opening;—would it be better to have the swing placed in the centre? As far as the vehicular traffic goes, I do not think there is any objection to the opening being where it is. I do not see any benefit from putting it in the centre.

1563. What work would have to be carried out to allow two vehicles to pass on the swing? I have seen two vehicles pass one another on the swing as it is, but with difficulty. I think it could be made sufficiently wide as the bridge is. If the footpaths on either side were taken in, it would widen the swing considerably, and on the outside of the bridge a footpath might be built similar to that on the Five Dock Bridge.

1564. Assuming that the bridge is sufficiently strong to carry the traffic, you do not see any necessity to alter the existing state of things? With the exception of the widening of the swing, I do not; and if that alteration is made, I would suggest that a certain time be fixed for vessels to pass through the opening during the day. I have seen thirty or forty vehicles stopped on each side of the bridge allowing one little schooner to pass through the opening.

1565. How much wider do you think the swing ought to be made? Wide enough to give sufficient space for two vehicles to pass. I should think it ought to be 6 feet wider in the cart-track.

1566. Is there any footpath for pedestrians on the bridge? Yes; on both sides.

1567. Are they exposed to any danger when the traffic is very great? They have need to be careful.

1568. Is there a guard to protect the pedestrians? Only in the shape of a piece of timber about 12 or 18 inches high, and any person walking near to that guard is, perhaps, in a little danger.

1569. Would you recommend the taking in of the footpath right across the bridge? No; only on the swing. There is plenty of room on the other part of the bridge for vehicles to pass one another at any pace they choose, if they exercise ordinary care.

1570. Has the shipping traffic through the swing increased of late? I should think it has. It has been increasing for a number of years. I can remember the time when I do not suppose above one vessel a week would pass through, with the exception of the tug-boats; but they have increased the height of the central span, so that the tug-boat taking out the offal to sea can go right under the bridge without opening the swing.

1571. Do you know whether the public suffer any inconvenience in passing the Abattoirs? I have not heard of any complaints. Of course, there has been an uprising against the Abattoirs for a great number of years.

1572. Is there any offensive odour which could be objectionable to passers-by? I do not think so; but I may be more used to it than others, being there so many times.

1573. Would you think it necessary to make another road for the public nearer to the shores of White Bay? No; there is a big wall right round the Abattoirs, and it is only at the sheep-yard down towards White Bay, or the main gates, when carts are going in or out, that the public can see anything. I have seen hundreds of people pass there, and they do not seem to take any objection.

1574. Do you regard with favour Glebe Island as a site for abattoirs? I do not think there could be a better site.

1575. What are its chief recommendations? The Abattoir is built on a hill, and the drainage runs straight down to a punt. The island is near to the city for the butchers to drive across, and buy their supplies of meat. It is also handy for the carting away of the skins and by-products out to the different works. Then there is the advantage of the island being surrounded by the harbour. A large number of sheep are killed on the island, and a barge is brought to the foot of the hill to take the carcasses round to the freezing-chamber at Kirribilli Point.

1576. Have you visited any abattoirs elsewhere? At Riverstone, Melbourne, and Adelaide.

1577. Are there any improvements in those abattoirs which you think ought to be made in ours? In Melbourne, I think, the sheep-killing is done upstairs. That is an improvement, because it allows the offal and skins to be thrown away off the floor, so that if there is any disagreeable matter it does not rise, and interfere with the carcasses hanging there.

1578. Do you think there is sufficient space now for the work done at the Abattoirs? I think there is more than sufficient space at the present time. There is a shortage of stock coming in, but at any time the inspector has been able to cope with the increased supply of stock. I have never heard of any stock being brought there where he could not provide accommodation to have them killed. We do the largest business on Glebe Island. We pay a rent of from £45 to £50 a week for three mutton-houses, a beef-house, a calf-house, and a pork-house.

1579. Does any other firm lease as large a space as you do? No. I think the greatest number of houses any other firm occupies are two.

1580. How are the stock brought to the Abattoirs? The sheep are driven in along the Parramatta-road, and from that point along Bullock-road.

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1581. Do the stock approach the Abattoirs from Balmain? The pigs and calves from the city yards, and the cattle and bullocks come from Balmain.

1582. Do you know that the driving of the stock through the streets is a source of great inconvenience and a danger to the people? I have heard so.

1583. Have you heard many complaints? Only what I read in the newspapers. Generally, I have not heard many complaints. I think it all could be remedied.

1584. In what way? I would suggest that the cattle should be driven from Homebush or the paddocks between midnight and 3 or 4 a.m.—say, 3 a.m.—and that the electric light should be installed on Glebe Island, so that the inspectors could count them in and inspect them just the same as they do in daytime. There is no traffic on the roads between those hours. The whole of the sheep could be brought in before 8 a.m. It would do away with the nuisance of bringing in the stock during the day. The pigs and calves from the city yards could be brought to Glebe Island before 8 a.m.

1585. Could this regulation be faithfully adhered to without greatly inconveniencing the persons engaged in your line of business? We are in the largest way of business at the island as regards pigs, calves, sheep, lambs, and cattle. I feel certain that if that rule were brought about it would not be any great inconvenience to us, and I take it, therefore, that it would not inconvenience anyone else. It would stop all these complaints about the driving in of cattle in the morning.

1586. At present there are no regulations as to the driving of cattle? Yes, there are. The cattle must all come in between 6 a.m. and 8 a.m., and if not in before 8 a.m. they are liable to a fine of so much a head.

1587. You think it should be fixed much earlier? They can drive the cattle easily during the night—from midnight to 3 a.m. Hundreds of times we have had our cattle brought in during the night.

1588. At what hour are the sales generally held at Flemington? The sheep sales start at about 9.30 a.m. At present they are getting the sheep sales over before lunch on Monday, and at about 3 p.m. on Thursday; but when there is any surplus of stock it takes them all day to sell the sheep. The cattle sales start at 1.30 p.m. on Monday and Thursday, and they are often not over until 5 p.m. or 6 p.m. They can bring cattle straight in from Homebush in about three hours nicely.

1589. Would it add materially to the expense? Not at all. There is only the one droving to be done.

1590. In what time have the stock to be removed from the sale-yards? They give the buyers up to next day—twenty-four hours.

1591. Do you think there will be any necessity to connect Glebe Island with the railway system of the Colony? Not the slightest necessity. I am sure it would never be workable.

1592. For what reason? Suppose that we were getting from 350 to 400 head of cattle for Glebe Island. On the journey down from the borders of Queensland the cattle very often are untrucked and trucked again. We have to suffer enough from the bruises which the cattle receive in the train on the journey down; and we would not re-truck them for such a short distance to Glebe Island. We pay a rent of £40 or £50 a week at the Abattoirs, and if we had to pay for the trucking of the cattle to the Abattoirs, it would simply be a monstrous act, and the result would be that we would have to go out into the suburbs to kill.

1593. The quality of the cattle would be seriously deteriorated? Yes.

1594. And you would be put to a large amount of unnecessary expense? Yes; it would mean that all the stock would need to be trucked from Homebush as soon as it was bought, and there would not be yardage accommodation on Glebe Island for it.

1595. Would you regard with favour the proposal which has been spoken favourably of here to have sale-yards at Glebe Island? There is not room enough. The space occupied at Homebush in the selling of cattle and sheep is very large. Suppose that stock arrives on Friday or Saturday for Monday's sale, it means that the auctioneers have to hold the sheep and cattle for that day. Take, for instance, the number of sheep we have yarded—between 70,000 and 80,000, and 75,000, I think, was the largest yarding—there would not be nearly sufficient room at Glebe Island for anything like that number of sheep, let alone the cattle. Again, all the stock which is sold at Homebush does not go to Glebe Island.

1596. Does 75 per cent. of it go there, or more? Barely 75 per cent.

1597. Where does the remainder go? To suburban slaughter-houses, as they call them, and up country a few miles outside Parramatta, Penrith, and Liverpool, and across to Hunter's Hill.

1598. To different suburbs through which trains pass? Yes; cattle are often bought at Homebush and trucked back to Maitland. Buyers from Liverpool and Campbelltown come down to Homebush to buy. If the whole of the stock were brought to Glebe Island these men would have to go there to buy, and truck the stuff back.

1599. You regard the sale-yards at Flemington as being in a position fairly convenient to the majority of the people engaged in the trade? It suits country people, and it suits metropolitan people.

1600. *Mr. Black.*] I understood you to say that the swing in the present bridge to Glebe Island does not interfere with the road traffic;—does it not interfere with the water traffic? In what respect.

1601. Is it not difficult for boats to get in and out there? There has been a difficulty with the larger boats.

1602. Even with the smaller boats, is it not in such a position that a boat requires very careful handling, and some time is wasted in getting her into the necessary position? Yes; I have seen time lost in doing that kind of thing.

1603. Does not anything which interferes with the water traffic interfere with the road traffic? Yes: I suppose it would cause the road traffic to be delayed.

1604. We may infer from your evidence that a central swing would be more convenient for the road traffic as well as the water traffic? It might not be worked with any more efficiency than the present swing at the end. I am not experienced in the navigation of vessels.

1605. You were asked this question: "Do you think that a new bridge is required there";—am I right in inferring from your answer that you think a new bridge in some other position would be better? No; with the alterations that I suggested the bridge as it is would meet all requirements.

1606. What area do you think is in use at Homebush for sale-yards? I could not say, as I am a bad judge of areas.

1607. You are sure that there is not a sufficient or a similar area available on Glebe Island? No; nothing like it.

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1608. Have you taken the hill at Glebe Island into consideration in answering the questions? Yes; I am speaking not only of the yards at Homebush, but also of the paddocks, where they have to be drafted before they can be brought in for sale.
1609. These paddocks would require to be very roomy? Yes.
1610. What extent do you think would be necessary? I think I have heard them say that they have paddock accommodation at Homebush, just round about the yards, to the extent of about 1,500 acres. The Wentworth estate is, I think, 1,000 acres in itself.
1611. Can you suggest anything which would improve the efficiency of the Abattoirs at Glebe Island? I think the place is quite capable of doing the whole of the slaughtering which is required there at the present time. Of course the slaughter-houses are not of the most improved style. I think the whole of the slaughtering—both cattle and sheep—ought to be done overhead, and the offal and one thing and another thrown down to be treated underneath in a separate room.
1612. That is the practice followed in the Meat Preserving Company's works? That is the practice followed in America, too, I believe.
1613. *Mr. O'Connor.*] On many occasions you have seen vessels jammed for a considerable time in the swing of the bridge? Yes. I have known the traffic to go right round by White Bay and through Leichhardt, but that does not occur very often. It has occurred only three times to my knowledge.
1614. If the swing were improved all the other conditions would be fair? I think so.
1615. *Mr. Trickett.*] As affecting the suitability of the Abattoirs at Glebe Island, may I ask how long are animals kept there before they are slaughtered? We bring in our sheep this afternoon for next day's slaughter, and the cattle come in in the same way, but, of course, in the morning. We do not kill cattle straightaway, unless we happen to be out of cattle, and then I bring them in from Homebush through the night, and they are allowed to rest three or four hours before they are slaughtered.
1616. Suppose they come from outlying places, such as Bourke, how many hours' rest do you give them before they are driven from the sale-yards at Homebush to Glebe Island? From twenty-four to ninety-six hours. It is very seldom that they are killed straightaway.
1617. Is not twenty-four hours a very short period to elapse before they are killed? I do not know. They seem to be in a settled condition as far as the meat is concerned—not what they term "veiny."
1618. Dr. Ashburton Thompson, in his evidence before another Committee, said it is necessary for the good state of the flesh that an interval of three days should elapse before the animals are killed? It is a matter of opinion. Dr. Thompson may have that opinion; I have not.
1619. What do you think should be the shortest time? I think that if a beast gets twenty-four hours' rest, and a drink of water, that is sufficient
1620. To compose it for the purpose of animal food? I think so.
1621. There is no desiccating plant in use at the island now? No.
1622. Do you not think a desiccator would be a great improvement on the present mode of wasting the material? No. I think the present mode is by far the best. The stuff is taken away fresh, and there is no smell arising from the Abattoirs now as there used to be when the desiccating plant was at work.
1623. Were not the desiccators of a very inferior and primitive construction? I believe they were.
1624. If the offal and blood could be converted into a marketable commodity without being offensive to residents of the neighbourhood, do you not think it would be desirable to adopt that plan instead of sending the stuff out to sea and wasting it? It is hardly a question of waste. Perhaps it might cost as much to work up the blood and offal as you would get for the manufactured article.
1625. As you have visited the Melbourne Abattoirs, you know that they go in for desiccating there? It is some time since I was there. I think they did, but I was not there very long.
1626. Perhaps you are not aware that the work is attended there with a profit? No. If we had a slaughter-house away from Glebe Island I do not think we should bother to work up the blood as they have done at Glebe Island.
1627. Have you gone into the commercial aspect of the question? No; but I have spoken to plenty of men who have done so.
1628. What is your opinion on this point? It is just as well to run it away as to work it up.
1629. You think there is nothing much in it? No.
1630. Do you think freezing-houses in conjunction with the Abattoirs are necessary? I think it would be a very good idea. There is room enough there for a freezing-house, and to my mind it could not be put in a better spot, for vessels could go up to the foreshore of the hill and be loaded from there.
1631. Do you think that a cool storage department on the island would be a very good adjunct to the Abattoirs? Yes, for the purpose of export.
1632. It would be put right on board the ship, instead of being punted away? Exactly.
1633. *Mr. Lee.*] Are you satisfied that the bridge to Glebe Island is in a proper position? Yes, and I think it meets requirements.
1634. Are you quite satisfied with it? Yes.
1635. Would you offer any objection if the new bridge were built from Glebe-road to Mullens-street? I do not think that is necessary. Most of the traffic which passes over there to Glebe Island is in connection with the Abattoirs, and if people wanted to go from the city to the Abattoirs they would need to drive round by a circuitous route.
1636. Could the road be deviated from the site of the present bridge round the island, either to the north or to the south, with advantage to the public as well as those who use the Abattoirs? Possibly it could be done, but I have not heard any great outcry on the part of the public who pass the Abattoirs.
- 1636½. Would it be any advantage to the occupiers of the Abattoirs to have the public traffic taken away from the Abattoirs-road? I do not think so.
1637. You offer no objection to it? I have no objection to the traffic past the Abattoirs
1638. Whether it comes past the Abattoirs, or is taken round on either side? It is quite immaterial to us.
1639. *Mr. Wright.*] Would it not be better if a new road were formed across the island with a better grade and a better approach? I do not suppose Glebe Island is the nicest place in the world for people to pass, and if it were decided that a new road should be put there it would be an acquisition to the public who travel to these suburbs.
1640. The road on the eastern side of the island is very narrow and steep for heavy traffic? Yes.
1641. It would be better if the road were widened and the grade flattened by cutting out some of the hill? I think it is only occasionally that any vehicles get stuck there with loads. We have no difficulty with our teams.

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1642. You do not, but there is some traffic very much heavier than yours, and that steep grade is inconvenient to them? Our traffic would be coming down the hill.

1643. Do you not think that if a new bridge is built the whole of the approaches should be very much widened and improved? If a new bridge is built no doubt it would be better if the approaches were widened.

1644. Is there water on the island for the cattle when they come in? In every pen.

1645. They do not suffer for want of water? No.

1646. I suppose there is no such thing as feeding the cattle? There is no occasion to feed them, because they are killed within twenty-four hours. If they are left from Saturday to Monday the regulations of the Abattoirs demand that they shall be fed, and of course we feed them.

1647. If the island were levelled down, and proper yards were made, and proper facilities provided for the beasts to be watered and fed, would it not be of very great advantage to yourselves if the cattle were brought in there for sale? I daresay it would be an advantage to have them handy to the slaughter-house, but if that is required to be done, why not have the slaughter-houses up near the sale-yards.

1648. From what you have said I gather that you consider the island is the best site which could possibly be obtained for an abattoir, being isolated, with perfect drainage, and removed to a large extent from any population? Yes.

1649. Now, if the island were flattened down, and proper yards built, do you not think that it would be an improvement to have sale-yards for all stock likely to be required at the island? There would not be room enough for that.

1650. You are quite positive about that? Yes.

1651. The island contains an area of $34\frac{1}{2}$ acres, and at White Bay there is a reclamation of 12 or 14 acres? I am sure there would not be room enough there.

1652. The disadvantage to that site, you think, is that you could not possibly get resting-paddocks for the cattle? No.

1653. I suppose the resting-paddocks at Homebush are perfectly denuded of feed? There is no feed on them, with the great number of stock passing through the yards.

1654. All they get is the privilege to lie down and a drink of water? Yes.

1655. Is there not room enough for that at the island? I suppose there is, but I do not approve of it.

1656. If it is determined to do away with the present bridge, you think the new bridge should be made direct from Pymont, and not from Glebe Point, to the island? From Pymont, most certainly.

1657. *Mr. Hassall.*] It is a great advantage when you take stock out of trucks after a long journey to be able to put them into a roomy paddock;—to walk about and cool off after the journey, which naturally creates a state of fever in horned cattle? Yes; and in sheep as well.

1658. For that reason you think it would be very injudicious to attempt to remove the sale-yards from Flemington, where every convenience except grass is available? Yes.

1659. There is any amount of water, and roomy paddocks are available for the stock to lie down and rest? Yes.

1660. Did you state that it would not be advisable to re-truck the stock from Homebush? I did.

1661. Are not the cattle knocked about very much in the sale-yards? Yes; from the trucking. Cattle coming in by road are free from bruises. Bullocks, when they have been driven about, trucked and re-trucked, get wild and sulky, and it would be a terrible thing to re-truck them.

1662. That operation at Homebush would not only be attended with a great deal of danger, but would deteriorate the value of the beast most considerably? Most certainly.

1663. Therefore the road-driving to Glebe Island is beneficial to the cattle rather than otherwise? Exactly. They are driven in quietly.

1664. As a practical man, I presume you would say that the location of the sale-yards at some little distance from the slaughter-yards is an advantage to the cattle rather than otherwise? Certainly.

1665. If the slaughter-yards were in the immediate vicinity of Homebush, the chances are that cattle would be run in and killed there straight away without waiting twenty-four hours to cool? Yes.

1666. So that your beef would not be of as good quality when distributed to the public as it is now? It would not.

1667. You have a good deal of traffic over the bridge in connection with your business? We have upwards of thirty waggons, carts, and trollies passing to and fro, and as they average about four trips a day to the island, they would pass backwards and forwards 240 times.

1668. Any stoppage of the traffic at the bridge means a considerable loss of time, and in some cases, I presume, considerable inconvenience? Certainly.

1669. Can you get into the Abattoirs after 6 p.m.? No. The gates are closed at 6 o'clock sometimes, and at 7 o'clock at other times.

1670. The regulation is that you cannot take any meat out after 6 p.m.? Yes; in an urgent case you have to get special permission.

1671. Suppose a cart is expected to return to the Abattoirs before the gate is closed, but owing to a block of the traffic on the bridge it does not arrive at the Abattoir gate until 6.5 p.m., it has to go back to the city empty? Yes. It is very desirable to have the bridge erected in such a manner that it will be as free as possible from blocks, because it injures our business. I have seen three or four of our vehicles on either side of the bridge when a block has happened, and that is why I suggest that a certain time should be fixed for the vessels to pass through the swing, no matter what bridge is built.

1672. Do you suffer any great inconvenience from the swing? Suppose there are forty or fifty vehicles on either side of the swing, the vehicles on the bridge are allowed to pass over before any vehicles are allowed to come in off the road. That regulation is the outcome of a suggestion I made to the man in charge of the swing three or four years ago, when they complained that the bridge was in a bad condition and there was so much traffic. I asked "Why let the traffic come off the road and pass over the bridge at the same time as the traffic on it which was blocked." There would possibly be from eighty to 100 vehicles on the bridge, which would mean a great strain on it. Now, if you are on the roadside, you have to wait for the traffic to come off the bridge.

1673. Has the traffic increased very largely of late years? Yes. Drummoyne, Birkenhead, and all those places out there have been built upon largely, and consequently there is a great deal more traffic.

1674. The great bulk of that traffic comes over the bridge? It all comes into Sydney by that way.

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1675. The bridge which was suitable to carry the traffic of fifteen years ago is now practically out of date? It is as far as the swing is concerned.

1676. It would be a great advantage, not only to Glebe Island, but to the western suburbs, if a larger and more convenient bridge, with a wider swing, were erected? I think the bridge is all right if the swing were widened.

1677. The great inconvenience in connection with the bridge is the narrowness of the swing? Yes.

1678. Do you think it would be justifiable to erect a more convenient bridge, in view of the evidence we have had that the structure is comparatively unsafe? If the structure is unsafe it will be just as well to have the bridge made a little wider, with a swing which will enable two vehicles to pass in opposite directions.

1679. You have no doubt that the Abattoirs will be retained at Glebe Island for some years to come? I think so. We are going to leave Glebe Island this year, and we are now making arrangements to kill in the country, in order to reduce the heavy expenses we are under—not that we are dissatisfied with Glebe Island as a killing centre. We intend to go to some place along the line within a radius of 15 miles of Sydney, and bring in the meat by rail to Darling Harbour, where we have a meat-room. Most of our meat is carted there from the Abattoirs for the Sydney trade.

1680. A considerable quantity of meat comes from Riverstone to Darling Harbour? Yes.

1681. You propose to carry on your business exactly as the Riverstone Company does? Yes.

1682. I presume, in the event of your leaving the island, somebody else will try to get the accommodation you occupy? They may. There is plenty of room there now if anyone wants to get it.

1683. I presume the consumption of meat is increasing year by year? Yes, our business has increased. A few years back there was only one slaughter-house, but as the population of the suburbs has increased I suppose between Sydney and Parramatta, there are on either side of the suburban line twenty or twenty five suburban slaughter-houses, which stop the local butchers from coming in to Glebe Island to make their purchases. Glebe Island does very little business further out than Petersham.

1684. Have you any idea of the system of inspection at the country slaughter-houses? I do not think there is any inspection at all. A man can kill at these places at any hour he chooses, and on Sunday as well. On Glebe Island no killing is done on Sundays, and you have to kill within certain hours, and in the presence of inspectors; but in the suburbs there is perhaps one inspector for six or eight slaughter-houses, and, of course, it is utterly impossible for him to inspect all the meat.

1685. I suppose, as a rule, they kill when he is not there? I know I should if I were out there. I suppose they do the same.

1686. Under these conditions, I presume it is exceedingly probable that a lot of meat which would not pass inspection at Glebe Island goes into consumption? There is not the slightest doubt about it. I have been buying stock at the city yards for a good many years, especially pigs. If a man's pig is condemned at Glebe Island the auctioneer has to refund to him the purchase money. Therefore, if an auctioneer is selling a pig, or a pen of pigs, which he thinks are diseased, it is to his benefit to see that somebody gets them with a chance of their being killed without being condemned by an inspector, and very often the auctioneers arrange with outside buyers and sell to them privately. The remark is often made, "At suburban slaughter-houses no inspection, and no chance of any refund." There is not the slightest doubt that stock is killed in suburban slaughter-houses which is diseased.

1687. And which would not pass muster at Glebe Island? Yes. There is no stock killed at Glebe Island without its being properly inspected. There is a whole army of inspectors at the island.

1688. It is utterly impossible for a country inspector, in charge of eight or ten slaughter-houses, to inspect the stock slaughtered at those places? Yes.

1689. If they had any diseased beast on the premises they would keep it out of sight until the inspector had gone, and then put the knife into it and dress it up and send out the meat? There is no doubt about that. An inspector under the Board of Health told me that he went out to a certain suburban slaughter-house where they had a fall of two head of cattle on the ground slaughtering. He inspected two beasts and condemned them. The man knocked off killing, and the inspector said, "Are you not going to kill any more?" and the man replied, "Not until you have gone." The inspector presumed that after he had gone the killing went on.

1690. There is a proper system of inspection at Riverstone? They have an inspector there.

1691. If you started operations in the country you would want an inspector at your establishment? Yes; I would offer no objection to an inspector.

1692. You get a refund for any beast which is condemned? Not for any cattle; only for the pigs.

1693. *Mr. O'Connor.*] Do you not get a proportion in respect of cattle? No. Some time ago if you had any cattle condemned you would get two-thirds of the cost price refunded. Now that is done away you do not get anything. That is where it benefits suburban slaughter-houses, who get rid of any cattle which are diseased.

1694. *Mr. Hassall.*] In that case it is possible that some steps may be taken to more properly supervise country slaughter-houses, or compel them to slaughter at places where they may be supervised? There is any amount of room to kill the whole of the cattle at Glebe Island. It is only a distance of 8 or 10 miles to carry the carcasses. They carry the carcasses now from Glebe Island right out to Waverley, which is no further from Glebe Island than is Ashfield or Burwood. If the Waverley Council would license a slaughter-house in that borough, there is no doubt that there would be a slaughter-house out there. If the whole of the stock within a radius of 15 miles were killed at Glebe Island, there is plenty of room, and the public would be well satisfied that no diseased meat would go into consumption.

1695. They would know that the meat was sound as far as human judgment could prove that it was? Yes.

1696. If this evil is growing, some steps should be taken to protect the public? Yes. We send meat from Glebe Island as far as the Rookwood Asylum, a distance of 14 miles, I think, and if we can do so in that case it can be done in every case.

1697. There is every possibility of Glebe Island being fully occupied for some years for the slaughter of cattle for consumption in the city and suburbs? Yes; but if they keep on erecting many suburban slaughter-houses there is not the slightest doubt that most of the trade will be taken to those places where there is no inspection.

1698. *Mr. O'Connor.*] Have you heard that the bridge was built specially for Glebe Island, and for the convenience of the business done at the Abattoirs? I have heard that.

- H. Macnamara, junr.
6 July, 1897.
1699. Since its erection, Balmain, from a very sparsely-populated place, has become a great city? Yes.
1700. Do not all the people who use vehicles to come to Sydney cross by that bridge? Yes; all the traffic from Balmain, Birkenhead, Drummoyne, Gladsville, and Ryde comes by that way to Sydney.
1701. One thing which surprised me during your examination was how can that bridge, which was built twenty-five years ago, only to carry the traffic between Sydney and Glebe Island, be suitable now to carry the traffic between Sydney and all those suburbs, as well as the traffic to and from the Abattoirs? If it was built too large in the first instance for the requirements of the island, of course it will bear out my argument that it will do now to carry the traffic; but if the bridge is in an unsafe condition it does away with my contention.
1702. How long has the rule that you may not enter the Abattoirs after a certain hour been in force? The gate is open until 6 p.m. in winter and 8 p.m. in summer.
1703. Twenty years ago you could go to the Abattoirs up to 11 p.m., and sometimes up to 1 a.m., and then they had as much as they could do to get over the bridge;—how can that bridge to-day, with so many people travelling from Drummoyne and Balmain to Sydney, be capable of carrying all the traffic? My opinion is that it is capable of carrying the traffic if the swing were widened; but I may be wrong in that respect.

Walter Cummin Macdougall, Proprietor, *Balmain Observer*, sworn, and examined:—

- W. C. Macdougall.
6 July, 1897.
1704. *Chairman.*] You are the proprietor of the *Balmain Observer*? Yes.
1705. *Mr. Farnell.*] How long have you resided at Balmain? Thirteen years.
1706. Have you had a good opportunity to notice the traffic over the bridge? Yes, especially for the last eight years, when I have been travelling between Newtown and Balmain in connection with my business.
1707. Your business brings you to town pretty often, and I suppose you drive? I drive, I travel on a bicycle, and I ride a horse over the bridge.
1708. Have you ever suffered any inconvenience from the present structure not being suitable for the requirements? Yes; I have repeatedly suffered inconvenience from the opening of the swing for half an hour. I have missed trains going to the country, and on two occasions I have had to drive round by Annandale, and through Camperdown to the city.
1709. What is the longest time you have had to wait for the swing to be closed? Thirty-five minutes; generally it is less than fifteen minutes.
1710. How many vehicles have you seen on the bridge when the swing has been open? I have seen vehicles stretching right up the hill on Glebe Island, and I suppose beyond that point out of sight.
1711. There would be a considerable tonnage on the bridge then? The bridge was completely blocked up with vehicles, and almost two deep in some places.
1712. Do you remember a notice being posted on the bridge to the effect that no vehicle was to be allowed to pass over the bridge if loaded with more than 2 tons in weight? I know that a notice was posted up, but I think the load was restricted to 5 or 7 tons. Some time ago a notice was posted up that nobody could drive quickly over the bridge.
1713. Do you not think the latter notice was more significant as to the state of the bridge than the other? It was significant when you could not drive a buggy over the bridge at a trot. They even stopped a buggy driving over at a trot.
1714. Did you ever notice any vibration on the bridge? I have often noticed a vibration when two vehicles were passing.
1715. Have you ever looked at the girders in the structure? No; I have not minutely examined them, but I have seen plenty of rotten wood taken from the bridge when repairs were being made.
1716. The dangerous condition of the bridge has been a subject of common talk in the district of Balmain? Yes.
1717. Suppose the Committee should decide to recommend the erection of a new bridge, do you think the approaches should be widened at the Glebe Island end? I think a great deal of expense could be spared by making a causeway for a third of the distance on each side with the material taken from Glebe Island, shortening the length of the bridge, and putting the opening in the centre as high as possible for small craft to go under without any possible interference with the traffic from the suburbs of Drummoyne, Marsfield, Ryde, and Balmain, and even a portion of Leichhardt. The present swing is located at a part of the bridge where it is dangerous to vessels.
1718. And only vessels of small tonnage can get through the opening? Yes.
1719. You think due provision should be made for the development of the industries which have been established in Blackwattle Bay and Rozelle Bay? Yes, and the bridge should be sufficiently strong to carry a tramway.
1720. Would you prefer an iron or a wooden bridge? I should think an iron or steel bridge would be more profitable in the end.
1721. If a causeway were made as you suggest, it would be more economical to have a steel bridge, because the bridge would be shorter? Yes.
1722. Do you anticipate that eventually the tramway it is proposed to construct in Harris-street will be extended to Balmain? I do, and it was promised by Mr. Bruce Smith when he was Minister for Works.
1723. Do you remember a proposal being made some years ago to run a tramway down Harris-street, through Balmain, across Drummoyne, across the Parramatta River, and on to the Field of Mars? Yes.
1724. Is there not a permanent survey or staked line for such a tramway? It has been surveyed by that route, in answer to repeated deputations which I have been on.
1725. It seems to be the natural route to take to give the easiest and quickest access to the city? Certainly; and it would be very much better than the present tramway, which takes forty minutes to get to Circular Quay from Balmain.
1726. Do you think a bridge would still be necessary if the Abattoirs were removed from Glebe Island? Certainly; because the traffic from the suburbs has been increasing year by year, especially from Balmain in heavy traffic.
1727. *Mr. Lee.*] Do the residents of Balmain offer any objection to the position of the present bridge? No; they are quite content with the position of the bridge, as being the only communication they can get, except by a tram.

1728. Is it a cause of complaint amongst the citizens that they have to pass the gates of the Abattoirs? It is a cause of complaint on the part of aristocratic people who drive in from Drummoyne in their carriages. They have to go past a place which is unenticing, and often smells pretty high. There are a lot of dirty men hanging around there whom they would naturally complain about.

W. C.
Macdougall.
6 July, 1897.

1729. That would affect all persons who use that road? It would to an extent, but others do not complain.

1730. If the offensive sights are there it would apply to all who use the road? Yes.

1731. Have you ever heard of complaints made in the newspapers in respect of these things? Yes.

1732. Are you prepared to suggest how that difficulty could be got over? The road difficulty could be got over by taking a sweep round the southern shore, and meeting the bridge without passing the Abattoirs.

1733. By making a deviation on the western side of the bridge and running right round the southern side of the island, and meeting the road at Mullens-street? At Mullens-street or at Crescent-street, as the Drummoyne traffic would naturally go by that way to get to the Western-road.

1734. It could also be taken round on the northern side of the island? The Abattoirs occupy the land on that side right to the water's edge, and there would have to be more cutting down.

1735. Inasmuch as it is possible that a bridge may be erected on that site, do you recommend that a deviation should be made in the road across the island? The bridge, of course, is considered to be a necessity, but whether the expense of that road would be justifiable is a matter for consideration.

1736. You must remember that the bridge would be there for all time, and the question is, does such a nuisance exist at the Abattoirs as to render it necessary in the public interest that the road across the island should be deviated? It has in the past; but there is no necessity for that nuisance, because the Abattoirs could be so conducted that you could avoid the nuisance.

1737. Your reply is, that the present road across the island will do very well? Yes; if the Abattoirs are well conducted.

1738. *Mr. Fegan.*] How long does it take you to go by tram from Sydney to Balmain? From terminus to terminus, 40 minutes.

1739. At times there is great inconvenience from the overcrowding of the trams, on account of the large number of people who travel as far as the Newtown-road? Yes.

1740. In the course of this inquiry, is it not an important point to consider whether a better route should be taken over the Pymont Bridge, in order to shorten the time and the distance by tram? Certainly.

1741. If this bridge must be erected, and if the people of Balmain want better communication than they have, the bridge must be made strong enough to carry a tram? The new bridge ought to be made to carry a tram.

1742. Has there been any agitation for its construction? Yes.

1743. How long does it take you to drive from Balmain? Twenty minutes.

1744. How long would it take you to come by tram over this bridge? Not as long as it would take you to drive.

1745. That would mean a material saving in time and wear and tear? No doubt it would.

1746. What is the fare to Balmain by tram? Fourpence. Few business men use the tram, except to go home in the evening. It takes too long. I have started from my office 4 minutes after the tram has passed it, and got to the railway station *via* the ferry and omnibus at the same time as the tram. They go by the ferry. I am a director of the ferry company, and they average nearly 10,000 passengers a day.

1747. You think that if a tram were taken over this bridge it would materially increase the traffic? Certainly.

1748. And very soon pay for the extra cost of the bridge? Certainly.

1749. What is the population of Balmain? Nearly 30,000.

1750. How many newspapers are there at Balmain? Two.

1751. It is a go-ahead suburb? Yes; all the foreshores of Balmain are being occupied with works.

1752. Recently some new works have been started at Balmain? We have Lever Brothers' works and a coal-mine on the other side.

1753. How many men are employed there? I cannot tell you.

1754. Before the works are complete there will be a large number of men employed there? Yes.

1755. You have a coal-mine on the opposite side? Yes.

1756. Therefore it is really necessary that some better system of communication should be provided than the present one? Certainly.

1757. Do you not think it is a great inconvenience to the public to have to wait as long as thirty-five minutes until the swing is closed? Certainly; but the average delay is fifteen minutes, and with the openings averaging twelve and a half a day it means a loss of three hours every day.

1758. You are aware that a large number of people are agitating for a city railway in order to get in two or three minutes sooner? Yes.

1759. It has caused the people of Balmain to ask for improved means of communication? Certainly; everyone doubts the strength of the present bridge.

1760. Have the people of Balmain taken any steps to ask the Minister, as regards the traffic on the bridge, to provide better communication? Yes; repeated deputations have waited on the Ministers since 1889. I took the traffic on the bridge for the deputation in 1889. It was 2,229 vehicles, 100 horsemen, and 700 foot passengers. We did not count any pigs. To-day, at dinner time, I counted the traffic for ten minutes, and I saw thirty-three vehicles pass in that time.

1761. Did you count the passengers? No.

1762. Was there a large number of passengers waiting there? People were travelling to and fro, but I did not take any notice of them.

1763. The swing was not open? No.

1764. Is that the busiest portion of the day? No; it is the slackest portion of the day, because the men are having their dinner.

1765. What is the busiest portion of the day? Between 9 a.m. and 10 a.m., and at about 4 p.m.

1766. *Mr. Trickett.*] In 1894 you were examined before a previous Committee, and you furnished some figures as to the traffic on this bridge? Yes.

1767. There is a considerable increase on those you quoted for previous years? Yes; they were both taken by my own direction, and by responsible men

W. C. Maccougall. 1768. In the evidence you gave on the 11th June, 1894, you said, "The traffic on the 11th of last month was in twelve hours:—Foot passengers, 1,553 to and fro; 2,715 vehicles, and 1,417 horsemen, besides bullocks, pigs, and cattle?" I saw a proof of my evidence, and the figures were correct.

6 July, 1897. 1769. You are confident that the traffic in each case is not decreasing? It has greatly increased.

1770. *Chairman.*] Is there anything else you desire to say? I suggested to Mr. Farnell that a causeway should be constructed from each side for a third of the distance, as a way to cheapen the cost of the bridge, and to save the cost of maintenance and repairs. I think that if the Government thought fit to use some of the sand-shifters for the labour portion of the work it could be done more economically—that is, to use practical men to do the practical work, and to let the stuff be shifted by anybody. It would be a great relief to the traffic to expedite the opening of the swing in the bridge.

S. E. Perdriau. Stephen Edward Perdriau, Surveyor, Department of Lands, sworn, and further examined:—

6 July, 1897. 1771. *Mr. Black.*] Have you prepared a statement for the information of the Committee? I have.

1772. Will you be good enough to read the statement? It is as follows:—

SCHEDULE of Water-frontage Lands used for business purposes upon that part of Port Jackson lying southward of Glebe Island Bridge, with the names of the occupiers thereof, description of the business carried on, statements by the occupiers relative to same, and relative to the present bridge-opening, and that required in the new bridge, if erected.

Name of occupier or owner.	Approximate dimensions of land.		Description of business carried on.	Statements by the occupiers as to extent of business done and relative to the facilities for shipping afforded by the opening in the present bridge, and the requirements in this respect in a new bridge, if erected.
	Water-frontage.	Width.		

Commencing at Pyrmont, at the eastern end of the bridge. The whole of the frontages of the sheet of water indicated above used for businesses are described in succession, making a complete circuit to the opposite end of the bridge.

North side of Blackwattle Cove.

John Harris (of Shane's Park).	138 feet...	90 feet...	Vacant	Suggested to be resumed for new bridge.
Mathew Harris	1,070 feet..	110 feet... average.	Vacant.	
Attwood and Overall	50 feet...	130 feet...	Sydney Iron and Steel Works.	Do very little ship-work now, but could do it if large-size vessels came through the bridge. Present value of machinery and plant about £2,000.
Saxton and Binns.....	76 feet... (area 3	220 feet... roods.)	Timber depôt; this firm have steam sawmills close by.	Principal business done is in Oregon and Kauri pine, of which they import about 5,000,000 feet per annum. This has all to be discharged in Johnstone's Bay (because the ship cannot come through the bridge) and rafted or lightered through the bridge, which greatly increases the cost. About half a million feet is now being received. About one-third of the 5,000,000 feet is cut up by them. They also receive about 100 hardwood logs per month from the northern rivers brought by the North Coast Co.'s and other steamers; this also has to be rafted. Such logs are discharged on the wharf when brought by ketches of not more than 150 tons. Sixty men are employed by this firm on an average.
(Here Miller-street.)				
Allen Taylor, late Mazes' wharf.	80 feet...	270 feet...	Timber merchant	Has vessels of 300 tons coming to this wharf; one of these vessels of 28-feet beam cannot come through during windy weather except by using long ropes; they have to wait for calm weather. Ten men are employed by Mr. Taylor.
Holdship & Co. (Ltd.) Bowra Wharf.	250 feet...	300 feet...	Sawn-timber merchants.	The water frontage is the great attraction at this place, which will be the centre of the timber trade. Has attended many deputations to the Government requesting the widening and deepening of the bridge opening, the present opening being insufficient in these respects is a serious obstruction to business. The vessels consigned to them are from 300 to 1,000 tons register. 1,000,000 feet of timber is now being received by this firm from the "Speke," a vessel of about 2,500 tons register. This is brought through the bridge by lighters because the vessel is too large to come through.
H. Doze	120 feet...	330 feet...	Steam sawmills and cooperage.	Attended deputation last year re improvement of the bridge opening. Receives his timber by lighters from foreign vessels anchored in Johnstone's Bay. Vessels of about 100 tons come to his wharf. About thirty men engaged usually.
R. Guy	300 feet...	430 feet...	Unoccupied—recently purchased by the E. S. & A. Bank.	100 feet frontage of this land is rented by Holdship & Co.
(Here Gipps-street.)				
Saxton and Binns..... (Here Pyrmont Bridge-road.)	340 feet... (about 3	400 feet... acres.)	Timber merchants.	Saxton and Binns have only lately taken a lease of this land; it is to be used in conjunction with their other business described above.
Government of New South Wales.	1,075 feet	.....	Blue-metal wharf, Elijah Waite in charge.	About 2,400 tons of blue metal, broken and ready for the roads, are landed here per month. The trade is increasing. The largest vessel brings 330 tons on a draught of 11 feet loaded; she cannot come through the bridge except at full or nearly full tide. The manager for Mr. Salmond, whose steamers discharge metal here, stated to me that the present bridge opening is so awkwardly situated that their vessels of about 270 tons register have several times lost blades of their propellers when going through.

Name of occupier or owner.	Approximate dimensions of land.		Description of business carried on.	Statements by the occupiers as to extent of business done and relative to the facilities for shipping afforded by the opening in the present bridge, and the requirements in this respect in a new bridge, if erected.
	Water-frontage.	Width.		
<i>South side of Blackwattle Cove.</i>				
Kauri Timber Co. (Robert Walker, Manager).	390 feet... Area about	430 feet... 4 acres.	Steam Sawmills.	They receive 10,000,000 feet per annum in sawn timber and logs, varying in size from 3 in. x 1 in. to 60 in. x 60 in. Of Oregon and other American timber they received 3,000,000 feet during 1896, varying from 3 in. x 1 in. to 20 in. x 20 in. They are now expecting a vessel, called the "Star of France," with 1,300,000 feet, all dressed timber. It must all be lightered, as the vessel cannot come through the bridge. The lightering will increase the cost from 4d. to 6d. per 100 feet. They are now lightering a vessel in Johnstone's Bay, of 1,100 tons register. With great difficulty vessels of 350 tons can come through the bridge. They employ about 120 men. The timber merchants cannot pay the rents required for city water-frontage, and so they come to Blackwattle Cove; in the city would suit them better. Balmain side would not suit, being too far away; and wharfage is too high at Woolloomooloo Bay to do the business profitably.
One large unimproved property, and Ferry-road, Glebe, intervene, and then is reached the Kauri Pine Co.'s wharf.				
The Sydney Kauri Pine Agency Co., Limited (J. H. Smith, Manager), now Greenaway and Henderson. (Here Forsyth-street.)	95 feet ...	200 feet...	.....	At present vessels of only 150 tons come to this wharf, and for them the bridge-opening is sufficient. Occasionally they receive timber from large vessels, which have to be lightered in Johnstone's Bay.
Borough Council of the Glebe.	140 feet...	.....	Blue-metal depôt and public wharf.	The blue metal for the roads of the borough is landed here; the statements relative to the requirements of blue-metal vessels running to the Government wharf at the head of the Cove apply to those berthing here also.
Daniel Sheehy and Sons.	230 feet...	400 feet...	Ship-builders, pile-drivers, and marine contractors.	Have taken borings and find that they can get 30 feet of water at their frontage before rock is reached. Find the bridge a great impediment to business. The archway in the centre of the present bridge is of no use for anything with a mast in it; at high water there is not more than 12 feet from the water to the bridge. The opening should be 60 feet wide. Has seen a vessel, the "Rio," 317 tons, stuck in the opening, on the 25th May last, for half an hour. About six months ago another vessel was stuck there for two hours. The rock near the opening is a great nuisance. Their punt, 30 feet wide, loaded, draws 6 feet of water, and cannot get through at low tide. Mr. Sheehy thinks the bridge ought to be removed altogether, and has a scheme whereby he thinks that could be achieved, substituting a tunnel from Pymont Bridge Road under Glebe Point to the Government reclamation at Johnstone's Creek.
From this point the water-frontage is used for private residences; there are no large business premises (excepting Whetton's pile-driving depôt at Glebe-road) until Johnstone-street, Annandale, is reached, but the frontage of the Government reclamation extending from Glebe-road to Johnstone-street, about 1,700 feet, will be required for wharfage purposes.				
(Here Rozelle Bay commences.)				
Annandale Borough Council.	100 feet...	.....	Public wharf and blue-metal depôt.	The information above relative to the Glebe Council's blue-metal depôt also applies to this.
Union Box Factory (A. Guthrey, Manager).	150 feet...	146 feet...	Timber depôt. The sawmills are on the opposite side of the bay.	The manager stated that they receive 2,500,000 feet of timber per annum in planks from 1 inch to 3 inches thick. On an average they have fifty men employed. Their vessels are from 200 to 300 tons register. Even a 300-ton vessel, if of deep draught, cannot get through the bridge, and portion of the cargo has to be lightered. One of our vessels—the "M. A. Doran"—of less than 300 tons, had to wait for a spring tide to go through. He is of the opinion that the present facilities for getting through are not equal to the requirements. A strong wind from north or south makes the passage dangerous, and although the captain of a vessel might be willing to venture, the bridgeman will not open because the vessel might get jammed in the opening. Mr. Guthrey says that he saw two or three vessels so jammed during the year 1896, it took from half an hour to one hour to get them clear. He does not remember seeing any jammed this year.
Langdon, Hopkins, and Langdon (they claim that they do the largest timber business of any firm in the metropolitan district).	200 feet...	100 feet...	Depôt for all sorts of timber from 2 in. x 1 in. to 12 in. x 12 in.	Their vessels carrying 30,000 feet of hardwood can get through the bridge, but their American timber has all to be lightered from Johnstone's Bay. At present the "Speke," with 1,250,000 feet of Oregon for them, is being so discharged. She has also 1,000,000 feet for Holdship, &c. Complain that the bridge-opening is not wide enough, nor deep enough. The "Speke" draws 27 feet of water loaded. The manager thinks it would pay the firm to make a large contribution towards the cost of a new bridge with a more convenient opening, because to discharge the timber at the wharf costs 1s. 3d. per 1,000, whereas by lightering it costs 3s. per thousand.

Name of occupier or owner.	Approximate dimensions of land.		Description of business carried on.	Statements by the occupiers as to extent of business done and relative to the facilities for shipping afforded by the opening in the present bridge, and the requirements in this respect in a new bridge, if erected.
	Water-frontage.	Width.		
<i>South side of Blackrattle Cove—continued.</i>				
Goodin, Hitchcock, & Co.	100 feet	100 feet	Timber merchant's depôt.	Receiving-yard for foreign and colonial timber; have vessels coming from the northern rivers carrying 60,000 feet. Foreign timber received by them has to be lightered from Johnstone's Bay, increasing the cost of discharging from 1s. 3d. to 3s. per thousand. They get on an average 600,000 feet of foreign timber in the year from about six vessels. The manager thinks the water-frontage of the Government reclamation close by would be valuable for timber depôts, and would let readily for that purpose.
Langdon, Hopkins, and Langdon.	132 feet	100 feet	Depôt for Oregon and red-wood timber.	See description for this firm's business above.
(Here Gordon-street on embankment, fronting Government reclamation at mouth of White Creek, about 500 feet water-frontage belonging to the Government, not used at present except where a ferry wharf has been erected.)				
<i>North side of Rosette Bay.</i>				
Justin McSwency	290 feet	400 feet	Federal Timber Co.'s Wharf.	Have vessels with blue-metal of 9 feet draught discharging here; the largest vessel is 250 tons register. Also four timber schooners from 50 to 120 tons register. If the required opening in the bridge were made, say 60 feet wide and 20 feet of water to accommodate vessels of 1,500 tons, they could load hardwood for export, especially wood-blocks. The land is large enough to give quick despatch to such vessels.
Hutchinson's Wharf.	530 feet	260 feet	Co-operative Flint Glass Company; J. West, wood and coal depôt.	West complains of the length of time it takes to get a vessel through the bridge in windy weather, the opening being so awkwardly situated. Vessels of 150 tons come to his wharf. In order to get through the bridge after sundown application must be sent to the bridgeman in writing, and if you are not there to time the bridge is not again opened, and you must wait until the morning. In winter the bridge will open between 7 a.m. and sundown. In summer from 6 a.m. to 6 p.m.
			Union Box Factory; Globe Meat Factory.	Union Box Factory, steam sawmills. Vessels up to 300 tons discharge here. Once in twelve months they have a large vessel, and she has to be lightered.
			Alston Soap and Candle Company.	Alston Soap-works. Managing Director complains that the bridge takes so long to open that they often miss the train at Darling Harbour through the delay, and that the archway in the middle is not high enough; in going under recently they lost the funnel, and the new one cost £8 10s.
Mrs. Symons	390 feet	130 feet		Wharf formed, and land reclaimed. It is to be let.
J. Barnes (Manager)	60 feet	190 feet	Globe Meat-preserving Works.	New stone building 160 feet x 60 feet, 3 storeys. Do not use the water-frontage except for lighters. Their goods are sent by road mostly.
J. Henderson	60 feet	190 feet	Ship-builders; also, Young and Sons, ferry-steamers-builders.	If the bridge-opening were improved it would be a great advantage, for larger vessels could be dealt with.
Swan Bros.	300 feet	170 feet	Steam sawmills, timber merchants.	State that they have to pay 1½d. extra per hundred to vessels to come through the bridge. They want to bring vessels of 700 tons alongside, but cannot get larger than 250-ton vessels through the bridge. The swing should be 60 feet wide. The depth of water at their wharf is 18 feet, but the increased depth is of little use, because it is only 12 feet 6 inches on the sill of the bridge. It should be 20 feet deep at low tide on the sill.

(Here Abattoir-road frontage; thence Globe Island frontage extends to the western end of the bridge.)

NOTE:—Boat-builders' sheds have not been described; there are several of them.

WEDNESDAY, 7 JULY, 1897.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.
 The Hon. JAMES HOSKINS.
 The Hon. CHARLES JAMES ROBERTS, C.M.G.
 The Hon. WILLIAM JOSEPH TRICKETT.
 The Hon. DANIEL O'CONNOR.
 HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.
 JOHN LIONEL FEGAN, Esq.
 THOMAS HENRY HASSALL, Esq.
 GEORGE BLACK, Esq.
 FRANCIS AUGUSTUS WRIGHT, Esq.
 FRANK FARNELL, Esq.

The Committee further considered the expediency of constructing a New Bridge at Glebe Island.

Henry Daly, sworn, and examined:—

1773. *Chairman.*] What is your occupation? I am not in any occupation at present. I reside at Glebe Point.

H. Daly.

7 July, 1897.

1774. *Mr. Hoskins.*] Do you wish to make a statement to the Committee as to the propriety of erecting a new bridge near to the existing bridge to Glebe Island? The existing bridge, or any bridge which would be constructed, would be more for the purpose of serving the Abattoirs than perhaps of serving Balmain; and I take it that if the Abattoirs are removed, there will be not so much necessity for a bridge there. At present, pretty well two-thirds of the traffic over the bridge is to and from the Abattoirs, which is a meat-market as well as an Abattoir; and the traffic is in connection with the carriage of meat, or people going to make their purchases of meat. Furthermore, if a bridge is constructed there it will always be a matter of expense more or less, to say nothing of the bar it will be to shipping entering Blackwattle Cove and Rozelle Bay. Blackwattle Cove, from its position, and from the easy access to it that there is at Blackwattle wharf, must become a very important place for discharging and loading ships, and a bridge will be more or less of a barrier to the class of business there.

1775. But a bridge will not necessarily be a barrier to the trade, provided that it is sufficiently high to allow vessels of a good size to go under it, even if they have to strike their topmasts, as they have to do in other ports, and provided also that a swing not less than 60 feet wide is placed in the centre of the bridge? But you cannot have a bridge at any great elevation. You could not have any bridge there in the nature of the bridge, for instance, which could be constructed to North Shore, because the approaches on Glebe Island would not admit of a very great deal of height.

1776. Still we have had evidence that if a better structure with a wider roadway and stronger piers, and with an opening in the centre to allow vessels up to 1,000 tons to go through, is built, it will not interfere with the traffic or with the shipping? Yes; but that would all be in view of the Abattoirs being continued in their present site.

1777. Do you wish to see the Abattoirs removed from Glebe Island? Undoubtedly; because it is a totally unsuitable place for them.

1778. All the evidence we have had here has been as to the suitability of the island for that purpose? Well, I can give evidence to the contrary.

1779. Will you kindly give the evidence? In the first place, the Government is losing a very large annual sum by the treatment of the waste from the Abattoirs. At present between 15,000 and 20,000 tons of blood and offal are discharged outside the Heads every year, and allowing for the cost of treatment it is worth at least £7,000 a year when it is converted into a manure, and even not to sell it in this market. Of course it should be properly treated. The methods which have been employed to treat these waste products at Glebe Island up to the present have been little better than worthless. Furthermore, the Abattoirs should be, and are in all well-ordered instances, beside the sale-yards. In this instance the cattle slaughtered are of such a nature that it is positively dangerous to the inhabitants of the surrounding places to bring them to Glebe Island. To treat the number of animals that are slaughtered at Glebe Island satisfactorily and economically, and to associate kindred trades with them, it would be necessary to have an area of at least from 1,000 to 1,500 acres of land. It is necessary that the cattle should be rested before slaughter, but they are not rested at all on Glebe Island; in fact, the animals are hunted from their resting-places to Glebe Island, where they arrive in a condition absolutely unfit to be slaughtered, especially cattle. The cattle or animals should be slaughtered somewhere contiguous to the railway line, and brought down to a central meat-market, or to a meat-market in Sydney; for, as I observed, Glebe Island is both a meat market and a slaughter-house. I, as a resident of Glebe Point, personally have no objection to the Abattoirs remaining where they are. It does me no personal injury, provided that they are carried on from the point of view of the smell arising from them. In summer-time I have written several letters to the Treasury, complaining of the terrible smell arising from the Abattoirs. Up to about six months ago it was not an infrequent thing to have the blood discharged straight into the bay. I have frequently seen it at noon; but latterly there was a receptacle provided, in order that the blood and offal which they could not run into the punt should be stored there. After it had remained there some time, pending the arrival of the punt from outside the Heads, it was generally discharged into the punt. It was in a putrid condition by this time, and the smell, of a most disgusting character, could be noticed for miles around.

1780. That state of things is discontinued? No; it is continued.

1781. I thought you said until the last six months it was done? Until within the last six months they used to run the blood into the harbour occasionally, but now that practice is absolutely stopped, and it is run into a vat on the island. There is only one punt, and if through stress of weather or other circumstance that punt cannot proceed to sea, this material is stored on the island, and it may remain there for one and a half or two days until it is run into the punt, and the smell from it is abominable. In summer time the punt gets filled more frequently, and the material is carried to sea more often than is done in winter time, because not so much slaughtering is done there in winter as in summer.

1782. We have had evidence here that there used to be a disagreeable smell from the Abattoirs at the time they desiccated the blood and offal, but since that practice has been discontinued, and the blood and offal has been taken out to sea, the bad smell has not been so noticeable? They did not desiccate the blood

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1783. We have had evidence here to the effect that the drains were not properly constructed to carry down the offal into the desiccating pans, and the desiccator was one of the original type, being old and almost worthless? That is not the case. They had a fair grasp of the principle, but it was badly constructed.

1784. The President of the Board of Health said that one of the reasons why the desiccating was discontinued was not only in consequence of the defective nature of the desiccator itself, but also because the drains were not made in the slaughter-houses to take the blood to the desiccating plant in the most expeditious way? What I would say in answer to that statement is, that it involves the treatment of this material at the Abattoirs. I understand very clearly how it should be done; but there is nothing at all attempted there. For instance, the blood and the washings of the establishment are all run down together, and that is absolutely improper. It is difficult even to treat it in that way, because you have to eliminate all the water out of the material before you can get the finished article.

1785. Have you never made a complaint to the Superintendent of the Abattoirs about running the blood and water down together? I have gone to a telephone at Glebe Point and asked the Board of Health to be good enough to telephone to the island, telling them to stop the people from running the blood out in day-time—not to let us see them doing it. We do not mind so much if it is done at night; we do not care to see it done in the day.

1786. You object to the erection of the new bridge because you think the Abattoirs ought to be removed from the island? I do not object to a new bridge; but I do not see that there is any necessity for so expensive or so substantial a structure if one is erected. I really do not think that a bridge should be erected at all.

1787. We have had evidence to the effect that a great deal of the traffic over the bridge goes to Balmain, Ryde, and other suburbs? There is no doubt about that.

1788. And that the traffic to the Abattoirs is by no means the largest proportion? I disagree entirely with that.

1789. Suppose that the present bridge is considered to be unsafe; if a new bridge is not erected, how are the people who use that road to get to Balmain, Ryde, and other suburbs? They can get there by a road from about where the Kauri Timber Company is located at Blackwattle Bay. If there was a road constructed to join with the reclamation in Johnstone's Bay, and to go around the head of Rozelle Bay, it would not be such a very great distance longer than the present road.

1790. If these people were compelled to go round by the route you have described, would there not be great complaints made of their having to travel so much out of their way? I do not think so, because it is not such a very great distance further than the present road.

1791. Your suggestion to have the sale-yards, resting-paddocks, and abattoirs in one locality would involve the purchase of a very large area of land, and also the expenditure of a very large sum for works; but this proposal to construct a bridge to an existing road, which is used by the residents of Balmain and Ryde, as well as the people who go to the Abattoirs, only involves the necessity for erecting a new bridge; and, therefore, we have to consider how much less that would cost than your proposal? That is always remembering that the Abattoirs are to remain where they are. I cannot believe that the Government will allow the Abattoirs to remain much longer where they are. I cannot believe that they will, from what I have seen elsewhere.

1792. To what places do you refer? I have seen the greater number of the Abattoirs on the Continent of Europe. Take, for instance, the Paris Abattoir.

1793. Is it not surrounded with a dense population? It is, but the circumstances as between Paris and Sydney, are altogether different. First of all there is the vast difference in the climate of the two cities; and secondly, there is a vast difference in the nature of the cattle to be slaughtered. The cattle to be slaughtered here are wild, or semi-wild; whereas in Paris you can take the cattle by the horns, and lead them into the slaughtering-place. Here there is a continuous danger to life and limb in driving the cattle to the Abattoirs. Scarcely a week passes but some person is maimed for life. I guarantee that I could point out many instances of that kind. Only last week, for instance, a female child was taken up on a bullock's horns and badly mangled.

1794. But Mr. Macnamara, a carcass butcher, has told the Committee that the cure for that would be to drive the cattle in in the night, as used to be done in this very city years ago, say from midnight until 3 or 4 a.m., and to drive the sheep in in the early morning? No doubt the sheep may be driven. All these regulations are in force, but it is not done, and frequently cattle break away in a state of fury, and it takes the men until the middle of the following day to catch them, although they were being driven in at night. Very frequently it is the cattle which are being driven in at night which do this damage.

1795. Children are not running about in the middle of the night? No; it is the cattle which escape while being driven at night that commit the damage I speak of.

1796. Do you not know that at Home, Scotch and Welsh cattle frequently horn people while being driven from the railways to Islington? The greater portion of the Scotch cattle which come to London come dead.

1797. Lately? The greater portion of it is killed meat. I have seen trains full of it; very little of it comes alive. I wish to show you the contrast between the method in Paris and the method in Sydney. I have already pointed out to you the quietness of the cattle in Paris. You say that the Paris Abattoir is surrounded with a dense population. It is surrounded with a dense population, but it is a poor population; it is a very poor quarter, and the value of property surrounding the Abattoirs is all depressed from the very presence of the Abattoirs, notwithstanding the fact that the utmost cleanliness is observed there, and that really no person would know that an Abattoir was being conducted thereat all. The sale-yards are beside the Abattoirs, and the cattle are just taken across a canal to the Abattoir and slaughtered there. In Paris every scrap of material, every scrap of the animal, is turned to account, and nothing whatever remains on the premises which would create any unpleasant smell or be unpleasant to the people in the neighbourhood.

1798. I agree with you that it is waste to take our blood and offal out to sea : but we have evidence to the effect that when the blood and offal were desiccated the manure was only saleable at such a price that it left no profit, but a loss? I took the trouble to consult a firm of engineers in England on this subject some time ago. The wholesale price in England of manure manufactured from blood is £8 a ton, and the wholesale price of manure manufactured from offal is £6 a ton. In England it is properly manufactured in the way I have indicated. It is not burnt up, as was done at Glebe Island. I saw the men treat the stuff at Glebe Island. I made inquiries, and I listened to what they had to say. All the fertilising elements were completely eliminated, and it was only an innocuous powder which remained.

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1799. We have had evidence to the effect that it used to cost nearly £7 a ton to produce the manure at our Abattoirs, but that it was not of the value it should have been, in consequence of so much water being mixed with the blood? That is one of the points I want to convey to you. They mix the blood and the swillings of the establishment, and all the water has to be eliminated; whereas the blood should be caught immediately the animal is slaughtered, and treated then. It takes 18 tons of that blood to make 1 ton of manure. You have to eliminate 17 tons of water before you can get a ton of the finished article; therefore, how much more difficult it is to treat the stuff when it is surcharged with water in the way I have indicated.

1800. We have had it in evidence here from the Inspector, Mr. Shelley, that it costs £5 a ton to manufacture the manure, and that the last surplus sale they had realised 7s. 9d. a ton; there was a great loss then? If I had 1,000 tons of blood manure I could get £5,000 instantly for it—that is, properly manufactured.

1801. I judge from what you say that the persons who had charge of this work did not seem to understand how to treat the stuff properly? No.

1802. In the second place, the desiccating machine was of an antiquated type, and very little use, comparatively speaking; and thirdly, as Dr. Thompson has pointed out, so much water flowed down with the blood into the receptacles that the quality of the article was deteriorated, and hence it cost more to produce it than it realised? I will describe the method I saw at the island. The blood and the swillings of the establishment were run down into a tank. It was there boiled: the blood became somewhat coagulated, but meanwhile all the fertilising elements were escaping. As it was boiled in an open vessel, the fumes escaped into the air. The pure blood should have been conveyed into the desiccators, and the operations from start to finish carried on in a sealed vessel.

1803. Did you ever hear who was responsible for the working of the desiccating machine? It could not be Mr. Shelley. He has so much to do, and has such a cramped space, that I do not see how he could devote any attention to the desiccating work. It was never done on proper lines; it was never worked on business lines at all.

1804. It has been suggested by several witnesses, that the rooms appropriated for the slaughtering-abattoirs are too small, that the sheep slaughter-houses are not very well adapted to the work, and that the area of the slaughtering establishments should be enlarged; Glebe Island comprises an area of 34 acres; I gather from what you say, that you would disapprove of the area of the slaughter-houses being extended, or of the slaughter-houses being improved, because you object *in toto* to the abattoirs being on the island? I say it is not the proper place for them, and that the slaughtering will continue to increase at the island, and that all the inquiries which have been held into the matter, with the exception of the last inquiry, have all pointed in the direction of the removal of the Abattoirs.

1805. Where would you suggest that they should be removed? To Blacktown.

1806. Do you know that one advantage of having the Abattoirs at Glebe Island is that butchers in a small way of business can go there and buy their meat at first-hand at a cheaper rate than they could do if they had to buy it at second-hand from large carcase butchers, which would be the case if the Abattoirs were removed to Blacktown? I do not know it, and I do not believe it.

1807. I am speaking from personal knowledge that that is the case? I do not believe it.

1808. I know respectable men in a small way of business who could not go to Blacktown to purchase their supplies? There is no necessity for them to go to Blacktown to purchase their stuff. Nine-tenths of the meat which is consumed in New York is slaughtered 900 miles away from that city, and you might as well say that the butchers in New York should go to where it is slaughtered to buy their meat.

1809. At all events, it has not been the practice here; we know very well that in New York the business is done by rings of wealthy capitalists or men with large credit, whereas here people with smaller capital have been able to go into the butchering business; I have said that Glebe Island is a meat market as well as an Abattoir;—why not have a meat market somewhere else and the Abattoirs somewhere else? If your contention was that the small butchers could go over to Glebe Island and slaughter their cattle for themselves, there would be something in it.

1810. I believe they can? They can, but very few do it, because they find it is unprofitable. They find it more profitable and satisfactory to buy their meat from the large slaughterers. There is plenty of competition between the large slaughtermen now.

1811. You are not in favour of having a new bridge erected in lieu of the present bridge, because you think the Abattoirs are in the wrong place, and because the people who do not travel to the Abattoirs, but go to Balmain, Ryde, and other suburbs, could go by another road, which would be very little longer for them? Precisely: and the whole of these bays would be open to shipping and traffic.

1812. A new bridge, such as I have described, would not prevent that? It would be always a source of expense and inconvenience, because more shipping must come to Blackwattle Bay. It is coming there every year. I have lived at Glebe Point for fifteen years, and I see the improvements which are taking place, and the way shipping is crowding gradually in that direction. A great deal of shipping must go there. The Government itself has a very large and most valuable property there which must be thrown open for large ships sooner or later. A bridge is always an inconvenience, especially to shipping.

1813. But if provision is made in a suitable bridge for vessels to go through to Blackwattle Bay and Rozelle Bay, a very trifling impediment will be placed in the way of any vessel wishing to go there? I would not say a very trifling impediment. A bridge is always an impediment, because there is always the opening and closing of the swing, and the stoppage of the traffic, as you can see at the Pyrmont Bridge.

1814. That bridge has been built nearly forty years, and the bridge, as well as the swing, is of a very antiquated type; but modern bridges are provided with a swing for a vessel which can be opened in a few minutes? Quite so.

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1815. Such a bridge would not be a great obstacle to traffic? I do not suppose it would; but I do not see the necessity for putting a very heavy, substantial, expensive structure there, because nearly all the heavy traffic of Balmain is carried by water. The most convenient thing which a bridge at that point would afford to Balmain would be access to the railway-yard at Pyrmont, but the distance would not be much further if a road were carried in the direction I have indicated.
1816. The route which you have just pointed out on the map would be much further than the present route? It would not be a very great deal further. It is a longer distance to the Abattoirs, but it is not much longer to Balmain.
1817. Would it not go through private property? It would.
1818. It would involve the expense of resuming that property? There is the expense of constructing the bridge.
1819. But there is a much longer road to travel? You would get a free waterway instead of having a bridge, and you could bring vessels of any size to the Government wharf in Blackwattle Bay.
1820. *Mr. Humphery.*] With regard to the existing bridge, what is your idea? The longer it is maintained the more expensive it will become, and it is pretty well worn out now.
1821. Do you suggest that it should be removed, and should not be replaced by a new bridge? Not replaced.
1822. You think no bridge is necessary? Yes.
1823. Assuming that the Abattoirs should remain at Glebe Island, do you think you would meet the convenience of the people using that island by the road you suggest? Well, the population of the city who use meat largely are more or less going into the suburbs, and the greater quantity of the meat that is slaughtered at the island is carried to the southward, and not in the direction of the city. The only portion of the suburbs which would be inconvenienced by perhaps half a mile extra haulage would be the eastern suburbs, but all the western suburbs and southern suburbs would be as well served by a road such as I have indicated as by a bridge in the present place.
1824. Assuming, as you said, two-thirds of the traffic across the bridge to be in connection with the Abattoirs, does it not occur to you that some means should be provided to enable people on the Pyrmont side to reach Glebe Island and Balmain without traversing a road which would probably be double the distance? There is practically no road at the present time in the direction I have indicated; you would have to go up Johnstone-street, in Annandale, to get on to the Parramatta-road, whereas you could go in a southerly direction if a road were made across the reclamation in Rozelle Bay.
1825. Your contention is that that road would be as convenient to two-thirds of the present traffic as is the existing bridge? It might not be quite as convenient for the full two-thirds, but it would be as convenient for half of it, always remembering that the Abattoirs remained at Glebe Island.
1826. As to the remaining third, we are told that the traffic is very considerable; that between 2,500 and 3,000 vehicles daily cross the bridge; that would mean that you would have to provide for 700 or 800, perhaps 1,000 vehicles, which would be traffic altogether apart from the Abattoirs;—do you think the convenience of that remaining third would be met in any way by your suggestion? If you speak of the traffic of Balmain alone, I suppose it would be a quarter of a mile longer by my route; but if you speak of the traffic of Five Dock and the west end of Balmain, it would be as well served by my route as by the bridge.
1827. I will put it in this way, that as far as Balmain is concerned the route you indicate would be longer and less convenient, but places beyond Balmain and the west end of Balmain would be equally well served? Yes.
1828. Is not the population of Balmain very large and increasing? It is a large population.
1829. Has not the reduction of the fare on the Balmain ferry to 1d. been the means of largely increasing the population there? I daresay it has; I have no actual knowledge of it. Cheap fares always do induce population to come to a place.
1830. For 1d. you can go to almost any part of Balmain? Passengers can, but not vehicles.
1831. With regard to the passenger traffic, would it not be much more inconvenient if that bridge were dispensed with? No; because it would be cheaper for them to go by steamer.
1832. I am talking of the foot-passenger traffic across the bridge? It is infinitesimal. Nobody walks to Balmain now; they take the ferry.
1833. In the event of it being desirable to connect Balmain with Sydney by means of a tramway, would it not be much more convenient to retain the bridge at the present site? If you speak of a tramway, undoubtedly.
1834. I wish you to give your evidence on the assumption that it may be desirable at no distant time to connect by means of a tramway? Of course, it would be very much shorter; you would get over the Pyrmont Bridge which is to be built, but you would have the inconvenience of having an opening in the bridge, which is always inconvenient where you have steamer or tram traffic.
1835. As to the inconvenience of vessels passing the bridge, have you made yourself familiar with the details of the proposed bridge—that it is to have an opening 60 feet wide, and is to be of such a height in the centre as to allow small craft to pass under it? I believe it is to be 25 feet above high water. I have seen several similar bridges.
1836. Do you think the rapid opening and closing of the swing in the bridge by the most modern appliances would be a serious inconvenience to vessels which pass, or are likely to pass, to Blackwattle Bay and Rozelle Bay from Johnstone's Bay? I cannot say that it would be a serious inconvenience; but it is some inconvenience, and there is always some risk, more or less.
1837. With regard to the removal of the Abattoirs, I suppose you have in view eventually the adoption of a scheme you have propounded yourself;—you have made some suggestions? Only here.
1838. I thought you said you had been in correspondence with the Government for a long time? Not with the Government, but with sanitary engineers in England.
1839. What recommendations have been made through you or to you in connection with your complaint of the Abattoirs being at Glebe Island? All I have done was to write and complain of the intolerable smell, and to hope that they would soon remove the Abattoirs, and that Mr. Reid would keep his promise that they should go.
1840. Have you made any suggestions? No; a suggestion would not be listened to from me, perhaps.
1841. Do you not think the strongest argument to use in favour of your view is to suggest some scheme? To make a suggestion to such a body as this Committee is one thing, but to write a letter to the Minister

is another thing. I have written repeatedly to the Treasury about the condition of the Abattoirs, and the abominable smells arising from them, but I have never suggested any remedy.

1842. It is much more difficult to suggest a remedy than to make complaint? I can suggest an ideal scheme.

1843. Will you give the Committee the benefit of your views? I suggest that the Abattoirs should be removed to Blacktown. There is an alternative place to put the Abattoirs, and that is quite close to the existing sale-yards at Flemington. But when we consider the class of settlement there, in the first place, it would be doing a great injustice to the people who have settled round there; and, in the second place, it would altogether lower the character of the settlement there. In this climate—and it is a very warm climate—it will be necessary also that the kindred trades for the treatment of the various matters in connection with slaughtering should be associated with, or very close to, the slaughtering establishments. At present all these things, such as the heads and entrails of cattle, are carted through the streets of Sydney to Botany. To any person who is not accustomed to such a thing it is a disgusting sight to see portions of animals carried through the streets in open carts in this way.

1844. May I put it in this way: That, as a site for abattoirs, Flemington would be equally as objectionable as Glebe Island? No. I do not say that Flemington would be equally objectionable: but I say that Blacktown would be a very much better site.

1845. Your idea is that Blacktown is the one site which would be suitable by reason of existing conditions for abattoirs and sale-yards? It is one site—not the site. There may be other sites on the Southern line I know not of. I have seen Blacktown, and looked at the place from various points of view, and I consider that it would be very suitable for the purpose. You can get excellent water accommodation, which is a very great consideration in abattoirs, because you are quite close to the Prospect dam; and then there is the matter of drainage, which could be very excellently arranged there.

1846. Have you made yourself familiar with the process adopted by the Sydney meat-works for the treatment of blood and offal? I do not know what it is; I have not been to their place.

1847. You have no information with regard to the process in operation at their works? No.

1848. What information do you possess with regard to the process of desiccation by which the results are found to be profitable? Do you wish me to describe the method.

1849. No;—I want to know on what knowledge you base your evidence? I have seen the treatment of blood and offal in Nottingham, in England. I have also seen the treatment of fish-guts at the great Grimby fish-markets, in the west of England, by the very same machinery—the very same method as that which is used for the treatment of blood and offal on profitable liues.

1850. Are you familiar with the method adopted in Melbourne? It is that method I speak of.

1851. Can you say from inquiry you have made whether in Melbourne there is any profit attached to the treatment of blood and offal there? I believe there is not. They use a very expensive machine there for the purpose. They use Farmer's machine, and I know what it is.

1852. You can understand that commercial people, unless they can see a profit, very rarely engage in an enterprise such as you speak of? They are very glad to get blood and offal manures in England at the prices I have mentioned.

1853. There are people here who would be very glad also to purchase the manures; but if the cost of treatment were greater than the price obtained for the manure, there would be no advantage to those engaged in the enterprise? No.

1854. I suppose that is the reason why at present these are waste products? I beg your pardon, sir, it is not the reason. The reason why they waste the products is that it is a more rough and ready method of getting rid of it, and they do not know, or have not been familiarised with, the proper method of treating it.

1855. You think that they are blind to their own interests? Yes. The blood and offal are there, and it is easier to take them outside the Heads to the sharks.

1856. Can you relate any other instance, besides the one you mentioned to Mr. Hoskins, as to the treatment of cattle in the yards at the Abattoirs? Yes.

1857. Will you state, for instance, the distance which would influence the condition of the cattle before they are slaughtered? You cannot form any estimate of the cattle in the older countries as compared with the cattle here. The cattle here are always in a wild, or more or less semi-wild, condition, and they are as frightened as a deer; whereas in all the countries on the Continent of Europe and in Canada, where they are all stall-fed, they are quite quiet, and may be taken from the pastures at any time to be slaughtered. All cattle require to be rested more or less before being slaughtered. Wild cattle like ours undoubtedly require very much longer time to become thoroughly quiet and rid of any fever which may have been induced by travelling.

1858. *Chairman.*] Taking it for granted that the routes are common to Pymont Bridge, I find, on scaling the plan, that the route you suggest to Western-road is three-quarters of a mile longer than the present route? No doubt it is further to the city of Sydney, but if you take such suburbs as Petersham, Camperdown, and Glebe it is quite as near.

1859. *Mr. Clarke.*] In the event of the Abattoirs not being removed from Glebe Island, do you consider that a new bridge is necessary? I do, indeed.

1860. A bridge about 60 feet wide, and with a 60-foot opening? It would have to be a substantial structure, because there would be a large amount of traffic, and it would require to have a wide opening.

1861. We have had evidence here by practical men—carcase butchers—that Glebe Island as a site, although rather small, cannot be improved upon as far as slaughtering is concerned? As regards the mere cutting of their throats, there is no doubt that you could not get a better place, but the getting of the cattle to the place is the point.

1862. Could they not be brought down in the night? It has never been satisfactory. They have been doing it for fifteen years, and occasionally some of the cattle escape, roam about the streets, and attack the first person they see. There is no more infuriated animal you can meet with than a knocked-up bullock. If you come across one in the bush he will warn you.

1863. I suppose it would not be practicable to re-truck the cattle if a railway were made from the sale-yards to Glebe Island? It would be like humpty-dumpty. You might get the cattle out of the trucks, but to get them in again would be a job. I have seen plenty of cattle de-trained, but I have never seen the same cattle put back in the same truck by anybody.

1864. You think it would be impracticable to re-truck them? It would be highly impracticable with the class of cattle you have here.

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1865. We have had it in evidence that it might be practicable, if a railway were made from Glebe Island to Flemington, not to take them out of the trucks, but to take them to markets erected at Glebe Island? A proportion of the cattle which would go there would not be sold—they would be held waiting for a future market, and they would have to be driven away to some paddocks pending a future market. You would have the same driving business all over again. You could not re-truck them and bring them back to that place for a market. There is by no means a sufficient area of ground which could possibly be got at Balmain for the purpose of slaughter-yards and sale-yards.
1866. You think it could not be done? It is impracticable here altogether. It would be a futile experiment.
1867. Several witnesses have said that a healthier place could not exist than Glebe Island? I have seen it in evidence from these gentlemen that it is the finest place in the world; but they had never seen any other.
1868. We have had evidence by several carcase butchers that a better place than Glebe Island could not possibly be found in the Colony? I have seen that statement in evidence. I have also seen in evidence that they have travelled over all the Colonies, and that that is the finest spot in the world.
1869. Mr. Austin, a carcase butcher, said he had been in Europe and America, and he thought that if the accommodation were improved, particularly for sheep and pigs, the Abattoirs would be suitable to the public, and would last for a number of years? I do not pretend to combat that at all. What I say is, that you can erect slaughter-houses on Glebe Island of a most perfect character; but the point is, how are you to bring the cattle there to be slaughtered. If you cut their throats at Flemington, and brought them down dead in the trucks, it might be all right; but to get the cattle to the island is the point. Even the sheep are a terrible nuisance. They are driven in in the day-time, and in the streets through which they travel they raise dust and ruin everything. If the slaughter-yards were erected, as I suggest, at some distance from the metropolis, surely with our present railway accommodation we could run them down easily in an hour to the meat-markets, and no harm could come to any meat in that time. In America they have very great advantages over what we have here. In America they can conserve large quantities of ice and chill their meat. It is a very easy matter in the hottest part of summer there to chill their meat and convey it a long distance; whereas here all our cold must be produced artificially. If you slaughter your cattle, and have your abattoirs within an hour's railway run of the city, surely to goodness it is an easy matter to run the meat down to the meat-markets. It would be far more convenient for small purchasers to go to a meat-market at Darling Harbour than to the Abattoirs at Glebe Island.
1870. I suppose you know that there is a considerable number of private slaughter-houses in the suburbs? I know that well.
1871. Do you approve of that? By no means. The method which should be employed is that which is employed in France. Every person who has slaughtering going on must have a Government official on the spot, and he stamps every portion of the animal, even the entrails. The finest abattoir I have ever seen is the Abattoir at Hamburg, which was built at a cost of £700,000, in the most elaborate manner. They take the very greatest possible precautions as to the character of every animal slaughtered there.
1872. How are the cattle brought there? The Abattoirs are close to the sale-yards.
1873. Do the cattle come from the interior of the country, or are they landed from ships? A good number are landed from ships; but they are pretty well tamed when they are taken off the boats.
1874. Do they come from Germany, Sweden, and Denmark? The largest proportion of them are home-grown cattle.
1875. A good many, I suppose, come from Holland? Yes; Danish cattle and Swedish cattle.
1876. Would the drainage at Flemington and Blacktown be complete? The drainage is a matter I have given a great deal of attention to. There is an amount of difficulty in connection with it. The method which would be employed for the drainage there would be something like the method which is employed in inland towns in England. There, the sewage is run into reservoirs, the solid matter is precipitated with a cheap chemical of a ferruginous character, the limpid matter is allowed to flow off, and the sludge is pumped up in filter presses, and it comes out in the shape of dry cakes, which are sold to the farmers as fertilisers. It is not an expensive process by any means.
1877. Does the sale of the stuff result in a profit or a loss? It is profitable in England. They make a profit in many English towns out of their sewage which is treated as I have described.
1878. You think that at our suburban slaughter-houses there is not sufficient supervision, and that a good deal of inferior and diseased meat is sold to the public? Undoubtedly. Glebe Island is very well looked after indeed, as far as inspection is concerned. Rigid inspection seems to be the prime point in the management of the Abattoirs there.
1879. Would not the road you propose to make involve a considerable amount for land resumption, or would it go through any Government land? I have not attempted to make an estimate; but I have gone over the route, and seen the surrounding ground and properties, and observed what the levels would be likely to be.
1880. I suppose you are aware that in the case of all land resumptions the Government have to pay high prices? No doubt; but there is a limit.
1881. Would the cost of the land resumptions be as much as the cost of building a new bridge, speaking approximately? I daresay the cost of constructing the road and resuming the land would pretty well amount to as much as the cost of constructing the bridge. I do not say it would be a cheap way of doing it by any means.
1882. *Mr. Lee.* Suppose the Abattoirs were removed from Glebe Island, do you not think the necessity would still exist for bridge communication between the island and the mainland? Hardly.
1883. Have you any accurate knowledge of the amount of traffic which passes over the bridge? Not an accurate knowledge, but I see the traffic. There is a continuous steady traffic from 4 a.m. to night-time, principally to the Abattoirs.
1884. Would you be surprised to find that the daily traffic across the bridge amounts to 2,032 vehicles, 51 horsemen, 215 driven animals, and 1,295 pedestrians? It does not surprise me.
1885. The traffic amounts to at least 3,378 persons, and includes 2,032 vehicles;—do you not think that a traffic of that magnitude would warrant the continuation of the bridge thoroughfare? But there would not be that traffic if the Abattoirs were removed.
1886. You do not pretend to say that the bulk of this traffic passes to and from the Abattoirs? I do.
- 1887.

1887. The vehicular portion of the traffic I have described passing to and from the Abattoirs on the same day amounted to 413 vehicles. The traffic was taken by a man stationed on the bridge for ten days, and although the traffic to the Abattoirs by vehicle is large, yet in proportion to the general traffic over the bridge it is rather small? Yes. H. Daly.
7 July, 1897.

1888. Now that you are placed in possession of these facts do you not think that the necessity for a bridge would continue to exist whether the Abattoirs are removed or not? Yes; but all that traffic does not come to the city. There is much of that traffic which would be served by the route I have indicated. For instance, all the brewers' drays going over to Balmain would not of choice go by the bridge. If they had the other road all the brewers' drays going to the western portion of Balmain would not of choice go by the bridge.

1889. Of necessity, it would be a fair assumption that the bulk of that traffic would be between the city and Balmain, over Pymont Bridge? Perhaps it might; I am not prepared to say that.

1890. You will understand that the bridge is a very imperfect structure, and that when the swing is open the delay is great? I do not think it is inordinately great.

1891. As much as fifteen or twenty-five minutes? I daresay it is.

1892. If this large traffic proceeds under the disadvantages of a bad swing, is it not reasonable to assume that with a proper bridge, provided with a wide swing, that traffic will increase very largely? I do not think so.

1893. If you were mayor of Balmain, would you advocate the abolition of the bridge in favour of a road to be given in the direction you have indicated? If I were mayor of Balmain and did that I would be stoned.

1894. Does that not arise from the fact that the large population of Balmain desire to be served in as direct a manner as possible, and require as direct communication with Pymont railway station and the city as possible? I take it that the railway-station is the point which is the necessity for this.

1895. It is a great feature in the inquiry? Yes.

1896. For the simple reason that factories are springing up around the foreshores of Balmain, and are wanting to get access to the railway-station? They are springing up around Rozelle Bay and Blackwattle Bay more than at any other part of Balmain.

1897. Chiefly timber-yards? There are little factories springing up in those bays, but the only large business, in the nature of a manufacturing business, which is carried on in Balmain is at Mort's Dock, and that is principally with shipping. There is a large amount of traffic to Balmain done by water. For instance, the coal is brought alongside Balmain. They will be digging it out of the ground there directly.

1898. It is a great feature that there should be direct road communication between Balmain and the railway-station? No doubt.

1899. As a business man, you admit that? No doubt.

1900. I take it that your chief objection to the whole thing is the retention of the Abattoirs at Glebe Island? That is from a public point of view.

1901. If the Abattoirs were removed you would offer no serious objection to the continuation of the bridge thoroughfare across to the island? No; I am speaking of the benefit which would accrue to the two bays by having an open waterway, not hampered by a bridge in any way.

1902. As a matter of public convenience, would it not appear to you that a large section of the public who have been accustomed to use this thoroughfare for so many years would hardly tolerate the closing of it? It would be a case of *volens volens*—if it was not there they would have to go by the other road.

1903. If the State could not give these people equally as good communication as they have now, do you not think that they would be discontented? If it would be three quarters of a mile further to get to the city, as the Chairman has pointed out, no doubt it would be a ground for complaint on their part.

1904. Admitting your contention, as far as Blackwattle Bay and Rozelle Bay are concerned, but providing that ample accommodation is made to admit ordinary vessels under the bridge, and by an open swing to allow large vessels to pass through the bridge, do you not think that that will give all the necessary access required to those bays? Yes; but there is always an objection, more or less, to a bridge barring a waterway. The manufacturing places in these bays, as well as the travelling public, would be inconvenienced while the swing was opened.

1905. But if the bridge is made sufficiently high to allow small craft to pass underneath without opening the swing, in the future, when these bays have been dredged out, do you not think there will be equally as much accommodation for anyone to settle in those bays as is likely to be given to shipping and others above Pymont Bridge? Yes.

1906. Well, if they are put on the same footing as the people above Pymont Bridge, what possible objection can there be to this proposal? People above Pymont Bridge are complaining now.

1907. But they are to get a very good bridge, with a fine swing in the centre. If they are all put on the same footing, your objections will, to a large extent, disappear? I daresay.

1908. If it is found that it is not possible to remove the bridge, the next best thing is to provide for very large accommodation in the future. Would not that very largely remove the objection you have to the bridge being there at all? I daresay it would.

1909. There is a proposal to carry a tramway to Balmain by that way? No doubt it would considerably shorten the distance to Balmain, but a tramway on a bridge with an open swing would certainly be very objectionable. An electric tramway would be a serious bar.

1910. The chief objection you offer is that it would be more in the interests of the community not to have a bridge there at all? Notwithstanding what you suggest, and notwithstanding what is promised, I consider a bridge is not a desirable thing to cross a waterway of this description, where a large amount of shipping is bound to come in the near future.

1911. But when it has been shown to you that so large a number of people will be put to serious inconvenience without a bridge, would you not, under conditions of that kind, waive the objection which you raise; would you urge the adoption of your plan in preference to the adoption of this proposal? I do not think that the people of Balmain would be so very seriously inconvenienced by it. They have a very fine water communication; they get across the harbour for 1d, and the trams run right up into Balmain.

1912. The road would lead to other places than Balmain? Certainly. It would bring Leichhardt very much nearer to Sydney.

- ^A H. Daly. 1913. It would lead to Drummoyne and Ryde? It would be almost as short by the route I suggest. It is Balmain proper—the part represented by the mayor—which would suffer most if the bridge were taken away.
7 July, 1897.
1914. *Mr. Fegan.*] I think you said that the Hamburg Abattoirs are the best situated and the best supervised of any abattoirs you know? The most expensively constructed.
1915. Have you visited other abattoirs? Yes.
1916. Under what supervision are they? Municipal, not Governmental. Everywhere I have seen abattoirs they have been under municipal control.
1917. How far are they from the centre of the town? You might say that they are in the town.
1918. Do you not think that the nearness of the Abattoirs to the harbour, and to the waters there, has something to do with the visitation of cholera now and again? No; the Abattoirs in Hamburg are scrupulously clean.
1919. Where does the water from the Abattoirs go? Into the drainage of the city.
1920. Is it not a fact that the drainage empties itself into the river, and that the people use the river water for drinking purposes at times? Not in Hamburg.
1921. Just before the epidemic of cholera visited Hamburg they did? No. The sanitary arrangements in Hamburg are rapidly becoming very excellent indeed; in fact, all the garbage of the city is burnt. They have spent £90,000 in less than four years.
1922. When did you visit Hamburg? I was there in 1892.
1923. That was before the cholera visited the place? Yes. There has been nothing serious in the way of cholera there. There were only a comparatively few isolated cases. You must recollect that until within the last eight or ten years Hamburg was an insanitary city, and it is only lately that they have taken up extreme sanitary measures, as they have done also in Berlin.
1924. But still, is it not a fact that hundreds, nay thousands died during that epidemic in Hamburg? I am not sure; I would not say so.
1925. Thousands a day died there during the epidemic? I am sorry to hear it. The cholera must have been introduced there; it did not grow there as a natural product.
1926. It went from there to other centres? I do not know; perhaps you know about it.
1927. It was mooted at the time that the cholera broke out in Hamburg on account of the insanitary condition of the city, which the authorities had to take immediate steps to improve—and that that was owing to the nearness of the Abattoirs to the centre of the town? I assure you that no epidemic—no case of illness—has ever been traced to properly-constructed abattoirs; in fact, it is one of the boasts of the people of Balmain that no disease or affection of any sort ever commences from the Abattoirs on Glebe Island.
1928. That points out at once that the position of the Abattoirs and their condition are such as to guarantee their retention at Glebe Island until a better site than has been suggested so far is found? It is to be hoped so.
1929. At the island they use, not only the city water supply, but also salt-water from the harbour? Yes; the blood runs down in the morning, and they pump it up in the evening. It is the blood pumped out of the bay that they wash down the floors with.
1930. *Mr. Hoskins.*] They have a large fresh water tank? They do not use that at all.
1931. *Mr. Fegan.*] Do you think that Blacktown is in a very good position for abattoirs? I do.
1932. If there were a railway to the island, or a possibility of conveying the animals by water, then a great deal of your objection to the present site would be removed? Yes; but you cannot get away from the sale-yards question.
1933. Your great objection is the inconvenience and danger caused by the travelling of the stock along the road? Yes; and the condition of the stock when they are slaughtered, as much as anything else, because meat slaughtered in the country brings 1d. more in Sydney than does meat from the Abattoirs.
1934. The objection you raise to the retention of the Abattoirs at Glebe Island is on account of the danger and inconvenience to the people? Yes; and the deterioration of the meat.
1935. Will you raise that as an objection to their retention? I do, undoubtedly; and a strong objection, too.
1936. If the cattle were run by a branch line from Flemington or Homebush into the Abattoirs, that would materially alter the position? I do not think it would help it at all. It is one of those things you could not do.
1937. Why? How will you re-truck the cattle again?
1938. If there is a railway to the island you can re-truck them? That is where I differ with you. You cannot re-truck cattle. You can hammer them into the trucks, no doubt, but when you get them to Glebe Island you will have them condemned for being in a bruised and unfit condition for sale after slaughter. Out of 77,000 bullocks slaughtered in 1895, 1,500 were bruised, and the proportion would be much larger if they were re-trucked. You will find all the slaughtermen concurring in the opinion that it is next to impossible to re-truck cattle. The sheep can be handled all right, but the cattle cannot be re-handled. Once wild or semi-wild cattle are put into trucks and untrucked, you cannot re-truck them.
1939. What are the principal features of Blacktown to recommend it as a suitable site for abattoirs? A large area of land can be secured there in one block. The water for the purpose of manufacturing the various products and of dressing the meat is close at hand in the Prospect reservoir. The district is a fairly good agricultural district, and the waste products can be disposed of, or there is a fair prospect of getting a market for the material among the settlers. It is within an hour's run of the city, and the meat can be sent down here for the purpose of disposal at a central market.
1940. Where would you remove your sale-yards to? I would take the sale-yards from Flemington to Blacktown.
1941. It has been suggested here by a witness that Belmore is a good site for sale-yards and abattoirs? That may be. I know nothing about Belmore: I have not seen it.
1942. Did you go to Blacktown with the express intention of seeing this good site? Yes. I saw some evidence by a gentleman concerning this site, and I went to Blacktown and had a look at it myself. I have no interest in the place.
1943. There would be no danger, I suppose, of the water filtering from the abattoirs back to the Prospect dam? None whatever; because the fall is in the opposite direction. It would not go into the watershed.

1944. *Mr. Hassall.*] I think you said that Glebe Island is totally unsuitable for abattoirs? Yes; that is, under existing conditions. -H. Daly.
7 July, 1897.
1945. The trend of the evidence before the Committee has been that it is the most suitable site for the purpose? Yes; but I have already pointed out that you cannot get the material to be operated upon there satisfactorily. You must have your sale-yards at the abattoirs, especially in this country, on account of the nature of the cattle themselves. You must have your sale-yards at the abattoirs in order to have an ideal scheme, as we ought to have here. You cannot have that at Glebe Island.
1946. You think the cattle ought to rest after being through the sale-yards? Undoubtedly; and that is acknowledged on all hands.
1947. A large carcass butcher has stated here that in all probability, if the sale-yards were alongside the abattoirs, or *vice versa*, the cattle would be run almost directly from the sale-yards into the abattoirs, and killed while in a state of fever; but the location of the slaughter-yards at some little distance from the sale-yards is beneficial in this respect, that it allows the cattle time to cool down? That is so.
1948. You have seen the cattle come from the sale-yards at Homebush? Yes; it is a regular hunting expedition from Homebush. They are not driven; they are hunted.
1949. It is a case of hunting the cattle from the time they leave the railway trucks until they go through the sale-yards? Their tongues are hanging out when they get to the Abattoirs, and they are dead meat in an hour.
1950. Would not the same thing occur anywhere else? No; it is all a matter for consideration by the owners of the cattle. If I owned cattle, and was a slaughterman, I would slaughter them in the best condition, in order to have my meat in the best condition. You can always tell meat that is properly bled. If you kill a beast, and it is properly rested, it will be properly bled, and the meat will have a healthy, sound, and inviting appearance; whereas, if you kill a beast which has been hunted and driven, it will not bleed properly; it will be suffused with blood. The meat which is not properly bled, and the meat which is killed in a fevered condition, will not keep as well as the other meat.
1951. You seem to think that it will be advisable for the meat to be slaughtered in the country? There are many difficulties in connection with that being done. The climate is against it. We have very little natural cold here; all the cold would have to be produced artificially. In America, where they carry meat 900 miles, all the ice is saved from the lakes. Their ice costs them practically nothing; whereas here, for every pound of ice you make, you have to pay dearly.
1952. We cannot alter the climate? The next best thing you can do is to bring the animals' meat within a reasonable distance of Sydney, and slaughter them there under proper conditions.
1953. Even when they slaughter cattle at Riverstone they have to send the meat down in chilled cars, especially in summer? I believe so. It is very good meat; it comes in very good condition; it brings the highest price.
1954. The question arises, then, whether any more suitable spot than Glebe Island can be found for the Abattoirs;—in the event of proper machinery being provided it may be possible to turn these products into a commercial article with very little nuisance to the residents? The blood and offal could be treated so perfectly, easily and satisfactorily, that any person entering the establishment would not be able to tell what process was being employed. If the material is treated from start to finish in sealed vessels all the manurial qualities are preserved, and it is sold at per unit of ammonia, or of whatever constituent it contains. There was no such thing as an analysis of the manure produced at Glebe Island. The men there could not tell you what constituents it contained any more than the man in the moon. All they did was to burn it up, and put it into bags; it was burnt dry dust. From Glebe Island a very large quantity of the offal is taken away for pig-food, and the driving of that stuff through the streets is a horrible nuisance. I have seen it filled into the bags and carried along the streets. The guts hang out of holes in the bags. It leaves a trail of stench behind it. All these things are disgusting, offensive sights in a large population.
1955. The municipal authorities or the Board of Health might make those who convey this offensive matter through the streets provide proper receptacles for it? It is very difficult to do that, because in this country these waste matters will decay and go into a putrid state in about six hours, especially in summer. Unless they are taken away very quickly there will always be a smell, and even in a fresh state, to people not accustomed to slaughtering, an offensive odour arises from the stuff. That is my experience of it.
1956. Do you think the present bridge is equal to requirements? No. Every day it is there it is expensive, and costs a large sum for maintenance, and you have to support a staff to open and shut the bridge. It is a continual cause of expense even as it is. I have suggested an alternative scheme—whether it would meet with the views of people I do not know.
1957. Do you not think that if the bridge were removed from that position it would result in great difficulties to the people who have been using it so long? No doubt. The people at the west end of Belmain want to keep the Abattoirs at Glebe Island.
1958. The agitation for a new bridge is justifiable in many ways? No doubt.
1959. As the present bridge has practically outlived its usefulness, do you not think a more substantial bridge should be erected in its place? If a bridge has to be provided there a good one should be erected.
1960. *Mr. Roberts.*] You said that in England manure manufactured from blood brought £8 a ton, and manure manufactured from offal £6 a ton;—do you know what that manure costs per ton to manufacture it? The blood manure costs in England about £5 per ton, and the offal manure about £3 15s.: but the raw material has a money value there, whereas here it is treated as waste and punted out to sea and discharged.
1961. *Mr. Black.*] You spoke of the injustice which would arise to the people of Flemington if the Abattoirs were removed to that place;—do you think that the Abattoirs could be established anywhere without an injustice arising to someone who was settled there? The very presence of an abattoir—no matter how well supervised and conducted it is—always has a lowering influence on the character of the neighbourhood. My experience is that an abattoir always depreciates the character of the neighbourhood where it is established.
1962. Then you think it is wise to remove the Abattoirs from a place where that depreciating effect has already been gone through to some other place where a similar effect will have to be undergone? A similar effect could not be undergone at Blacktown, because there is no settlement there.

- H. Daly. 1963. Is there not a village there? It is a comparatively small place. I am speaking now of some distance from the railway. You are not taking the abattoirs into any settled population which is already there.
- 7 July, 1897. 1964. But if there is a population there you are? There is no population of the nature you indicate there.
1965. What do you mean by saying of the nature I indicate? You indicate the population which is round Balmain. The population at Flemington is totally different. The class of settlement at Strathfield and Flemington is totally different from that at Balmain.
1966. Do you think that what is offensive to people of a certain class will not be offensive to people of a lower class—that the people of a lower class have no sensibilities to be considered? No; that does not enter into the thing at all. Practically, the Abattoirs where they are do not touch the houses of the people, whereas if they are established at Flemington or Strathfield, settlement will go on until it comes close up to the abattoirs. The men, for instance, who are employed in the abattoirs, and the people who make their living round them, will keep spreading out and out until they touch the fringe of the better class of settlement.
1967. Why should settlement ever come up so as to touch or fringe on the area occupied by the abattoirs? It is bound to come. You are bound to have a lot of associated trades there.
1968. I do not see it;—you have set apart at Flemington a certain area for the sale of cattle, and you have also a certain area (which they say is about 1,015 acres) for the resting of cattle;—suppose you put your Abattoirs in the centre of that block of 1,015 acres, which is permanently reserved for this purpose, however is settlement to so nearly approach the Abattoirs as to feel its injurious effects? I am not prepared to indicate how it is to approach it. The residents of that locality, or the better class of people who are employed in the city, have moved out in that direction in order to escape the crowding of the city, and if you put an abattoir down close to them it certainly will have a depreciating effect on the neighbourhood.
1969. Yet you say that you can so conduct the desiccating of the blood and offal that it will be possible for anyone to enter the abattoirs without knowing what process is going on? Quite so.
1970. You also say that the killing of cattle in Paris and Hamburg is not prejudicial to the health or objectionable to the inhabitants of those cities? I do not say it is not objectionable; but I say the class of settlement around those abattoirs is a poor class.
1971. Who are not supposed to be sensitive? I have nothing to do with their senses.
1972. Why should they not have as much consideration as others? That has nothing to do with it.
1973. It has this much to do with it, that if you consider one class you should consider all? It is merely a matter of peoples' tastes. Take me, for instance; I would not, out of choice, buy an allotment of land and reside in the neighbourhood of an abattoir let it be ever so well conducted.
1974. *Mr. Roberts.*] The nearer the abattoir the lower the rent? Rather. It is the case everywhere I have seen. The men who are employed in abattoirs like to be near their work.
1975. *Mr. Black.*] Do you think the people of Balmain object, as a rule, to the present site of the Abattoirs? I am quite sure they do. I was at a meeting in Balmain which was called to bolster up the Abattoirs, and all the men who were there were simply the employees of the Abattoirs.
1976. How far is the site at Blacktown from the Prospect reservoir? I suppose it is half or three-quarters of a mile.
1977. Do you think it would be wise to place the abattoirs so near to the public water supply? I do not see what injury could result from it.
1978. Do you not think that some of these sensitive people you think about might object to drink the water from the reservoir? They could please themselves about that.
1979. The people of Sydney might object to the proximity of the abattoirs to their water supply? It could not injure their water supply.
1980. Whether it could or could not, do you not think that there would be an objection on sentimental grounds to the presence of the abattoirs so near to the water supply? An abattoir cannot be a pestilential place if it is properly conducted. Nothing arises from it which could be detrimental to health. Our food supply comes from the abattoirs, and, therefore, it must be in good condition in all circumstances. Nothing can arise from it, except matter is allowed to putrify, and allowed to contaminate and pollute the water supply, which could be any danger to the people.
1981. Do you not think that substances which are prejudicial to health—which contain the germs of disease and contamination—can be carried a great distance by birds or insects? I have heard so.
1982. Is it not just possible that the seeds of contamination might be carried from the proposed abattoirs at Blacktown to the Prospect reservoir and dropped into the water there? I do not think so. If you allow an open sewer to be there, and putrid matter to flow from the abattoirs, and create an abominable stench—if you allow that sort of thing to obtain there, and birds and animals pick it up and drop it into the water—that may come about; but I think it is absolutely impossible in a well-regulated establishment that it could happen.
1983. Do you consider the establishment at Glebe Island well regulated? If you view the inconvenience of the place, and the conditions under which the men have to slaughter, and the bad accommodation there, I really think it is marvellously well looked after. The means for conveying the blood and offal away are inadequate.
1984. Do you know any reason why, with certain improvements which you have suggested, and which others have suggested, the Abattoirs at Glebe Island could not be made just as unobjectionable to the public as any Abattoirs which may be situated elsewhere? I do, undoubtedly; but the getting of the material to be operated upon there is the trouble.
1985. To refined persons, especially? You can kill a beast in this room, and clear up the debris, and come in here to-morrow, and you will not know that there has been a slaughter here. You can erect a slaughterhouse in the middle of a city, and keep it scrupulously clean and remove all the material.
1986. Then it would be possible to greatly minimise the nuisance supposed to exist at Glebe Island? Undoubtedly it would be possible. You could erect substantial abattoirs there; but notwithstanding that you would not be able to have an ideal scheme, or such a scheme as there should be in this country.

THURSDAY, 8 JULY, 1897.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.	CHARLES ALFRED LEE, Esq.
The Hon. JAMES HOSKINS.	JOHN LIONEL FEGAN, Esq.
The Hon. CHARLES JAMES ROBERTS, C.M.G.	THOMAS HENRY HASSALL, Esq.
The Hon. WILLIAM JOSEPH TRICKETT.	GEORGE BLACK, Esq.
The Hon. DANIEL O'CONNOR.	FRANCIS AUGUSTUS WRIGHT, Esq.
HENRY CLARKE, Esq.	FRANK FARNELL, Esq.

The Committee further considered the expediency of constructing a New Bridge at Glebe Island.

Cecil West Darley, Engineer-in-Chief for Public Works, Department of Public Works, sworn, and examined:—

1987. *Mr. Humphery.*] Is the design of the proposed bridge similar in every respect to the design which was placed before a former committee? No; the design I am prepared to recommend to the Committee is what is known as the causeway design. C. W. Darley.
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1988. Will you briefly explain your design to the Committee? The centre line of the causeway will be about 90 feet, on the southern side, from the centre of the existing bridge. It will be constructed of a solid bank of stone, extending out towards the centre from each side, with a steel swing-span in the middle, covering two openings of 60 feet in the clear, and two side spans, each 80 feet long. The swing portion will be 194 feet overall, which covers two openings of 60 feet each, two rest-piers of concrete and masonry, and two side spans of 80 feet long, so as to reach on to the stone causeway. The clear headway under the bridge will be 20 feet, and the roadway will be 40 feet wide, with two footpaths of 5 feet each.

1989. *Mr. Hoskins.*] Why do you require to have two side spans? Because otherwise the stone from the causeway would run out and block the waterway.

1990. Even though you have two openings in the centre? The object is to span the slope of the stone, otherwise you would have to put up very heavy masonry rest-piers to act as an abutment. It is cheaper to put a span on to the causeway than to make a heavy abutment there. In my estimate I have allowed for the cost, which will be ample, of excavating the stone on Glebe Island, and bringing it into position. I have taken a very full estimate, but I have reason to believe that it will be very much cheapened by a large quantity of material being brought from the city out of foundations. For instance, the Railway Department are about to construct a large power-house near Harris-street, in connection with the electric tramway system. There will be a large amount of excavation on that work; I do not yet know how much, but there will be a considerable amount, I understand from the Engineer-in-Chief. The contractor must have a place to tip the stuff, and this place is immediately available as a site. By putting the material here we will actually cheapen their operations. Again, if the city railway extension should be authorised—a thing I cannot count on—there will be very great difficulty in readily getting rid of the material. Here would be a dumping ground for the material excavated from the city railway extension. That would practically enable this causeway to be made free of cost. The estimate of £25,750, which I have put down for the causeway, might be written off. It is the most convenient dumping ground which could be found for city material. There is no other place within that radius which could be found for dumping a large quantity of excavation from the city. From my experience of the filling done at Circular Quay you have but to offer such a site for sound filling, and you can obtain it readily poured in. I have not counted on getting any material. I have simply put down what is a good price for excavating the material on Glebe Island. That all goes to the good if we can get the material or any portion of it from the sources I have indicated. I estimate the cost of the whole structure at £84,500.

1991. Is that for the causeway alone? It is the cost of the causeway and the bridge, including the swing. £25,750 of that sum is for stone; it is possible that the whole of it may be saved, but certainly a large proportion will be saved.

1992. *Mr. Humphery.*] Have you ever estimated how much of the £25,750 would be required to remove the stone from Glebe Island? That is the full value of excavating the stone at Glebe Island. It is an outside estimate.

1993. Have you made any allowance for the cost of the causeway on the Pymont side? No; I have treated the two causeways as one work.

1994. Have you made any estimate of the value of the material which you will obtain from the excavations for the power-house near Harris-street, and possibly in connection with the city railway extension? At this stage I do not know how much is likely to come from the power-house. I do not think the plan has sufficiently developed yet to get that information. In my estimate I have not calculated on getting any portion of this material free. I have put down an estimate of its cost as if we had to excavate the material at Glebe Island.

1995. The total cost of the bridge and causeway will be £84,500 on the assumption that you will have to pay for all the material you use? Yes.

1996. It is possible that that estimate may be very greatly reduced if you obtain, as you hope to do, a large portion of the material free of cost? Yes.

1997. Can you say approximately what the saving in that direction may be? It may be as high as £25,750.

1998. Practically that would reduce the cost of the bridge to below £60,000? A little below that sum.

1999. How do these figures compare with the estimated cost of the wooden bridge with a steel swing-span, which was placed before a previous committee? The first cost estimate of the wooden bridge was £59,500. Of course, a wooden bridge is more costly to maintain than a steel bridge. The estimated cost of a steel bridge throughout, with stone piers, is £92,400, as is illustrated on the drawing to my right.

2000. Would you regard a bridge, as now designed, with two causeways as being superior to either a wooden or steel structure? In my opinion it is.

2001. Will you be good enough to explain wherein the superiority of the structure lies? Over three-fourths of the length of the structure will be absolutely permanent, and will require no maintenance other

- C. W. Darley. other than the surface-maintenance of the road. It will be dealt with as an ordinary street or road; but beyond its maintenance, there is nothing to deteriorate or depreciate in the permanent structure.
- 8 July, 1897. 2002. What is the estimated difference in the cost of maintenance between the proposed causeway and a wooden bridge with a steel-swing span? I have the maintenance and working expenses put together. The working expenses are so large in proportion that it does not leave much difference between the two. There is the labour of attending to, and opening and shutting the swing-span.
2003. Can you separate these items, because I suppose the estimate for opening and closing the swing-span will be common to all schemes? Yes. In the case of the roadways, as regards maintenance and working expenses, there is no very great difference. A steel bridge altogether will cost £46 more to maintain than a causeway. The renewals come to £672 a year in the steel bridge as against only £234 in the causeway. In the wooden structure it would come to £1,578 18s. 4d., compared with £234 in the case of the causeway.
2004. So that there would be an annual saving of about £1,300? No; because you have to include the interest. The interest on a wooden bridge is so much less than the interest on the causeway.
2005. Suppose you answer my question on the assumption that you will be able to effect the saving you anticipate, and reduce the actual cost of the bridge and causeway to £60,000, which is about the same as the estimate submitted for a wooden bridge? Then the interest would stand the same. I have worked everything out on the maximum basis, assuming that we get no material from outside at all.
2006. On the maximum basis what will the saving be? The interest, renewals, and working expenses in the case of the causeway will be £5,040 a year. The difference in the total annual cost to the country is £230 in favour of the causeway. Capitalising the total cost to the country, and allowing for renewals, interest, and maintenance, in the case of the causeway it is £126,000, as against, in the case of the timber bridge, £137,750, so that actually in the long run, the causeway is the cheaper of the two, calculating it on the most costly basis.
2007. That is to say, on your maximum estimate, there would be that saving? Yes.
2008. And upon the reduced estimate, in the event of a portion of the material being obtained free of cost, how much will the saving be, calculated in the same way? It will come down to £111,000. The capital value of the whole structure and its upholding will be £111,000 as against £137,000 in the case of the timber bridge.
2009. Have you taken into consideration the cost of renewals? Yes; I am putting down the same for renewals, giving the different portions of the bridge a different life.
2010. On the calculations you have made as to the matter of cost, would the construction of the causeway result in a very large saving ultimately? It would.
2011. Are there any objections to the construction of a causeway that would not apply to the erection of an open structure? I do not know of any.
2012. Have you considered the question of dredging? Yes.
2013. Would more dredging be necessary with a causeway than with an open bridge? No more.
2014. Would there be any possibility of greater pollution at Blackwattle Bay by reason of a causeway than by reason of a timber or steel bridge? None whatever; there is nothing to cause pollution. The entrance here is of an immense size in proportion to the area of the water in the bay inside.
2015. *Chairman.*] There will be no diminution in the amount of water entering the two bays? None. The proportion that the width of the entrance bears to the area inside the bay is exactly four times what the width of the Sydney Heads bears to the area of water inside the Heads. As the Committee have fresh in their minds the entrance at Lake Illawarra, let me make a comparison with that place. The width of the entrance into Rozelle Bay through this opening is exactly forty times as large as the proposed entrance to Lake Illawarra. In the case of the Sydney Heads it is four times the size. In other words to pass the same quantity of water through per hour, in proportion, as Sydney Heads do, you can reduce it to a fourth of the present width.
2016. *Mr. Humphrey.*] The proposal is to have the road on the causeway of the same width as the roadway on the bridge with two 5-foot pathways? Yes.
2017. Have you a design of the causeway showing the width of the base? I had not time to prepare a cross-section. It is a 40-foot roadway with two 5-foot footpaths.
2018. Do you propose to pitch the face of the causeway? The slopes I propose to hand-pitch from low-water mark upwards, so as to give it a trim and tidy appearance.
2019. *Chairman.*] Is the causeway likely to cause the bay to silt up, or is there any force to take out the silt? There is nothing to cause the bay to silt up. There is no run there. It is not like a river's entrance.
2020. Have you any idea what the velocity of the water passing between the causeways would be? It would be almost imperceptible.
2021. *Mr. Wright.*] Is it 3 miles an hour? It is not a mile. Practically, the current is not worth considering, as the area of water in the bay is so small. There is only a water area of 170 acres inside the bridge.
2022. *Chairman.*] What is the width of the water between the causeways? The net waterway is 235 feet—that is, after deducting the width of the central pier and the two resting piers. The area of the water inside the bridge is so small that the current would be inappreciable.
2023. What is the rise of the tide in the bay? From 3 ft. 6 in. to 5 ft. 6 in.
2024. Would you average it at 4 feet for all practical purposes? At 4 ft. 6 in.
2025. *Mr. Humphrey.*] Where do you propose that the causeway shall start from on the Glebe Island side? At about 90 feet from the southern side of the present bridge. It will be parallel with the present bridge at both ends.
2026. To some extent it will straighten the present road on Glebe Island? It will take away a portion of the existing curve on that road.
2027. Your causeway will be much higher than the present roadway? Yes.
2028. How do you propose to deal with the road on the Glebe Island side? I propose to fill up, so as to get a better gradient up to the Abattoirs. There is a rather steep gradient rising up from the Abattoirs—1 in 15. I propose to alter the gradient so as to get not less than 1 in 20.
2029. Do you propose to widen the roadway? I propose to widen and improve the roadway.
2030. Now, on the Pyrmont side, do you propose to make any alteration in the approach to the causeway? I propose to widen it considerably.
- 2031.

2031. Do you think it necessary on the Glebe Island side to make any deviation in the roadway? No. C. W. Darley.
2032. You think it is better not to do so? I think it is better to keep it for the present on the same line. 8 July, 1897.
2033. The previous proposal was to take it straight across the island? At this stage I would not like to recommend that that should be done, because the future use of Glebe Island is not determined on. I am afraid that if a road were now taken across the island, it would interfere with the usefulness of the island for railway traffic. It will be better to keep the road, for the present at any rate, where it is.
2034. *Mr. Wright.*] Would not a straight road across the island take up very much less space? No; it would mean having two roads instead of one. You must keep the present road.
2035. *Mr. Humphery.*] The present road is almost direct; the only reason for a suggestion of the kind which has been made to the Committee is that, at present, the road divides the Abattoirs;—is not that so? I rather think that that is of small moment at the present stage.
2036. How long will it take to construct the causeway and complete the bridge? I think it will be very nearly three years' work.
2037. Will the bridge be ready for use within three years from the time of commencing the work? I think there is no difficulty in doing the work in three years.
2038. Have you considered the present condition of the Glebe Island Bridge, and are you of opinion that it may be maintained during the erection of the causeway? We would have to maintain it until the other was finished. It may be more or less costly, but it must be done.
2039. Have you any doubt about your ability to maintain the present bridge during that period? I think we can do it.
2040. Can you make any suggestion as to providing a better approach to the bridge from the Pymont side;—you see from the plan on the easel that the present road is certainly not a direct road, but has very sharp angles? Of course, it is possible to provide a better approach, but I do not think it would warrant the cost. It would be done at very great cost, because it would interfere with too many vested interests. There are so many large businesses established facing the road that I think it would be very hard to make a deviation.
2041. The present road is about as direct as you can make it without incurring very great cost? Without incurring unreasonable cost.
2042. Could a shorter route through Glebe Point and round the head of Rozelle Bay be obtained? I could obtain a route, but not a shorter route.
2043. What would be the length of the shortest route, starting from the letter B on the plan, that you could obtain? I have made a calculation of the distance from a common point at the junction of Pymont Bridge road with Union-street to a common point at the junction of Weston-street with the Abattoir-road. The present distance *via* Glebe Island Bridge, starting at the intersection of Union-street and Pymont Bridge road, *via* Union, Miller, and Bank streets, the Abattoir-road and Weston-street to Gordon-street, is 1 mile 46 chains; but going from the same point, *via* Pymont Bridge road, Brougham-street, Lyndhurst-street, Glebe-road, over the embankment at Rozelle Bay to Weston-street, it is 2 miles 54 chains; or 1 mile 6 chains longer than the direct route.
2044. Could that be shortened without considering the cost? It could be shortened, but it would be very costly indeed, instead of following the Pymont Bridge road into Glebe-road, to go across either by tunnel, or through private property.
2045. What distance could be saved in that way? I do not think you would save more than 30 chains.
2046. That would bring you to the point on Weston-street which you just mentioned. Yes, to the common point of junction for the traffic going to Hunter's Hill and the western district, Glebe Island; but to go round to Glebe Island Abattoirs, it makes a difference of 1 mile 72 chains.
2047. Will you now state the distance from that point on Weston-street to the Abattoirs? It is 40 chains from that common point to the Abattoirs.
2048. Making what difference between the road you have described and the present road to the Abattoirs from Sydney? To the Abattoirs it will be 1 mile 72 chains longer than the present road.
2049. So that assuming the present bridge to Glebe Island to be removed, and no new bridge to be built in its place, for all the traffic between Glebe Island and Pymont there would be a difference of nearly 2 miles? Yes.
2050. Do you think these figures are quite correct? The difference to a common point for all traffic going to the west and north—to the Hunter's Hill district—would be 1 mile 6 chains longer.
2051. That would be for all traffic going beyond the point on Weston-street which you have mentioned? Yes.
2052. Therefore the residents to the west of Balmain would have to travel an additional mile if the present bridge were removed? Yes.
2053. As a matter of convenience it would be out of the question to adopt the suggestion which has been made to the Committee to take a road round by the head of Rozelle Bay? Not without putting the people to extra trouble.
2054. Have you considered the cost of connecting the end of Glebe-road with Glebe Island—that is, across Rozelle Bay? I have not made an estimate of that.
2055. I suppose any suggestion in that direction would not commend itself to you? No; it would be very nearly as costly, because it would still require an opening span in the bridge.
2056. And there would be no advantage? I do not see any advantage to be gained. You would require an open span to go through that bridge, and practically it would be as costly a bridge as the other.
2057. Do you see any objection on the score of delay to vessels passing through a large swing (say) 60 feet wide, to get into Blackwattle Bay and Rozelle Bay? None whatever.
2058. Have you considered the time which will be required to open and close the swing? The swing can be easily opened in half-a-minute, and closed in the same time.
2059. The only delay will be while the vessel is passing through the opening? Yes; the question of opening and closing the swing hardly enters into consideration.
2060. Do you consider that an opening 60 feet wide would be more than ample for all the traffic in connection with the two bays? Quite sufficient.
2061. Can that causeway and the swing-span be so constructed as to admit of tramway communication between Pymont and Glebe Island? Yes.

- C. W. Darley. 2062. Is it your intention to so construct the bridge? It is not contemplated that a tramway shall be laid on the bridge, but it is strong enough to carry a tramway.
- 8 July, 1897. 2063. Would there be any difficulty in passing a tramway over a swing-span? No difficulty.
2064. Would there be any danger? Not with proper precautions. There is danger, of course, with every swing-span.
2065. Would there be any special danger? No.
2066. Therefore, for tramway purposes a bridge or a causeway with a swing-span may be regarded as an ordinary road? It may.
2067. *Mr. Lee.*] Have you considered the question whether the road on Glebe Island could be deviated with advantage to the public of Balmain? I do not think it would be to the advantage of Balmain to deviate the road. It is nearly as direct a road as you can have.
2068. Instead of going directly past the gates of the Abattoirs, where at times there are unpleasant sights and smells, could you, with advantage, deviate the road to the north without incurring any large additional expense? It would mean considerable expense, because you would have to cut a good depth through the island. Of course, it could be done, but I think at this juncture it would be unwise to determine on it, because we cannot just yet lay out the possible future of the island. If it is to be utilised for railway purposes—for shipping purposes—it would be a pity to fix levels on the island which would be inconvenient for its utilisation hereafter.
2069. It is possible that in the future the Abattoirs may be removed, and the island turned to much better account? Yes.
2070. For shipping either coal or merchandise? Yes.
2071. You hold that if we were to make a large cutting through the island, it would seriously interfere with its future utilisation in that respect? With the future development of the island.
2072. You know of no reason why the road should not continue to run past the Abattoirs? I do not see any objection at all.
2073. I presume your objection would hold equally strong against a deviation of the road on the eastern side of the island? It would. The road if deviated in that direction would block off the access to very valuable water frontage, which is part of the scheme for developing the island.
2074. If a day should come when Blackwattle Bay and Rozelle Bay are dredged out to accommodate a vessel of moderate size, all that frontage will be required for wharfage purposes? I think so. I think the day is not far distant when we will find it desirable to commence utilising the various frontages around Glebe Island. It would be a pity at this stage to go to the expense of constructing a road there which you may have to do away with then.
2075. A large amount of sewage is discharged into Blackwattle Bay? Yes.
2076. If that practice is continued, and you build a causeway, will it not largely impede the discharge of that sewage from the bay? No. The amount of sewage discharged into the bay is decreasing every year, and as the sewerage system becomes completed the amount going into the bay will be lessened. But any sewage which goes into the bay is deposited near the mouth of the sewer. It is not as if it were deposited in a river. It is not water-borne, and in the absence of any current it is precipitated and arrested near the mouth of the sewer. We dredge it up time after time. It is not carried away into the bay. At a little distance from the mouth of the sewer you would find the water comparatively pure. There is no current from the bay out as compared with a river. If there were a river running down there and passing through that opening, it would be a matter for consideration, but in the absence of any disturbing influence of that kind there is nothing to create a deposit behind the piers, any more than in other portions of the bay.
2077. And therefore it is not likely to become more offensive than it is? No.
2078. Is it the intention of the Sewerage Department to discontinue discharging the sewage into this bay when their scheme is completed? Practically so.
2079. Is that likely to be very long? No. The western suburbs scheme is well advanced, so that in two or three years really the sewage of that portion of the suburbs will be diverted and taken through the sewers.
2080. That being the case, there can be no possible danger of a nuisance springing up there from that cause? None whatever.
2081. Practically then, the sewerage system may be completed almost as soon as the bridge is built? The great bulk of the sewage will be diverted from that bay before the bridge can possibly be constructed.
2082. When the reclamations are complete and the sewage is removed, and the bays are dredged for the purpose of admitting ordinary shipping, then you think the bridge you propose to construct will be sufficient to give ample accommodation for any vessel which can possibly trade to that water? Ample.
2083. Are you very clear on that point? Quite clear.
2084. That will cover the objection that such an opening in the bridge might interfere with the navigation? There is no ship entering the harbour which would not go there easily.
2085. The class of ships likely to go there will be fully accommodated by that swing? Fully. There is no ship which has ever entered Sydney harbour which could not go through there.
2086. *Mr. Wright.*] Do you know the beam of the "Orlando"? I am not quite sure, but I think it is under 60 feet.
2087. I believe it is 62 feet, and the "Nelson" is 60 feet in the beam; but of course you are speaking of merchant ships? Even the "Nelson" would go through.
2088. What depth of water have you at the swing and the two spans? There is only from about 17 to 18 feet now, but it is proposed to dredge it.
2089. I suppose the construction of your piers and causeway would allow that to be dredged to a depth of 27 or 28 feet if necessary? In my estimate I propose to dredge to a depth of 25 feet right away.
2090. That will not be deep enough for a large class of ships? There is no reason to dredge to a depth of 28 feet. I am going to dredge it to a depth of 25 feet before constructing the bridge.
2091. It has been pointed out that there is a possibility of a very large type of ships frequenting that bay, and therefore you would require to have a depth of 28 feet;—would it interfere with your estimated cost of the work if it were dredged to that depth? Not in the least.
2092. What is the idea of that extreme batter at the end of the causeway;—would it not be better if it were built up plumb? You would have to build a retaining wall to hold it, and that would be a costly work. I let the stone take its natural slope. I propose to let it rest well, and after it is consolidated to face it with hand-pitched slope, so as to give it a tidy appearance.
- 2093.

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2093. That is principally on the score of economy? Yes.
2094. It seems to me that you lose a good deal of waterway by that big batter, which you might get if the wall were plumb? The waterway is of very little object. If we want it, we will simply increase the span and set it further back. Two 60-foot openings are ample for the place. The other two openings can be used by small vessels.
2095. Will a boat, drawing 7 or 8 feet of water, be able to run through the outside openings? Yes. When the bridge is finished there will be a depth of 20 feet on that side span, with a clear width of 24 feet.
2096. Would it be possible to use the sides of the causeway eventually as a timber wharf? Certainly; you could construct a wharf for the island on each side of the causeway.
2097. You could get a sufficient depth of water there for all practical purposes? Yes.
2098. I think Mr. Humphery asked you a question about the grade of the road over the island, and the increased height of the causeway as compared with the present road? From the bridge is hilly all the way, but a good portion of the road is about 1 in 15, where it is principally in side cutting. I propose to continue the level of the causeway until it meets a gradient of 1 in 20 from the top of the island.
2099. That will be an advantage to the traffic? Yes; it will improve the road, and at the same time give a wider road.
2100. You propose then to widen the road over the island? I propose to widen the portion of the road through the cutting. It is a sort of side cutting which we propose to widen.
2101. You disapprove of the idea of cutting down the island, so as to make a straight road through? Yes; at this juncture.
2102. Because it will interfere with purposes for which the island may in the future be found suitable? Yes.
2103. Is the total opening which you propose to leave proportionate to the original opening, before the reclamations in Blackwattle Bay and Rozelle Bay were made? Not quite.
2104. A large area of the water in those bays has been filled up, and you think your proposed opening will not be proportionate to the opening before the reclamation was made? No; I think it will be a little less in proportion.
2105. Still you think it is ample for all purposes? Ample.
2106. There is no danger of the tide not getting in there at its full flow? I am quite sure about that. The area is so very small in proportion to that opening.
2107. A road taken round the head of Blackwattle Cove, along the foreshore of Glebe Point, and across the head of Rozelle Bay, would be a mile and a half longer than the present road? It would be 1 mile 6 chains longer from a common point to a common point.
2108. The only advantage which would be gained from a deviation of that kind would be the abolition of the bridge? Yes.
2109. That would give the people a very much longer route, and though a gain to the State it would be a loss to the people? It would be a loss of time, which is money.
2110. Your causeway is to be 50 feet wide on top;—I suppose it will be 100 feet wide at its base? 210 feet. I have taken the stone until it goes right down to the clay. It will not take as much stone as I have estimated. I estimate that the stone will displace from 12 to 14 feet of silt, and instead of the silt, which is overlying the clay, we will have a bank of stone. As a matter of practice, I know that that will not occur, but if it did occur the width would be 210 feet. If I were carrying out the work, I should dredge a gullet right across on the line of embankment and remove about 12 feet of soft mud. If that were not done, with the stone going in on top of the mud, there would be a very great risk of its forcing the mud away and knocking down the old bridge too soon.
2111. There would also be the possibility of future sinkages? I think the stone would go down pretty quickly. It would come to a state of rest before it was all completed. In my estimate I have allowed for dredging a gullet right through the main part of the embankment to good firm ground.
2112. Inside your causeway you can tip not only stone but sand and clay taken out of excavations? I should use all good sound filling and cover it over with stone. Assuming that the city railway extension is authorised, that causeway will be constructed practically at no cost to the bridge, because the contractor for the railway-station must find a dumping ground, and he could not get a more convenient dumping ground for the excavated material than that place. One of the difficulties in connection with the railway extension will be to find a place to dump the material, and they could not find a place nearer or more convenient to the city to convey it to than this place.
2113. Do you know anything of the quality of the stone at Glebe Island? There are some very good beds on the island. There is some inferior stone there also. Some beds on Glebe Island come very closely up to some of the Pyrmont beds.
2114. There is more stone to be obtained from Glebe Island than you are likely to require? It would only make a small indent into the island to take that quantity.
2115. Before or after the construction of the bridge would you recommend the making of a good wide channel up Johnstone's Bay and the dredging out of Blackwattle Bay and Rozelle Bay to a fair depth? Only as trade demands it. It would be too big an undertaking to dredge out the whole bay. We would have to dredge a channel and run out wharfs as trade demanded it.
2116. One witness has stated that eventually a large produce trade will be done in the two bays, that they will be frequented by timber and wheat-laden ships which cannot go up there at present; and your reply is that as trade develops you are prepared to provide sufficient water there? Yes.
2117. *Mr. Hoskins.*] Two witnesses before the Committee have objected to there being a bridge to Glebe Island at all, and evidence has been given to show that not more than a third of the traffic over the bridge goes to the Abattoirs; that the major portion of the traffic is to Balmain, Drummoyne, Ryde, and other suburbs; and these two witnesses say that by having another road—a road such as you have pointed out—the people at Balmain would not be greatly inconvenienced;—what is your opinion on that point? Every person travelling would have to go more than a mile further than he would by the present road. The cost of all that road construction must be considered. There is a long length of road to be made.
2118. They admit that; but would the residents of these suburbs have to travel much further by the route than they have to travel by the present route? One mile 6 chains longer.
2119. Suppose that Parliament sanctions your scheme, how soon can you commence the work after you get that sanction;—would the commencement of the work depend on the probability of the extension of

- C. W. Darley. the railway into the city being authorised? I would commence with the dredging and the foundations for the piers. I would get a contract out for that work as soon as possible.
- 8 July, 1897. 2120. Suppose the commencement of the city railway extension were delayed for a couple of years, would you delay the commencement of this work after it was authorised, or would you commence the work without delay? We would have to commence it at once.
2121. A great deal of the material to be excavated by the contractors for the city railway extension would not be stone, and you want nothing but stone for your causeway? Not necessarily all stone.
2122. How do you propose to fill in the interior of the causeway? It can be any clean material—sand would do very well. Mostly all material excavated in the city is of a sound nature—clay, sand, and stone mixed.
2123. If the tide is pretty strong, would not the water drive the sand through openings in the causeway? There is no tide there to speak of.
2124. Not sufficient to cause any sand or loose material in the interior of the causeway to flow out? There is a rise and fall of the tide, but no run.
2125. If the extension of the city railway is not commenced for some time, your estimate of the probable cost of the causeway will be increased, because you cannot get the material for nothing? My estimate does not contemplate getting 1 ton of the material for nothing. A case in point is furnished by the Centennial Park reservoir, where the contractor had to take out a large rock excavation. He had to cart nearly the whole of the material for a considerable distance. The bulk of it was carted away, and all he had was 2s. 2d. for excavating, dressing the bottom, and dressing the sides carefully. In my estimate I put down 2s. 6d. a cubic yard for the whole of this material. I know that it is a very ample estimate.
2126. The stone you will require for the outer walls of the causeway would have to be large stones? Not necessarily large stones; good stones which you can roll into place by hand.
2127. Suppose you could not get good stone for the outer walls of the causeway, would you have to get it from Glebe Island? Yes. I have put down a special price for the hand-pitching.
2128. Has your Department ever erected a long causeway which has answered the purpose intended when it was constructed and which has not sustained any damage from rushes of water? Blackwattle Bay was dealt with exactly in the same way. It was a causeway which had been constructed in the old days across the bay with a little opening span near the Pyrmont end. That opening span is now used at Lake Macquarie.
2129. Would there not be a greater rush of water here than there? In proportion the opening here will be very much larger than the opening which was left in Blackwattle Bay, and which at the outside was only 35 feet.
2130. *Mr. Hassall.*] Would it not be similar to the causeway across Cook's River? That is simply stone tipped in, but not hand-pitched. I propose to finish the slopes of this causeway in a somewhat better style. I have allowed the price at 5s. per yard.
2131. *Mr. Fegan.*] Your causeway bridge will carry a tramway if necessary? Yes; it will carry any railway.
2132. *Chairman.*] Why has your Department decided to recommend a causeway in preference to an iron bridge as it previously proposed;—why has it abandoned its previous attitude with regard to the best means of communication between Pyrmont and Glebe Island? I never went very fully into the matter before.
2133. The reasons you give at present are permanence of work, cheapness of construction, and cheapness of maintenance? Cheapness of maintenance, and permanence of construction. I may point out that this causeway scheme, as contemplated in the estimate I have laid before the Committee, is altogether a superior class of work—not only in the solidity and permanence of the causeway—but in the construction of the swing portion. It is a more permanent, more costly class of work than I contemplated for or estimated for in the case of the steel bridge.
2134. We understand that for the road traffic it would be more satisfactory, and as regards the water traffic that the swing being a superior one will work more satisfactorily? The mechanism of the swing will be practically the same in each case; but instead of having a timber top on the swing, I have estimated for using trough girders filled with concrete and wood-blocking.
2135. It is virtually a roadway over the swing? Yes.
2136. Of the amount of material which you will want for the causeway, the material to be obtained from the excavation from the power-station will certainly be available? Yes.
2137. What proportion would it bear to the amount you would require? *Mr. Deane* has not got his plans fully developed to take out the quantities.
2138. That much is a certainty? I think we may count upon getting the surplus from the power-house, and I know that I can get a very large quantity of material from town foundations. At Circular Quay we had a large area to fill up, and in a very short time we got an enormous quantity of stone and good sound material tipped in. In fact we had a difficulty to stop the people bringing the stuff there. It poured in faster than we anticipated. We got thousands and thousands of tons. The people were only too glad to get a place to tip the stuff. Again, I know that I can get a very large quantity of material from Sanders' and other quarries at 1s. a ton. Although I put down 2s. 6d. in my estimate, I know if we say, "Here is a tipping place, and we will give you 1s. a ton for all you put in," we will get thousands of tons in that way. It would pay them well to cart it in. I have not taken any account for that in my estimate. I have estimated all through that we will pay 2s. 6d. a cubic yard for the material. I know that we can effect a very large saving in that item.
2139. This item means 30 per cent. of the cost;—these are three certain sources from which you can obtain material either for nothing, or very cheaply? No doubt we will get a large portion for nothing, and we will get a considerable portion very cheaply, much more cheaply than I estimate.
2140. If the city railway be constructed you will have a very large quantity of material? If it was authorised and started within a reasonable time, I think the Committee might count on our getting the whole of that material put in practically for nothing.
2141. And therefore save £25,000? I believe the contractors would take some of the work more cheaply, knowing that this tip would be available. There is no other place so near the city where they could dispose of the material.
2142. *Mr. Lee.*] Do you think the contractors would be prepared to deposit the material on the same terms

terms on the Glebe Island side? I think so; it is only a matter of going across the bridge and tipping C. W. Darley. it. We could commence tipping from the middle of the present bridge.

2143. The remarks you make as to the cheapness of the material apply to both causeways? Yes.

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2144. *Chairman.*] Will you now state the depth of clay and depth of rock? The under part of the bridge is 20 feet over high-water mark, and then allowing 6 feet for the tide, 20 feet of water below low-water mark.

2145. Does that bring you to the mud? A depth of 18 feet will bring you to the present mud. We propose to dredge out to a depth of 25 feet during the construction of the bridge.

2146. What do you get at that depth? It is still mud at that depth. The firm clay is practically about 34 feet below low-water mark.

2147. At what depth do you get rock? It goes down to 90 feet.

2148. The rock is the foundation of your piers? No, we do not propose to get to the rock. We propose to put in groups of piles and carry block concrete. In this case, it is too deep to go down to the rock with cylinders, and it would not be safe to stop short with the cylinders, so that it is better to put in groups of piles.

2149. Will you just state the estimated cost of the swing-span, the side-spans, and the causeway? The swing-span including pivot-piers, and two rest-piers is estimated to cost £35,050; the side-spans, with the piers, abutments and superstructure, £10,740; the rubble causeway, £32,130; the approaches on both sides, £3,250; and the tram track and protecting platform, £3,330; making a total of £84,500.

2150. Less, perhaps £25,000? Possibly less £25,000.

2151. What is the cost of land resumption? The improvement of the Abattoir-road, and the resumption of land are common to all the schemes, and the two together are estimated to cost £4,600, which would have to be added to all the estimates. It is not usual in preparing estimates, to include the cost of land resumption.

2152. Will you be good enough to state definitely to the Committee why you have decided to submit this scheme, consisting of two causeways and a swing-bridge? With regard to the scheme at present before the Committee, although the matter had received some thought, it had never been fully considered; but after fully considering the matter, and getting out the quantities, it appeared to me that because of the cost and the stability of the work, it would be a wiser thing for the country to carry out this scheme.

2153. *Mr. Humphery.*] Your former answer was that a stone causeway would cost £126,000 as against £131,000 for a timber bridge, and £146,000 for a steel bridge? The matter was not fully gone into originally. Then I took up the matter, and on looking into it, I very soon came to the conclusion that it was desirable to submit a stone causeway to the Committee. I wish the Committee to understand that I had nothing to do with this matter, directly, before. It was only last week that I knew the matter was before the Committee. I have been out of the Colony, but since I have returned I have been going into the matter fully, looking into all the estimates, and getting the different estimates taken out. The more I went into the matter, the more convinced I became that a causeway was the proper thing to recommend, and I determined to submit it to the Committee.

2154. *Chairman.*] Is there anything you desire to add which has not been brought out? Not at this stage.

FRIDAY, 9 JULY, 1897.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.
The Hon. JAMES HOSKINS.
The Hon. CHARLES JAMES ROBERTS, C.M.G.
The Hon. WILLIAM JOSEPH TRICKETT.
The Hon. DANIEL O'CONNOR.
HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.
JOHN LIONEL WEGAN, Esq.
THOMAS HENRY HASSALL, Esq.
GEORGE BLACK, Esq.
FRANCIS AUGUSTUS WRIGHT, Esq.
FRANK FARNELL, Esq.

The Committee further considered the expediency of constructing a New Bridge at Glebe Island.

Alexander Martin Milne, Alderman of Balmain, sworn, and examined:—

2155. *Chairman.*] You were at one time mayor of Balmain? I am the ex-mayor. I was mayor for two years. A. M. Milne.

2156. *Mr. Trickett.*] How long have you resided in Balmain? Nearly thirty years.

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2157. Do you favour the proposal to construct a better bridge with a finer swing than the present bridge to Glebe Island? I think there is another proposal which should be considered by the Committee.

2158. Do you think the bridge scheme is the best, or have you another scheme to propose? I propose to erect a bridge higher than the bridge which is shown on the drawing. I propose to take a road through the vacant land on the Harris Estate, Pymont, which is now subdivided and offered for sale, and to build a bridge from the top of the hill, to which a road runs on the plan of subdivision, to the high land on Glebe Island. I think it would give a headway of 80 or 90 feet. If the bridge were carried higher you could do away with your swing and let a lot of intercolonial steamers pass under the bridge without an opening at all. An opening, no matter whether it is in a causeway or in an iron bridge, will be a great nuisance to the traffic.

2159. Will you describe your route? The highest point on Glebe Island is 80 or 90 feet above high-water mark, and on the Pymont side it is a little higher. The water in the bay above the bridge is not suitable for very large steamers to use; it is shallow water, comparatively speaking.

2160. Your proposal is for the traffic to go across Pymont Bridge, along Union-street, over the ridge of the hill on the Harris Estate and thence by a bridge to a point above the site of the bridge on Glebe Island? Yes. You may align the bridge with the Pymont Bridge if you take that route.

2161.

- A. M. Milne. 2161. You propose to construct a high-level bridge? Yes, at a height of about 80 feet, or higher, if possible.
- 9 July, 1897. 2162. You state that the water above the bridge is shallow, and that therefore large vessels would not go up there; but it is contemplated by the Government to dredge out that basin, so that it will be deep enough for almost any vessel which comes into Sydney Harbour? I do not think that large vessels would go up there. I think they would prefer to berth on the outer side of the bridge. It would be waste of public money to dredge out this bay when there is so much cheap land to be got in Balmain and Pyrmont outside the bridge. The cost of dredging would nearly build the bridge.
2163. Are not the sites above the bridge used as very large timber yards now? Yes. The bridge I propose would allow most of the timber vessels to go underneath.
2164. What tonnage do they average? I should say some of them are 2,000 tons measurement.
2165. Would your bridge land on Glebe Island past the Abattoirs? It would make the bridge between 200 and 300 feet longer. It would land on Glebe Island where the cottage residence is situated. The reason why I make this proposal is that there is not the slightest doubt that all these water-frontages will be taken up for manufacturing purposes, particularly as timber yards and city iron works. The timber merchants import very long timber, and if they are allowed to use this road, and you have a tram or a light railway, the chances are that you will have to widen the present road. By my proposal you would shorten the present road considerably between Pyrmont and Glebe Island Bridges.
2166. By your route the only land to be resumed would be the land between the corner of Union-street and the approach to the bridge? The Harris Estate can be purchased at a price now from Richardson and Wrench, between Union-street and the bridge. If you are going to cut down the island for export trade, it will be a great advantage to be up high so that exports could gravitate down to the water. For abattoir purposes it is better to keep it up. If you level down the island, and put the Abattoirs on level ground you will have to pump up the material, whereas if it is not levelled down it will gravitate down to the desiccating yards, or to the punt, or it can be run round to the Bondi sewer in Mullens-street, Balmain.
2167. Have you ascertained the tonnage of the ships whose masts would be 80 feet high? I only judge by the vessels I see floating in Johnstone's Bay.
2168. You have not measured their spars? I should say that some of the vessels were as large as 2,000 tons, and that some of the spars are as high as 120 and 130 feet.
2169. A vessel with a mast of that height would not go under your bridge? It would by striking its topgallant mast.
2170. A witness stated yesterday that a vessel of 1,000 tons would have a mast 125 feet high? They vary in height. Some ships have three long masts, and others will have four short masts.
2171. What would be the good of your bridge with a headway of 80 feet when vessels of 1,000 tons which have to go up there have masts 125 feet high? I think, by striking their topgallant masts, they could get under the bridge.
- 2172-3. A good many vessels do not strike their topgallant masts;—many of these three or four masted schooners which carry timber have their masts in one piece? Then I think they could do as they do at present. They could unload their cargo into a punt on the outer side of the bridge, and take it under the bridge into the bay.
2174. You advocate this elevated bridge on the ground that it would be a more direct route than the Pyrmont Bridge,—that it would preserve an uninterrupted route for foot and vehicular traffic at all times, and that it might be so constructed as to carry a tramway or a railway without any interruption by the opening of a swing? Yes.
2175. These are the advantages which you claim for your proposal? Yes.
2176. And that a great many ships could go under your bridge, but that the others would have to unload in Johnstone's Bay, and punt the stuff up into Blackwattle Bay? Yes; I believe that all the coastal steamers could go under the bridge.
2177. But large vessels would have to unload their cargo on the outer side of the bridge and punt it up? Yes. It would be quite possible to keep the bridge higher by building up to the top of the hill, but I do not think it worth while to do that. If you provide for intercolonial steamers and vessels going under the bridge I think it will be quite sufficient, and the others can do as they do now.
2178. They go through the swing in the present bridge and take their cargo up to the wharf? Yes, but all the vessels which go there now, and even larger vessels, would be able to go through without using a swing.
2179. Have you thought whether it should be a suspension or a pier bridge? As far as I am concerned, it does not matter materially which sort of bridge is constructed, so long as it is kept high. I have not gone into the matter of cost, or the qualities of different bridges. Looking at it from the Balmain point of view, and as one who knows a lot about the district, I consider that any break in the bridge will be a nuisance.
2180. You advocate a high-level bridge as a matter of convenience to your borough? Yes.
2181. And you have not gone into the question of expense? No.
2182. Is there any very great outcry now about the inconvenience of the present bridge? A very great outcry.
2183. But that is admitted to be a very old-fashioned bridge with a swing of a primitive description in a very inconvenient position? Yes.
2184. With a good wide bridge, such as the Government propose to erect with two 60-foot swings of the most modern style, which could be opened and closed quickly, and with a headway of 20 feet so that all the ferry steamers and small craft could go under, do you not think that the people of Balmain would be very much better inconvenienced than they are now? They would be more inconvenienced but still a swing would be a nuisance. I do not think the amount of trade which is done up the bay warrants the Government in putting up another swing, if they put a high-level bridge across that water.
2185. How would your bridge work in with the present road to the Abattoirs;—would it be higher than the Abattoir-road? No, it would be about level with the top of the hill.
2186. That is level with the gates of the Abattoirs? Somewhere about that.
2187. May I ask if this is your own individual opinion, or do many others agree with you that it should be a high-level bridge? I was the first to speak about it in Balmain, and a great number of the aldermen were of opinion that it would be better to keep the bridge high and have no swing. It is backed up by the opinion of the other aldermen and residents.

2188. Would the cost of purchasing the necessary land from Union-street to the beginning of your bridge be very great? No. The cost is stated on the subdivision plan here. The subdivision shows that there is a street called Hill-street running almost in a line with Union-street and the Pyrmont Bridge. This street if widened could be utilised, which would minimise the resumption. A. M. Milne.
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2189. Have you worked out what it would cost? About £2,000 an acre. I do not suppose you would want to take more than a quarter of an acre for the road. Hill-street, in the Harris estate, would only require widening.

2190. As an engineer, I suppose you can state whether a high-level bridge of this kind would cost more or less than £84,000? It would cost a trifle more than that sum. I do not profess to be a bridge engineer. I do not think any engineer could jump at a price without going into the matter. If I had plans, and went carefully into the matter, I daresay I could make an estimate, but I would not like to say, off-hand, what it would cost.

2191. The bridge it is proposed to build is to have a headway of 20 feet, and is to cost about £84,000—your bridge is to have a headway of 80 feet, or four times as much as the other, and therefore I suppose you can realise that your bridge will cost very much more than the other? As regards the platform of the bridge there will be no extra cost. The only difference will be in increasing the height of the piers. You would save the cost of the swing; but you would have extra work in regard to the increased height of the piers; and the bridge would be a little longer than the other. I think the Committee would be warranted, even if it should cost more than the other, in recommending a bridge of that sort on account of the facilities which would be afforded in keeping the bridge high. It would be a mistake to level down Glebe Island if you are going to use the island for export purposes. Great inconvenience is experienced through the Iron Cove Bridge being kept so low.

2192. You are looking at your project as one of great convenience to the people of Balmain, and the people who go between Balmain and Sydney, irrespective of cost? Yes; and to the people beyond Balmain too. The extra cost would be very small when you consider the benefits which would be derived by the districts interested. The extra cost is hardly worth considering when you consider the great benefits which would be derived from shortening the distance and serving the people. If a tramway were going by that route to Balmain it would be almost unworkable, unless you widened the road on Glebe Island, if they are going to carry on the same business there as they are doing now.

2193. As a resident of Balmain, do you find the Abattoirs objectionable? No; but rather a benefit to the borough.

2194. In what way? They give a lot of employment to the people, and the men who work there have bought land and built their little homes, on which they have to pay rates and taxes like other people. Looking at it, from a municipal point of view, I say they are a benefit to the borough.

2195. As regards any offensive smell or any objectionable traffic, you have nothing to say against the Abattoirs? I do not see any objection to them. Of course there is room for great improvement at the Abattoirs, and the engineer, who seems to be up to date, is making improvements there very fast.

2196. What are your views as to driving the stock from Homebush by a suburban road to the Abattoirs? I think a railway connection from the Darling Harbour station to the Abattoirs would get over that trouble. The distance is under a mile I should think.

2197. I suppose you recognise that the driving of stock and sheep is objectionable? It is a terrible nuisance, especially with sheep. You cannot drive sheep along the road without raising great clouds of dust and impeding the traffic.

2198. It stops the traffic, and is somewhat dangerous? Yes.

2199. If the Abattoirs are to remain at Glebe Island, do you recommend that there should be a railway connection made between the sale-yards and the Abattoirs? Yes.

2200. We have heard sometimes that the Abattoirs as regards the traffic to and fro, independent of the driving of the cattle, is a nuisance;—do you, as a representative of Balmain, bear that out. Have you ever heard of any objection to the traffic across the bridge? Yes; I have been delayed there nearly half an hour sometimes. On the swing there is room for only one vehicle to go over at a time. Whichever vehicle gets on the swing first, after it is closed, is followed up by all the other vehicles coming from that direction. It is generally a scramble to see which vehicle gets on the swing first, then it is like a procession for a quarter of an hour; but if you happen to be at the end of the vehicles on the other side of the swing, it takes another quarter of an hour to get over. This occurs frequently through the day.

2201. The wide swing in the proposed new bridge would very much, if not altogether, remove that objection? It would to a certain extent. On the Pyrmont Bridge two vehicles can pass abreast, but still it is a great nuisance; it means a big stoppage of the traffic, therefore a great loss to the public.

2202. A little while ago you said that a swing was also a great objection;—have you been impeded in crossing the bridge by vessels going through the swing? Yes; they try to get vessels too large for the opening to go through. The vessels pass through very slowly, and they stop the traffic considerably. I used to drive round.

2203. That is all an objection to the present swing; but if, in the new bridge the swing was made wide enough to allow the largest vessel which comes here to go through, and it could be worked quickly, would not that objection be very much minimised? The only way to remove that objection would be to open the bridge at stated hours in the day, say three or four times a day, and let the shipping wait until it is open. People would then know the hours when the bridge would be open, and they would take care not to be there at that time. Under regulations, it might work very well, but not on the go-as-you-please style they have now.

2204. If the Government officials or the Committee do not see their way to adopt your recommendation, you think that the present provision for the accommodation of the traffic could be very much improved by a wider bridge being built, with a swing in the middle, which could be opened quickly? Yes.

2205. You are aware, I suppose, that the Government proposal is to build a bridge which will carry a tramway or a railway? I think I heard Mr. Young say that.

2206. That would meet your views in some respects? Yes.

2207. An alternative proposal has been made to get to Balmain, namely, to take a road through Glebe Point and across the reclamation in Rozelle Bay, and to come out at Balmain, the distance being more than a mile longer than the present route *via* Glebe Island;—how do you favour that suggestion? I was here when the evidence was given, and I thought that it was a bit of nonsense to talk in that way.

2208.

- A. M. Milne. 2208. How do you view that proposal? It would never answer. Where you have a bay you have corresponding ridges to go over, which Mr. Daly forgot to point out to the Committee. I know Mr. Daly well. He has been in the habit of attending public meetings and trying to upset our proposals for a bridge. His idea—and it is the idea of some people—is to dispense with a bridge. I am speaking from a Balmain point of view. If the bridge is done away with, the next best plan will be to make a road from somewhere about the junction of Newtown-road with Parramatta-street.
- 9 July, 1897. 2209. That would also be a very circuitous route? Yes.
2210. As regards the distance, you regard these proposals as being highly unsuitable to Balmain and the western suburbs? Yes.
2211. I suppose you recognise that it is absolutely necessary to do something with the present bridge? Yes; it is keeping Balmain back. A lot of industries are starting there, and trade is increasing wonderfully. There is an immense traffic across the bridge, and I consider that its condition may be the means of preventing other industries from starting in our midst.
2212. *Mr. Clarke.*] Have you taken into consideration the probability of the Abattoirs being removed from Glebe Island to another suburb? I have been on various deputations in reference to that matter, but I have never heard any argument from those who are against the retention of the Abattoirs at Glebe Island which convinced me that they had found a more suitable place for them. If the Abattoirs are removed to Blacktown the sewage is bound to be a great trouble; but at Glebe Island the water, which seems to give the most trouble, can be connected at a very small cost with the Bondi sewer which runs along Mullens-street.
2213. Is there not a great objection to the present mode of driving the cattle to the Abattoirs as being dangerous to passengers? It is objectionable. It would be objectionable anywhere, but you have a better chance to get over the difficulty when you have the Abattoirs at only that distance from the railway.
2214. How do you propose to remove that objection? I am not well up in the slaughtering business, but I think that if under a regulation, so many cattle a day were brought to the Abattoirs from the resting-paddocks, there would not be any trouble. They must carry the cattle by rail in other countries as far as I can hear. I think the training of the cattle would be the most feasible way to get over the difficulty.
2215. You mean by a direct railway from Homebush to Glebe Island *via* Darling Harbour? Yes, but in special trucks.
2216. Are you aware that after the cattle are untrucked and sold, it is objectionable to re-truck them as they get knocked about so much? I heard that evidence given, and I daresay there is a good deal of truth in it. If they brought them down from a long way inland under regulation, I daresay they could be brought to the Abattoirs. They know how many beasts are slaughtered every day, and therefore they would know the number required to be slaughtered for daily consumption.
2217. What traffic, apart from the Abattoirs, comes over the present bridge from Glebe Island? There is traffic going all night long. The fruit carts start very early in the morning from Castle Hill and other districts. I should think that most of the traffic comes from districts beyond the Abattoirs.
2218. Do you think the causeway which is depicted on the plan here would be better than a steel bridge? I do not think there is much to choose between the two. You would have to find material to fill in. The cost of that would depend on the amount of settlement in the stonework when they are filling in. I should think it is proposed with a view of levelling down the island, and if they have to experience the settlement they had to contend with in other places the work would be costly.
2219. But if it were found that it would give as good a communication and be cheaper in construction, have you any objection to offer to it? I do not see that anybody could object to that. The objection I have is to the levelling down of the island. If they are going to make any sort of an export depot on Glebe Island, you want to keep high up with the bridge. You could level it down a bit on the cap of the hill.
2220. We have it in evidence that a causeway would cost less to construct and maintain than would a new bridge? It would cost a long way less to maintain a causeway than an iron bridge.
2221. Do you think it would be as good as or better than a new bridge? In the event of your not adopting a high-level bridge, it is immaterial to the Balmain public whether you go across with one or the other; but I favour a high-level bridge without a swing for the reasons stated.
2222. Would it not require to be of a great height? You have high land on each side to give you that height. A still greater height could be obtained by raising the abutment on the Glebe Island side.
2223. The masts of some vessels are 220 feet high;—you would not expect to keep the bridge as high as that? It would allow any ordinary coastal boat to go under, and the others could discharge into punts outside the bridge as they do now.
2224. *Mr. Lee.*] It is proposed to make a causeway on either side for a certain distance, and to connect the two causeways with a steel bridge with two swings of 60 feet each;—suppose it becomes a question of an ordinary low-level bridge, leaving your own scheme out of question, have you any particular objection to offer to that proposal? None. The only objection I have is that it looks as if it were designed with the intention of levelling down Glebe Island, which would be a mistake.
2225. It is designed, we understand, to give better facilities to the island and not to interfere with any of the approaches;—are you of opinion that the residents of the localities indicated by the figures on this population map are served directly and indirectly by a thoroughfare across the bridge? Yes; a lot of the people of Balmain are served by the bridge, and there is a great future before the district, which should be considered when erecting a bridge.
2226. The areas shown on that population map behind you embrace a population of over 42,000 people,—do you think that that is an over-estimate? I do not.
2227. Are the whole of these people served directly and indirectly by having a passage over the bridge from Glebe Island? Yes.
2228. Any scheme to do away with the bridge and to divert that road is not likely to be entertained with favour by the residents of those western districts? No.
2229. The population of those districts being so large, the accommodation necessarily must be great? Yes.
2230. Therefore, whatever may be determined upon, you must confine your attention to the maintenance of the thoroughfare across that water? Yes.
2231. You stated that a quantity of fruit from the Field of Mars goes across Pymont Bridge;—would its destination be the fruit markets and the railway station? Some would go along Harris-street to the Haymarket and some to Russell's Wharf.

2232. Would any portion go direct to the railway station at Darling Harbour for shipment to the country? *A. M. Milne.*
Yes. If a tramway were constructed to Drummoyne, and round that way, the chances are that it would take all the traffic from the Parramatta, Ryde, and Castle Hill districts. 9 July, 1897.
2233. You think that the population resident in those localities will require a thoroughfare in the shape of a bridge from Glebe Island, no matter whether the Abattoirs are removed or retained? Yes.
2234. There can be no doubt in your mind that there must always be a main thoroughfare there? Yes. These districts are developing very rapidly. The people are building very quickly in these districts. A great number of houses were run up in Balmain last year, and a lot are going up now. Drummoyne is going ahead very fast; the houses are going up there at a considerable rate. They go to the top of the Western Road by the Balmain tram. The route reduces the distance from Parramatta considerably.
2235. As the population increases, the tendency to get to the city in a more direct and quicker way is increasing? Yes.
2236. It must necessarily keep pace with business arrangements? Yes.
2237. You think it would be a mistake to adopt any other route for a passenger thoroughfare than the one which has been used for so many years? Yes.
2238. Suppose that no tramway is made, are you still of opinion that a bridge ought to be built? Yes.
2239. *Mr. Roberts.*] Have you any knowledge of the shipping traffic through the present bridge? Yes.
2240. Is it not a fact that it has been on the increase during the last few years? Yes. Holdslip's timber company has started business there. Two or three other firms, whose names I forget, have also started there. Swan Brothers have extended their works. Daniel Sheehy has bought a property up there; but I fancy all his boats can go under the bridge.
2241. Is it not likely that the traffic will so increase that the size of the vessels going there will increase? That is quite possible. It is a question in my mind whether we should consider the ships before the people. At the Pyrmont Bridge you will see a line of vehicles from the bridge away up the hill on the island side, and the same on the Sydney side. If you compare the value of the time which all these people lose in waiting there with the cost of the inconvenience to the ships in not being able to go through there, you will find that the people suffer considerably more than the ships do. If the ships do not like to make their top-gallant masts so that they will slide down they should be inconvenienced, and made to do their business on the outer side of the bridge. I do not think the through traffic should play second fiddle to the shipping.
2242. Is it not true that at the present time a number of vessels are unable to get through the swing of the Glebe Island Bridge? Yes; vessels loaded with imported timber.
2243. And the timber merchants are put to very great inconvenience and expense in getting the timber up to their wharfs? They are put to a certain amount of expense. They have to punt the timber, but there are no wharfage dues to pay when the vessel lies out in the bay. I think the people lose a great deal more by these delays than do the ships or those who do business with the ships.
2244. Had you in view the possible development of the traffic when you formed the opinion that a high-level bridge without a swing should be built? I propose a high-level bridge without an opening because it would be cheaper than a bridge with a swing and it would be better adapted for the requirements of the people, and the tram service over the bridge would not be interrupted.
2245. The swing in the proposed bridge would be of the most modern type; very little time would be lost in opening and closing it, and therefore there would not be the same delay to the traffic as now takes place? Not with modern appliances.
2246. Notwithstanding all that, you think it should be a high-level bridge? Yes.
2247. Is the vehicular traffic from the districts to the west of Balmain increasing every month? Every month you see a great increase.
2248. What is the nature of the traffic—omnibuses and buggies? Omnibuses to Ryde, and fruit-carts from the districts in Central Cumberland. There is a big timber business with all the various timber merchants. A large business is done with Elliott Brothers' chemical works. All the heavy girders and joinery work for the new Markets were made by Phippard Brothers in Balmain and taken over the bridge. Mort's Dock Company sends a lot of its manufactures round that way; they make baths and various things for Hordern. Goodlett and Smith do a good business there. I think the coal-mine alone will take 10,000 casks of cement, which very likely will all go over the bridge. A meat cannery has been started lately, which will cause a lot of traffic across the bridge.
2249. It will be an ever-increasing traffic? Yes.
2250. Are you favourable to the Abattoirs remaining where they are? Yes; I think if modern Abattoirs were built there, you could not find a better site.
2251. You are not aware of their being a nuisance in any way? Not a bit. I was here when Mr. Daly gave evidence as to the putrid matter going into the punt. I saw the engineer, Mr. Houghton, about that evidence, and he says it is not true; that the punt is never away for more than six hours at a time, and that the stuff which goes into the punt is never more than six hours old, so that it could scarcely get putrid in that time. Mr. Houghton could come here and contradict all these statements by Mr. Daly if he is called.
2252. Are you in favour of any alteration in the road from the Glebe Island end of the bridge towards Balmain? The road would be all right if you kept the bridge about level with the top of the island.
2253. Have you heard many complaints from the public as to the proximity of the road to the Abattoirs? Yes, the place where the sheep are killed is near the road;—there is no objectionable smell, but from a bus you can see the heads and skins and entrails lying on the ground. It is more an eye nuisance than anything else. I think they ought to improve that portion of the Abattoirs.
2254. Are the public loud in their complaints? No; they make passing remarks when travelling on the buses.
2255. In view of these facts would you recommend a deviation of that road or make another road for the public? I reckon that if we are entitled to the construction of a bridge, the better way would be to continue Union-street right on to the bridge, and align Glebe Island Bridge with Pyrmont Bridge. You would not only give us a short road by going up Mullens-street, but you would make a great saving at Pyrmont. If the Government purchased the Harris estate and made a good road, the chances are that it would sell out the balance of land at a big profit, and cover the expense of a lot of the work.
2256. Do you think it will be necessary for the comfort of the travelling public to take the road going past the Abattoirs to Balmain nearer to the shores of White Bay? It would be better if you were going to

A. M. Milne. to allow the Abattoirs to remain there; but I believe it is intended to shift the Abattoirs, or to make new ones. If you were going to make new abattoirs I should think you would want to put them where you suggest the road should go. The present road would do splendidly if you were going to make new abattoirs. If you were going to build new abattoirs you could not build on the present site; you would have to build the new abattoirs towards the point, and then pull down the old ones.

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2257. A road by that route would be an improvement as regards avoiding any unpleasant nuisance at the Abattoirs? The 'buses would naturally take the shortest route. It is only a few people who are fond of talking that propose to have a road right round the point.

2258. Did not your council at various periods ask the Government to make the road? I think they did, but they do a lot of foolish things at times.

2259. *Mr. Black.*] Do you not think that much of the delay on the Pyrmont Bridge arises from the inferior character of the appliances for turning the swing? Yes. The swing is not wide enough, and it is turned with a handle like a grind-stone.

2260. Do you not think that most of the time is lost in moving the swing? It is a very slow process. It is too close into the side, and there are shelving rocks going out into the water.

2261. What time is occupied in opening or shutting the swing? I should say five minutes to open and five minutes to close the swing.

2262. The swing which it is intended to put in the new bridge will take two minutes to open and two minutes to shut;—I suppose it will affect a considerable saving of time during the day? Yes.

2263. It will obviate much of the objection to the swing? Yes.

Ernest Macartney de Burgh, Assistant Engineer for Bridges, Department of Public Works, sworn, and further examined:—

E. M. de
Burgh.

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2264. *Mr. Clarke.*] I believe you have a statement to make to the Committee? I have brought a statement as to the height of the masts of vessels passing through the opening in the Glebe Island Bridge. I had the masts of thirty-seven vessels which passed through the opening measured from water-line to truck. The average was 68 feet, the maximum was 105 feet, and the minimum was 18 feet.

2265. I presume you mean vessels which have been going through the opening lately? These are the actual measurements of the masts of the vessels for which we had to open the swing during the past week. I know of vessels which go through there with higher masts, but they did not happen to go through during the week we were taking the measurements.

2266. If the water is deepened larger vessels will be able to go through the opening? Certainly.

2267. Do you know the population in the neighbourhood or the traffic which goes backwards and forwards? I have prepared a small population plan for the information of the Committee, and the figures on it I obtained from the Electoral Office, in order that they might be reliable. A very great portion of the traffic which comes over the bridge, apart from the Abattoirs traffic, comes from the Municipality of Ryde, the Municipality of Hunter's Hill, a portion of the Municipality of Marsfield, and a small portion from the Chatswood district. The old road from Ryde to Hunter's Hill was across the Gladesville ferry and down the Great Northern road to about Ashfield. That road is now abandoned, because there is no ferry, and it was in connection with this traffic largely that the bridge over the Parramatta River (the Drummoyne bridge), and the Iron Cove bridge, were built.

2268. *Mr. Lee.*] They all form a part of a general line of communication over Glebe Island bridge and Pyrmont bridge to the city? Yes. The line was extended in a northerly direction by the construction of a bridge over Lane Cove river. That bridge to a certain extent brings traffic in to feed this main line, and it in turn passes on over the Glebe Island Bridge. While there can be no doubt about the traffic from the Ryde district and from the Hunter's Hill district using this line of bridges to reach the city, there is a doubt when we come up towards Chatswood, because there is an alternative road open to travellers. A man who is on Chatswood corner, where the Lane Cove Road comes into the village of Chatswood, would have a shorter road to go to Sydney than by the bridges; he could go down the Lane Cove Road and by paying a toll could cross in the ferry. But directly you go from Chatswood towards Hunter's Hill the distance to the ferry increases, and that by the bridge road lessens, so that from about half-way between Hunter's Hill and Chatswood the traffic by choice would go over the bridges.

2269. In the aggregate the figures given on the population map represent 42,000 persons? Yes.

2270. *Mr. Clarke.*] I suppose, independently of the Abattoir traffic, a large traffic goes over the present bridge, and would continue to go over the new bridge? In my previous evidence I pointed out that only a fifth of the present traffic could be traced to the Abattoirs.

2271. You are satisfied from your mode of checking the traffic that your estimate is perfectly correct? I am quite satisfied that it is correct.

2272. *Mr. Lee.*] Any removal of the bridge from its present site to any other part of that bay would destroy the purpose for which the Drummoyne, Lane Cove, and Parramatta River bridges were constructed, namely, to give a perfect chain of direct communication to the city? It is difficult to see a position in which it could be placed which would give more direct communication to the city.

2273. Suppose the bridge were abandoned, and the road deviated round the head of Roselle Bay, it would utterly destroy the original idea for which the other bridges were built? It would increase the distance.

2274. All these connecting links—all these expensive bridges—were provided for the purpose of giving a chain of direct traffic to one point? That is the purpose for which they were constructed.

2275. The time has gone by to entertain a proposal to remove that bridge to any other place? I should think it would be a mistake to interrupt the line of traffic.

2276. What would you think of a high-level bridge with a roadway of 80 feet being taken across to Glebe Island from Pyrmont? I do not think it would be high enough if you wanted to have a high one.

2277. Where would the bridge bring you out? I suppose you would be right up on top of Glebe Island, and on the Sydney side you would have to climb up a long hill.

2278. I suppose any proposal of that kind is quite out of consideration? I should consider it quite out of the question. The mere fact that the island will probably be cut down for wharf accommodation will put that bridge out of question, because you would have to go over on a high bridge and then get down on to the island.

2279. Although the roadway of the bridge now submitted by the Department is a little less than the roadway of the proposed Pyrmont Bridge, it is the same as the roadway of the Iron Cove Bridge and the Gladesville Bridge? Yes.

THURSDAY, 26 AUGUST, 1897.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY,
The Hon. JAMES HOSKINS.
The Hon. CHARLES JAMES ROBERTS, C.M.G.
The Hon. WILLIAM JOSEPH TRICKETT.
The Hon. DANIEL O'CONNOR.
HENRY CLARKE, Esq.

CHARLES ALFRED LEE, Esq.
JOHN LIONEL FEGAN, Esq.
THOMAS HENRY HASSALL, Esq.
GEORGE BLACK, Esq.
FRANCIS AUGUSTUS WRIGHT, Esq.
FRANK FARNELL, Esq.

The Committee further considered the expediency of constructing a New Bridge at Glebe Island, to replace the existing structure.

William Henry Wilks, Esq., M.P., sworn, and examined:—

2280. *Chairman.*] You represent the Electorate of Balmain North in the Legislative Assembly? Yes. W. H. Wilks, Esq., M.P.
2281. *Mr. Lee.*] I might explain to you that it was originally proposed to erect a new bridge to replace the present Glebe Island bridge; but it has since been proposed that a causeway should be constructed, with a central swing-span? I am acquainted with both proposals. I consider that it is absolutely essential that the existing bridge should be replaced by a new structure, because of its apparent uncertainty, and because it is inadequate to the immense traffic which goes along that road. A journey over the bridge will show at once how much a new bridge is required. Near the swing-span the whole of the traffic is congested into a single file of vehicles, and this causes a delay of sometimes of half an hour, and even of three quarters of an hour. Thousands of people pass over the bridge in the course of twenty-four hours, some of them in pursuit of pleasure, others pursuing their business avocations, either in connection with the Glebe Island Abattoirs, or in conveying goods to the western suburbs, such as Drummoyne, and to Ryde, and to Balmain. It will therefore be apparent to the Committee how great the convenience is. The vibration of a bridge when a vehicle—even an ordinary four-wheeled vehicle—passes over it is very noticeable. I very seldom go that way, but I have noticed that the panes of glass in all the lamps are broken because of it. The general appearance of the bridge would indicate that its life cannot be a very long one, and I understand that that is the opinion of experts. With regard to the proposal to make a causeway, it has much to recommend it to the Committee, because material could readily be obtained close at hand. Glebe Island could be put to much better uses if it were razed, and the stone thus obtained would go a long way towards making the causeway.
2282. In the middle of the causeway there would be a steel swing-span to allow of the ingress and egress of vessels? Yes; I am not tied to any scheme. I think it is for the Committee to decide what is the best scheme to adopt, and no doubt the causeway proposal will meet with a great deal of approval. The general opinion of the people who use the present bridge is that what is wanted is a new and up-to-date structure, giving a better headway for vessels wishing to proceed up Roselle and Blackwattle Bays.
2283. They want a wider bridge for the vehicular traffic, and for the foot-passenger traffic as well? Yes.
2284. That is a necessity? Yes; with the swing-span situated where it is at present, vessels have to make a difficult detour to get into and out of the bays. If the swing-span were in the middle, it would be much easier to navigate vessels passing through the bridge, and I believe that the natural scour would be retained. I would favour the construction of a timber bridge on the score of economy; but whatever bridge you construct you must anticipate the probable future construction of a tramway, and even of a railway in this direction. The present Balmain tram takes a very round-about course, and no doubt the railway authorities would favour a more direct connection *via* Pyrmont, and across this bridge. Any bridge constructed, and be sufficiently strong to carry a tramway, or even, perhaps, a railway.
2285. I understand that public opinion is strongly in favour of having the new bridge constructed close to the site of the present bridge? Yes; if you are going to construct a causeway, you have the necessary material close at hand, and while you were making the causeway, it would be possible to provide a second roadway around Glebe Island. The existing road runs right across the island, and you could make an alternative road where you took out the material for a causeway.
2286. Would that be on the northern side of the island? Yes; running in again to meet the present road on the other side.
2287. Have you ever heard the residents of these suburbs express an opinion as to the undesirability of being taken past the doors of the Abattoirs;—do you think that the Abattoirs are an offence to the people round about? There is no doubt that it would be a great advantage to have a second road. A second road would be of advantage to the people passing across the island, and also to the Abattoirs traffic.
2288. Have you any special reason to urge against the construction of the causeway? None at all. Of course the construction of a timber bridge would give employment to a large number of shipwrights, carpenters, and timber-getters. I do not know which is the cheaper—a causeway or a bridge, but I think it would be wise to adopt the cheaper construction. I believe that in a few years another route of communication to Balmain will have to be opened up.
2289. The swing of the present bridge is old-fashioned, and a positive obstruction to traffic? Yes; that is self-evident. Any honorable Member can see that for himself by paying a visit to the place.
2290. You prefer this site for a bridge to any other? Yes, because of the immense amount of traffic going along the road.
2291. It has been pointed out that it would be of advantage to take a bridge from Glebe Point across to Mullens-street? So far as the distinct trade of Balmain is concerned, I think that that would be a better road; but the present bridge serves the traffic not only from Balmain, but from Drummoyne, Ryde, and other places. If that traffic were taken round to Mullens-street, it would be considerably diverted from its direct route.
2292. You look upon the road which passes over the Glebe Island Bridge as part of one of the main roads into Sydney? Yes.

- W. H. Wilks, Esq., M.P.
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2293. That would be a strong reason for improving the bridge? Yes. If the bridge were one for serving local traffic only, it might perhaps be an advantage to take it over to Balmain from about where the sugar works are.
2294. But you are in favour of putting a new bridge close to the site of the existing Glebe Island Bridge? Most decidedly.
2295. I presume that the fruitgrowers of Drummoyn and Ryde and other places, and the manufacturers about Balmain, have often to do business at the goods station at Darling Harbour? There is a large tract of country out in the direction of the Field of Mars and Ryde, from which many people are compelled to come into Sydney by this road; while on the eastern side of Balmain and thereabouts we have places such as Lever Brothers' manufactory, and John Booth & Co.'s place. This proves the advisability of making a new bridge, and the possibility of ultimate railway extension.
2296. The main northern line from Hornsby to Strathfield, and the Milson's Point line, have been sufficiently long in existence to prove that they cannot take the whole of the through traffic from the districts to which you refer? I think so.
2297. This road is also necessary to enable the people in those districts to get to the city? There are many people who prefer to come into Sydney by vehicle instead of by the train.
2298. The inference is, that they take the cheapest route? That is my opinion.
2299. There appears to be a great tendency for manufacturers to establish themselves round the foreshores of Balmain? Yes; it is very marked.
2300. To give them the easiest access to Sydney and to the railway system, you can do nothing better than improve this bridge? Not at the present time.
2301. Of course, in the future it would be an advantage to give them more direct tram accommodation; but at the present time, if the bridge were taken away, what would their position be? No doubt the people would not stand such a thing very long, and the agitation would be so powerful that you would be compelled to provide a new bridge. To show that it is probable that the foreshores of Balmain will be used even more extensively for manufactories in the future, I say that I know of several people who are willing to construct a private railway through Glebe Island and round the shores of Johnstone's Bay, if they can get power to do so. The Australasian representative of one of the firms established there told me that he could obtain money for the work, if he could get power to construct it.
2302. *Chairman.*] Such a line would, of course, connect with the main system? Yes; but no definite plan has been formulated. Still, people are so taken with this neighbourhood as affording good sites for manufactories that they would be willing to spend the money in making this line.
2303. If the necessities of the people demand that Pyrmont Bridge should be perpetuated, it follows, as a matter of course, that the Glebe Island Bridge must also be perpetuated? Yes; and a more opportune time than the present could not be obtained for constructing a new bridge, especially a timber structure. It is well known to people in the trade that at the present time there is a splendid opportunity for constructing a timber bridge.
2304. Do you think it would be wise to fill in the upper portions of Blackwattle and Roselle Bays, and to make a causeway across to the south-western side of the island? I have not sufficient knowledge to give an opinion upon that scheme.
2305. Do you think it would be desirable to fill in any portion of the water-way? Not any of it that is usable at the present time. There might be small reclamations which could be recommended, but nothing more. The more open water spaces we have the better. I think it would be suicidal to destroy any possible water-way in these estuaries.
2306. There are several wharfs in Blackwattle Bay now, and several business places established there? Yes. Some two years ago it was strongly represented by the timber-merchants and others around Blackwattle Bay that the present swing-span in Glebe Island Bridge interfered with the passing of vessels.
2307. Do you feel disposed to corroborate the opinion that if proper facilities were given for the entrance and exit of larger vessels the business in these bays would increase? I think it is reasonable to assume that that would be so, especially taking into consideration the possible intention of the Government to create cold storage works at Glebe Island. Vessels would then have to lie close up to Glebe Island to load the meat, and if you did not allow them to go through the bridge a lot of the foreshore would be lost.
2308. Do you desire to offer any opinion in regard to the proposed alteration of the approach on the eastern side of the bridge? You might have to widen the road there. There is the face of the quarry on one side, and some reclaimed ground upon the other.
2309. Do you know if there has been any expression of opinion against the proposed renewal of the bridge? No, but there has been continual agitation for a new bridge.
2310. That agitation has been going on for years? Yes. The tradespeople throughout Balmain complain of the present arrangements.
2311. You are of opinion that the re-building of the bridge cannot be safely delayed any longer? I am strongly of that opinion.
2312. *Mr. Hoskins.*] Have you any doubt as to whether, if the causeway were made, sand-banks would be formed in the corners at each end? I am not in a position to say whether that would happen.
2313. *Mr. Fegan.*] You have heard complaints about the position of the present swing-span? Yes; numerous complaints.
2314. This is the most important bridge you have? It is the only bridge.
2315. You want no other bridge? In time we shall be compelled to ask for another bridge going across from about where the sugar-works are.
2316. Have you heard any complaint in regard to the circuitous route now followed by the tram? Yes. It is an "all-round-the-hat" business to get to Sydney now, and no doubt if a strong bridge were built it would not be long before the railway authorities would suggest a direct line.
2317. You think that a bridge wide enough and strong enough to carry a tramway should be constructed? Yes. I take it that that is a matter of the utmost concern.
2318. *Mr. Clarke.*] Do you think that a bridge is preferable to a causeway? I do not know the relative costs, but, as I have already said, it is a very opportune time for the construction of a timber bridge.
2319. If a causeway could be constructed as cheaply as a wooden bridge, you would have no objection to its construction? No. An improvement of the present conditions would be a great gain to the public at large.

2320. A causeway would not require continual repairs as a bridge would? That is evident.
2321. I understand that at the present time punts and small vessels can get under the bridge? They would be vessels of perhaps only 5 tons burden.
2322. If a causeway were made all vessels would have to go through the swing? Yes.
2323. I suppose that the construction of a new bridge would mean a large increase of trade in Rozelle Bay and that part of the harbour? A new bridge would give better facilities for traffic, and I take it that that portion of the harbour would be more used.
2324. Have you given any thought to the advisability of removing the Abattoirs to some other place? I was a member of a Select Committee which inquired into the matter.
2325. If the Abattoirs were removed there would be so much less traffic over the bridge? Even if the Abattoirs were removed, it is not reasonable to think that the State would allow Glebe Island to continue unused. Indeed, the establishment of cold storage works there is contemplated. That would give a considerable traffic; but even apart from that traffic, there is now a large and rapidly increasing traffic from Balmain, and from Drummoyne, Five Dock, the Field of Mars, Ryde, and all that portion of the western suburbs.
2326. *Mr. Trickett.*] Do you hear many complaints about the location of the Abattoirs? I do not hear many local complaints, but I have heard of complaints. Of course, while the Select Committee, to which I have referred, was making its inquiry, we had evidence both for and against the removal of the Abattoirs; but the general opinion was decidedly in favour of the retention of the Abattoirs.
2327. Are the complaints about the offensive character of the business carried on there, or about the danger and trouble caused by the driving of the animals through the streets? The complaints arise in regard to both matters. The offensive character of the business could be mitigated by the adoption of scientific appliances.
2328. I understand that it is almost the general opinion that it is highly undesirable to drive cattle from the sale-yards at Homebush to the Abattoirs? It is not only highly undesirable, but it is dangerous. You should have either a special road or a special means of conveyance.
2329. A branch line of railway? Yes.
2330. Do you think that if the Abattoirs are permanently established at Glebe Island something of that kind must be done? Yes; it cannot be avoided.
2331. Even if the Abattoirs were removed, would the construction of a new bridge still be necessary? Absolutely. There is no other way of communication between the southern end of Balmain and Sydney, unless you go right round through Leichhardt and Petersham.
2332. If there were a tramway across the bridge, would it be used in place of the tramway that now goes *via Annandale*? No; that tramway would still be used. The new tramway would be of advantage to the people in Balmain North, and to some of the people in Balmain South.
2333. Is the present tramway largely used except by the people in Balmain South? Yes; a large section of the people in Balmain North use it.
2334. But I suppose most of the Balmain people come to Sydney by steamer? Yes; the people in the north-eastern portion of Balmain use the ferries. They cannot get round to Sydney in vehicles unless they drive right through Balmain and round by this bridge.
2335. There is no night ferry service to Balmain at the present time? No.
2336. Do you think that a tramway across the Glebe Island Bridge would be a paying concern? I am satisfied that it would. It would create fresh traffic for itself. The saving of time which it would bring about would encourage people to patronise it.
2337. *Mr. Roberts.*] When you say that there is a probability of another bridge being asked for, where would you suggest that that bridge should be placed? I was speaking wholly of the future requirements of Balmain. I think that a bridge might be taken across from Pymont, near the sugar-works, to what is known as Ford's property, close by where the late Sir Henry Parkes used to live. When you view that suggestion in connection with a scheme of extending the line to North Shore, you will see the probability of this being pushed forward a few years hence.
2338. You think it probable that the connection will be made? I think it a feasible proposal.
2339. Has the population of Balmain increased during the last few years? Yes, decidedly. During the last fifteen months, 160 new tenements have been put up there, and several manufactories have been started. Balmain will soon be the most thickly populated place near Sydney.
2340. The establishment of manufactories there will probably lead to an increase of population? Yes; and the suburb having quick communication with Sydney and possessing water frontages, it offers strong inducements to people belonging to the middle and working classes to reside there.
2341. What is your estimate of the present population of Balmain? I should think it is somewhere about 30,000; it may be a little more or a little less.
2342. Do you think that the construction of a direct tramway there would increase the population of Balmain? Yes; it would materially assist the place.
2343. If the tram were taken over the Glebe Island Bridge, and then over the Parramatta Bridge, it would be a still greater improvement? Yes; I hold to the opinion that the railway authorities would favour such an extension of our tramway system.

Sydney James Law, Esq., M.P., sworn, and examined:—

2344. *Chairman.*] You represent the Electorate of Balmain South in the Legislative Assembly? Yes.
2345. Are the Abattoirs situated within your electorate? Yes.
2346. *Mr. Wright.*] Have you any statement to make in regard to the proposal now under the consideration of the Committee? I think that any bridge that is constructed should not have less headway than the proposed Pymont Bridge, which I understand will have a headway of 25 feet. Of course the higher the bridge and the wider the span the better it would be. I suppose there are more than 100,000 people living westward of the Glebe Island Bridge. In Leichhardt and Balmain alone, the population amounts to 50,000 people, and the bridge is used also by the traffic coming from Ryde, Drummoyne, Gladesville, Ermington, Hunter's Hill, Bourketown, and many other places which are fairly well populated. Most of the traffic coming over the Lane Cove, the Parramatta, and the Iron Cove bridges, comes across the Glebe Island Bridge. I believe that the greater part of the vehicles travelling between Sydney and Parramatta

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- Parramatta cross the Glebe Island Bridge. Most of the fruit-growers come in this way. I think that any new bridge should be at least 40 feet wide and have side-walks in addition, and it should have a swing span which would be right up to date. I see that it is proposed to make a causeway, which I believe would considerably lessen the expense, though I do not pretend to have a particular knowledge about these matters. I take it that what the people want is a stable structure which will be worthy of the splendid position which this bridge holds, situated as it is on one of the main outlets of the greatest city in the southern hemisphere. Whatever bridge is put there, it should be a first-class bridge, capable of lasting for all time, and commensurate with the importance of the future destinies of the city.
2347. The opening of the present bridge is 34 feet, and it is proposed to make it 50 feet? Well, I think we want as wide an opening as possible.
2348. An opening of 60 feet would admit the largest vessel that has ever come here? In that case the opening would be large enough.
2349. The proposed bridge is to be 20 feet above high-water mark? I should like to see it higher. I would point out that any bridge which is made should be of sufficient stability to carry a railway or tramway at some future time.
2350. Do you think that the present bridge is in the right position? I do not think it could be in a better position. In my opinion, however, it would be possible to carry the bridge over the top of Brown's works. There is a lot of high ground there on both sides, and I think it would be possible to have a bridge 70 feet high, though I have not gone into the details of the cost.
2351. You do not think that a headway of 20 feet is enough? We want as much headway as possible. We must have a bridge, however, whatever the headway.
2352. A new bridge is absolutely required? Yes.
2353. The proposed new bridge will allow vessels of the largest size to enter Blackwattle Bay? Yes. That will become a very important place in the near future.
2354. There is a very large traffic from the suburbs on the Parramatta River across this bridge? Yes.
2355. There is also a large amount of traffic in Leichhardt, Five Dock, and around about Iron Cove? Yes. There is no other site for a bridge which would be so convenient. I believe it has been proposed that a bridge should be taken from Glebe Point to the other side of the Abattoirs; but that would make it necessary to go a long way round to get to Balmain, and it would not suit the convenience of the people there.
2356. The population of Balmain is rapidly increasing? It is increasing at a fairly rapid rate, and more so than most of the suburbs. New industries have been started there lately, and there is more employment for the people. Mort's Dock has employed more hands during the last eighteen months than ever before. Balmain has 7,000 people more than any other suburb near Sydney, and it contains the largest industries in Australia.
2357. The tendency of these industries is to grow? Certainly. They are extending Mort's Dock at the present time, and there is every indication of the recent great increase of business continuing.
2358. I suppose the ferry service is only for the use of pedestrians? Yes. The tram also takes a large number of people. It is doubtful whether more people travel by ferry than by tram. I might point out, however, that the ferry company, which has not been in existence for more than three or four years, charges 1d. fares, and is always declaring 10 per cent. dividends besides putting large sums to the reserve fund, so the traffic must be very large. We have a 15-minute ferry service and a 20-minute tram service.
2359. But neither the ferries nor the trams enable you to transport goods? No.
2360. It is necessary to have some means of transporting heavy goods? Certainly. It was said in 1894 that the present Pyrmont Bridge had a life of only three years. The three years are now up, so that the sooner the new bridge is built the better.
2361. The present bridge is inconvenient and unsafe? Yes; it is altogether unsuitable and behind the times.
2362. You are opposed to the construction of a bridge from Pyrmont to Balmain? I think that it would be three times as expensive as the proposed bridge, and that it would obstruct a far greater portion of the harbour.
2363. If you put the bridge at a much higher level, how would you get an approach to it from the Sydney side? I think Union-street could be taken right through. That would give almost a direct line from the Pyrmont Bridge. A tramway crossing both bridges would enable people to travel from Balmain to the General Post Office in 15 minutes, whereas the tram journey through Forest Lodge takes 35 minutes. The proposed extension to Union-street I speak of would go through vacant land. There is a quarry there which is now lying idle.
2364. *Mr. Egan.*] Has there been any agitation for a tramway such as you suggest? No large amount of agitation.
2365. Has the matter ever been brought before the Secretary for Public Works? I believe so. Of course the extension of a tramway across the bridges has always been advocated; but in the past the people of Balmain have asked too much, and up to the present they have not got anything.
2366. How long is it since any representation was made to the Minister? It is a long time ago.
2367. Since then no move has been made? No; the people complain that the present tram follows a round-about route, and, no doubt, when the new bridges are constructed, they will advocate a direct tramway connection.
2368. The saving of time you speak of would be of great importance to the business people living out towards Balmain? Yes.
2369. That would tend to an even larger settlement than you have there now? I do not think there is anything better calculated to accelerate the progress of Balmain and the adjacent suburbs.
2370. You were a member of a Select Committee which inquired into the condition of the Abattoirs? Yes.
2371. Will you give us the benefit of your views upon the propriety of removing the Abattoirs to another situation? My opinion is that they should not be removed, and most of the members of the Select Committee were of opinion that a better site could not be obtained in any part of the world. Of course, it is universally conceded that everything there is much behind the times, and that new machinery is required. There has been no agitation for the removal of the Abattoirs, except by a handful of people living

living over at Drummoyne, and at Glebe Point a small public meeting was called to consider the subject, but I think only twenty people attended, and it was a fizzle. There is hardly anybody in favour of the removal of the Abattoirs.

S. J. Law,
Esq., M.P.

26 Aug., 1897.

2372. How long have you been living in Balmain? Sixteen years.

2373. You have not found the Abattoirs a nuisance? No; but the practice of driving cattle and sheep through the streets is a nuisance. What is required is a railway from somewhere near Petersham. There are 40 acres at Glebe Island, and the late Mr. Eddy, in giving evidence upon the proposed extension of the railway into the city, said that eventually there must be a line to Balmain, and that it would be a profitable concern.

2374. If the Abattoirs are remodelled and improved the necessity for a better bridge will increase? Yes.

2375. *Mr. Hassall.*] During your residence in Balmain the population has very largely increased? Yes; I suppose it has nearly doubled in the time.

2376. And I suppose the population of the adjoining suburbs has also increased? The population of Leichhardt has increased to an even greater extent.

2377. And there has been a considerable increase of population at Ermington, Ryde, and other places on the Parramatta River? Yes.

2378. The traffic along the road from Glebe Island has, therefore, become so great that it is absolutely necessary to improve the Glebe Island Bridge? Yes.

2379. The cost of an iron bridge is stated to be £92,400; of a wooden bridge, £59,500; of a causeway, with a steel swing-span, £84,500, from which last amount £24,500 must be deducted as the amount saved by allowing stuff excavated in the construction of buildings and so on to be thrown in to fill up, making the cost of the causeway and swing-span £60,000;—under those circumstances, do you not think that the causeway would be better than the timber bridge? Certainly. I would advocate, however, the construction of an iron bridge. I do not think that £90,000 is too much to spend there, considering the importance of the roadway.

2380. There would be no great difficulty in increasing the headway under the swing-span if the approaching causeway were sloped up a few feet? That is so. Whether the Abattoirs remain or not, Glebe Island is the property of the Crown, and will always be used. I daresay the 40 acres there are worth £500,000.

2381. At the present time the Government get a large amount of revenue from the Abattoirs? I believe they do.

2382. And the only cause of complaint is the cattle-driving? Yes. Several people have been gored by wild bullocks, and only recently a young girl was very severely hurt.

2383. Would it not be possible to do away with the nuisance by fixing certain hours for the driving of cattle through the streets? That is done now; but there are always a few people about. People have had to get into the lattice work of the Iron Cove Bridge in order to avoid cattle crossing over that bridge.

2384. But, with ordinary precautions, the nuisance need not be sufficient to warrant the removal of the Abattoirs? No; the difficulty would be obviated altogether if the Government were to construct a railway to Glebe Island. The late Mr. Eddy, the greatest authority upon railway matters who has visited the Southern Hemisphere, stated that such a railway would pay. This line will have to be constructed in any case some day.

Stephen Edward Perdriau, Surveyor, Department of Lands, sworn, and further examined:—

2385. *Mr. Black.*] I believe you have some additional evidence to lay before the Committee? Yes; I have here a description of the roads and district travelled by stock from the metropolitan cattle sale-yards at Flemington to the Abattoirs at Glebe Island:—

S. E.
Perdriau.

26 Aug., 1897.

THE SALE-YARDS.

THE metropolitan sheep and cattle sale-yards at Flemington railway platform are the property of the Sydney Municipal Council.

An area of about 30 acres is occupied by the sale-yards. They adjoin the railway, and extend to the Parramatta-road, the length being about 25 chains, and the width about 11 chains.

The land was purchased for this purpose by the Sydney Municipal Council in the year 1881, and the yards were opened in November, 1882. The cost is stated to have been about £80,000. A large one-story building of brick, in a convenient position to the various yards, provides offices for the caretaker and 13 sheep and cattle salesmen and agents.

Sales are held twice a week, viz., upon Mondays and Thursdays. Sheep and cattle are sold on both days. Monday being the more important day for cattle, and Thursday that for sheep. The charges made by the Municipal Council for use of the yards for the sale of sheep is 3d. per head, and 5d. per head for cattle. The number of sheep sold in 1896 was over 2,650,000, and over 110,000 cattle. The revenue, therefore, is about £12,000 per annum, and the expenses of management are said to be about £1,000 per annum.

The stock are brought to the sale-yards by railway as well as by road. Those brought by railway arrive generally in sufficient time to allow of their resting before being sold, but sometimes there is no time to spare for that purpose, and they are taken straight from the railway trucks into the sale-yards.

The resting paddocks comprise many hundreds of acres lying to the north, south, and west of the sale-yards. These paddocks are held by various agents, Hill, Clark, & Co.; Pitt, Son, and Badgery; and others.

The sales commence at half past 9 a.m., and purchasers are allowed until 8 o'clock on the following morning to remove the animals.

ROUTES TRAVELLED BY THE STOCK.

Upon leaving the sale-yards, the whole of the stock going to Glebe Island travel along the Parramatta-road for about 2½ miles—that is, until the borough of Five Dock is reached. There a considerable number turn in a northerly and north-easterly direction into the borough of Five Dock, and on to Drummoyne, eventually reaching Glebe Island via the Long Cove Bridge, Weston-road, and West Balmain. This route is about half a mile shorter than that travelled by the remainder, which continue along the Parramatta-road, through the boroughs of Ashfield and Leichhardt, to the Abattoir-road, which meets the Parramatta-road at a point northerly from, and distant about half a mile from, Petersham railway station. Thence they travel along the Abattoir-road (which was made for the purpose), through the boroughs of Leichhardt and Balmain, and skirting the north-western side of Rozelle Bay to Glebe Island.

At various places along the above-described routes there are resting-paddocks, viz., on the Great North road at Five Dock; on Lyons-road, Drummoyne, near the western side of the borough; at Ramsay's Bush, Dobroyde, extending from the Iron Cove Bridge on the Parramatta-road north-easterly to, and on the other side of, the tran-line. There is one paddock in Leichhardt within about ¾ of a mile of the island.

TIME DURING WHICH SHEEP AND CATTLE TRAVEL ALONG THE ROADS MENTIONED.

Sheep may be driven at any time during the day or night, as they are almost harmless to human life; but cattle are restricted to the hours between 6 p.m. and 8 a.m.

From the sale-yards the section of the Parramatta-road and contiguous land thence to Powell's Bridge, about three-quarters of a mile, is not included in any municipality, and consequently there is no restriction as to the time that cattle may roam over it.

The

S. E.
Perdriau.
26 Aug., 1897.

The Parramatta-road is maintained by the Government. At Powell's Bridge, the boroughs of Burwood and Five Dock are reached (the Parramatta-road divides them), and cattle are not allowed to pass this point until 6 p.m. The actual block across the road is the railway-gate on the Strathfield-Newcastle railway, close to Powell's Bridge, which is not opened until that hour, and the drovers leave the sale-yards at such a time as to arrive there about that time. After 6 o'clock the cattle are on the roads, generally in about half a dozen mobs, varying in number from about 20 to 200, and perhaps more.

They are taken part of the way to the Abattoirs at night, viz., to the various resting paddocks above mentioned. They are not allowed to pass through the borough of Leichhardt before 10 p.m. Thence, between 6 and 8 o'clock in the morning, they complete the journey, and are driven to the Abattoirs. Cattle going to Parramatta and intervening suburbs are, of course, driven along the road, westward; those for Enfield, Canterbury, Hurstville, &c., cross the railway at a point close to Flemington, either by the subway or by the over-bridge; while those intended for Moss Vale and such places, 50 miles or more away, are re-trucked.

NOTE.—I am informed by the officer of the Works Department in charge of the roads that the Parramatta-road—that is, the Great Western road—and the Abattoir-road are maintained by the Government, but that the Weston-road, Balmain, is not.

I beg to hand in a statement by Mr. C. A. Simms, Secretary to the Board of Health, of the number of sheep, cattle, calves, and pigs slaughtered at Glebe Island. The calves and pigs are brought coastwise and driven to the island *via* Pyrmont and Glebe Island Bridges after having been sold at the Corporation Yards near the Market Wharf, Sydney.

Sir,

Office of the Board of Health, Sydney, 25 June, 1897.

In answer to your letter of the 19th instant to Mr. G. W. Shelley, the Inspector of the Abattoirs at Glebe Island, I am directed by the President to inform you that the return subjoined shows the number of animals driven from Flemington to the Abattoirs for slaughter during the year 1896.

I have, &c.,
C. A. SIMMS,
Secretary.

Sheep	1,159,000
Cattle	70,000
Calves	9,528
Pigs	64,690
Total	1,303,218

S. E. Perdriau, Esq., Lands Department.

CATTLE DRIVING DANGEROUS TO HUMAN LIFE.

The boroughs or suburbs above mentioned, through which the cattle are driven, are all more or less populated. All along the Parramatta-road there are shops and other business premises, and a large township at Leichhardt. On the Weston-road, Balmain, there is also a large township.

Generally, there are two drovers on horseback and several dogs with each mob of cattle. One drover rides a short distance in front of the cattle to warn people on the road, the other drover with the dogs bringing up the rear. There is one drover who takes charge of a mob, and has no assistance except from dogs. On dark nights the cattle cannot be distinguished further than 20 paces off, except when there are lights. There are public gas lamps on the southern side of Parramatta-road, in the boroughs of Burwood and Ashfield, but there are no public lights on the northern side in the boroughs of Concord and Five Dock, which means that for 3 miles on one side of the road it is very difficult indeed to see the cattle before one gets right up to them. Such circumstances need only be mentioned to show the danger existing. Evidence of this also is afforded by the shopkeepers, who state that on cattle nights they do scarcely any business, because people are afraid to venture on the road, for, of course, the cattle are wild, and they travel faster than they otherwise would, because dogs on the roadside dart out at them unexpectedly, and make them more furious. They may be driven on any other nights besides Mondays and Thursdays, and are sometimes a nuisance to church-goers.

If a beast knocks up it is roped to the fence or the nearest suitable post on the road-side, and left there till the morning, when it is shot, its throat cut, and then carted to the Abattoirs. Thus it remains on or near the footpath all night, and becomes a dangerous nuisance.

The cattle cannot be kept in the roadway, but run all over the footways as well, and the drovers must go on to the footpaths—especially at cross roads and lanes—to prevent the cattle turning into them. If any break away into such places they are brought back to the mob as quickly as possible; the drover, urging his horse at full speed, makes the cattle almost gallop on to the road again. Sometimes the mobs are driven considerable distances up the cross roads to endeavour to attract the strayed ones to it again. The Parramatta-road is 1 chain wide, but several of the streets *en route* through Five Dock and Drummoyne are only half a chain wide, hence the danger is increased. If any beasts happen to get clean away, the drover cannot leave the mob, but must complete the journey with them, and afterwards return for the strayed ones, which in the meantime have roamed at will, a scourge to the neighbourhood. This is not an uncommon occurrence, and these separate ones often become very fierce, and refusing to be driven, have to be shot when found. It is not necessary to burden this report with every detail of danger, resulting from the cattle-driving; but I should add that during my two days' inspection of the routes particulars of three deaths, occasioned recently through vehicles being overturned by bullocks, were narrated to me, besides numerous serious accidents and escapades. Scores of the latter could be obtained in a few hours if required. In fact every person resident for any considerable length of time in the district affected knows of several, and they are unanimous and vehement in their denunciation of the present practice, and point to the agitation—intermittently extending over a long period of years—for its abolition. Many depositions on the subject have waited upon Ministers of the Crown, and these have frequently been composed of aldermen from several of the boroughs affected.

The danger would be decreased by restricting the driving of cattle to the hours between 12 p.m. and 6 a.m. (that is twice as long a time as is required for the whole journey), but this would not secure complete immunity from danger, for occasionally some would break away.

CATTLE-DRIVING DETRIMENTAL TO PROPERTY AND ROADS.

Owners of property in the district affected complain bitterly of the detriment caused by cattle and sheep driving, and state that houses fronting the Parramatta-road are difficult to let, and rents decreased on that account (people with children dislike the position), consequently the value of land for building purposes is depreciated; also that the bullocks destroy the fences. The council clerks of the various boroughs *en route* state that in assessing land values they decreased them for land fronting and within a certain range of the cattle road, and that this is warranted by their experience of this nuisance. Another serious nuisance is the dust raised, especially by flocks of sheep (sometimes 5,000 in one flock); this, of course, depreciates the value of goods exposed for inspection.

The roads are much cut up by this traffic, especially in wet weather, and metal newly laid is displaced and scattered all over the road. New asphalt footpaths are said to have been destroyed in a fortnight. The whole width of the road is affected, and even when the cattle are kept off the footpaths the drovers must go on them to head the cattle: this they do at a great speed, which in itself is dangerous, but when summoned for the offence by the local borough council, the case was dismissed for the Magistrate stated that as cattle-driving was legal the drover must not be restricted to any one portion of the road, and that as the object in view in going on the footpath was to prevent accident it was unavoidable.

The nuisance is keenly felt in Five Dock which suffers more than other boroughs, both because the bullocks traverse it throughout its whole length, and that its streets are narrow. For a length of 2½ miles in Five Dock and Drummoyne the roads travelled by the cattle are only half a chain wide. I was informed that a movement is now afoot in Five Dock Borough Council to establish a toll bar to raise funds to repair the damage to the roads caused by the cattle.

The tramway authorities find it necessary to exercise special supervision over the lines travelled by cattle on account of their treading stones into the grooves.

GLEBE ISLAND AS A SITE FOR CATTLE SALE YARDS AND ABATTOIRS COMBINED.

The total area of Glebe Island and the reclaimed land lying between it and Balmain is about 46 acres. A proposal was made some time ago to reclaim a further area of 15 acres, extending from the north-eastern end and round both sides, to be used for wharfage purposes.

The

The stone and material required would be obtained upon the island close to the water.

Thus the total area available at this place could perhaps not be increased beyond 60 acres without expensive resumptions.

S. F.
Pordriau.

This area would not be sufficient for abattoirs, sale-yards, and resting paddocks if the present custom of selling only twice a week be adhered to, because buyers having to purchase sufficient for their requirements between those days apparently require a larger area for resting paddocks than would be available.

At Flemington there are hundreds of acres (perhaps thousands) used as resting paddocks.

It might be worth while inquiring of the wholesale butchers and others whether the holding of sales every day would be practicable, for, if so, possibly sufficient area could be obtained at Glebe Island to meet all requirements.

If when the proposed railway to the island had been constructed the cattle had still to be taken to resting paddocks through Balmain the nuisance would have been only partially overcome.

The pens on the island hold 1,000 cattle and 10,000 sheep, and this accommodation could be largely increased.

It is some time ago since I prepared this information, but three accidents happened just about then to which I would like to draw the attention of the Committee. The paragraphs in which two of them are mentioned are taken from the columns of the local newspapers:—

Thursday, 24 June, 1897.

(1.) *A girl gored by a bullock.*—Yesterday morning a girl named Ethel Best, aged 11 years, residing with her parents at Nelson-street, Rozelle, was in Weston-street when a number of bullocks were being driven to the Abattoirs. The girl ran to the colonnade of the Rozelle post office for safety, when one of the bullocks charged her in a sensational manner, goring her three times. Her screams attracted attention, and when the girl was rescued it was found she had received serious injuries to her legs and body, and one of the bones in one of her hands was broken. The bullock was shortly afterwards destroyed.

Western Suburbs Weekly Budget, 12 June, 1897.

(2.) *Blocked by sheep.*—Quite a commotion occurred on Thursday afternoon, in close proximity to Catherine-street, consequent upon Parramatta-road vehicular and tram traffic being completely blocked by sheep. A very large mob was being driven to the Glebe Island, and at the corner of Catherine-street, a strike occurred amongst them. For some time neither force nor entreaty could induce them to give up possession of the street, they being complete masters of the situation—tram and vehicular traffic being completely blocked. The nuisance is becoming unbearable, and apart from the cruelty meted out to the poor brutes in a vain endeavour to force them along, in the interest of the business people, also the tram passengers, the Government should take immediate steps to minimise the nuisance.

NOTE.—Catherine-street is the Abattoir-road.

(3.) The Catholic priest at Leichhardt stated to me on the 25th June, that that morning in the church ground he had to shoot a wild bullock, it having broken away from the mob which had passed along the Abattoir-road near the church at about 7 o'clock. Another man shot the bullock twice, but the shot used being too small he had to obtain larger shot. The bullock was fired at three times. Mass was being conducted when the bullock got into the church ground, and the thirty people attending had to wait until the bullock was killed before they could leave the church.

2386. *Chairman.*] Do you know what the rise and fall of the tide of Blackwattle Bay is? I believe that they have lately been making observations in regard to the rise and fall of the tide. It averages 42 inches, I believe. The extreme difference between high spring tides and low tides is 6 feet.

2387. Is there any current under the existing Glebe Island Bridge? I do not think there is any noticeable current.

2388. If the waterway were narrowed to one-third it would increase the current? That would be the tendency; but I do not know if even then the current would be perceptible.

2389. Do you care to express an opinion as to the likelihood of there being any silting up alongside the proposed causeway? No doubt there would be a certain amount of silting up at the ends of the causeway near the land, but how much it would be I cannot say. The mud there is very soft, and is easily moved by the tide.

2390. Have you had any experience of similar obstructions to the tide in other parts of the harbour? I have seen all the stone wharfs and piers erected in the harbour, and I have noticed that in corresponding positions there is a tendency for silt to be deposited round them to some extent.

2391. *Mr. Humphery.*] The silt that now goes down into Johnstone's Bay would be obstructed by the proposed causeway, and would lodge against its inner side? Yes; but it would be cheaper to dredge it up if it were always in one spot. When the bay is dredged to a depth of 20 feet, nearly all the silt there will be removed.

2392. *Mr. Hoskins.*] Has Blackwattle Bay shoaled very much in the last ten years? I think so. They are always dredging it to increase the depth. By scale on the city map I make the area of Blackwattle and Rozelle Bays 180 acres.

2393. *Chairman.*] The process of silting up is going on gradually all over the harbour? Yes.

2394. *Mr. Trickett.*] In what connection did you quote those instances about cattle getting into people's gardens, and injuring people? Only to show the danger of driving cattle from Homebush sale-yards to the Abattoirs.

2395. It is necessary that something should be done to get rid of this danger? Yes, it is a very serious matter indeed. I went over there two or three nights to watch the cattle being driven along the streets, and there is no doubt that on dark nights it is very dangerous to be in the streets where they are being driven, because you cannot see them until they are right on top of you. The sheep, too, are a serious nuisance in the daytime.

2396. Does this practice of driving cattle through the streets absolutely prejudice the properties along the line of route? There is no doubt it does, especially where the roads are narrow. In the borough of Five Dock some of the roads are only half a chain wide. I think it would be a wise thing for the Committee to get evidence upon this subject from some of the council clerks of the boroughs traversed by the cattle.

FRIDAY, 27 AUGUST, 1897.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.	CHARLES ALFRED LEE, Esq.
The Hon. JAMES HOSKINS.	JOHN LIONEL FEGAN, Esq.
The Hon. CHARLES JAMES ROBERTS, C.M.G.	THOMAS HENRY HASSALL, Esq.
The Hon. WILLIAM JOSEPH TRICKETT.	GEORGE BLACK, Esq.
The Hon. DANIEL O'CONNOR.	FRANCIS AUGUSTUS WRIGHT, Esq.
HENRY CLARKE, Esq.	FRANK FARNELL, Esq.

The Committee further considered the expediency of constructing a New Bridge at Glebe Island, to replace the existing structure.

Edward James Howes Knapp, C.E., made an affirmation, and was examined:—

E. J. H.
Knapp, C.E.

27 Aug, 1897

2397. *Mr. Fegan.*] You have seen the plans of the proposed Glebe Island Bridge and causeway? I have had an opportunity of looking at them since I have been here this afternoon.
2398. You are well acquainted with the road which leads over the present bridge? Yes.
2399. Have you any statement to make with regard to the question under the consideration of the Committee? Yes. I have come here to-day because I have a strong opposition to the damming up of any of our water-ways or parts of the harbour if it can be prevented. The disadvantages of the proposal may not be patent to everybody, but in years to come any bridge will be a positive hindrance to the commerce of this great city, which I need not tell you will shortly have to enter into very keen competition with the neighbouring Colonies. If Federation be accomplished as I hope it will, on right lines, the proposal I have to make is, that instead of building a new bridge to Glebe Island, the traffic should be taken round through Glebe Point. I have a good knowledge of Glebe Island, having been appointed by the Surveyor-General in 1860 to subdivide it for residential sites. I then pointed out to him privately the danger of building bridges across the harbour. My objection to a bridge is that it largely interferes with water frontages which will in the future be required for commercial purposes. It shuts in about 3 miles of water frontage, about 1 mile of which now belongs to the Government. I object to it too, because of the annual expense which it involves in repairs of wear and tear, and in keeping men to open and shut the swing span.* The removal of the bridge would give free access to the water frontage of which I have spoken, and would therefore, of course, increase its value, and the betterment system might be applied to the properties that were benefited. In place of the present bridge, I would suggest that the traffic be taken round through the Pyrmont Bridge road, and then at the back of the Kauri Timber Co.'s yard, crossing Ferry-road and Forsyth-road into Leichhardt-street; then round into the Glebe Point-road just below where the tram stops, down the Glebe Point road westward, and across reclaimed land to the intersection of Burt and Gordon streets. The distance to that point by my proposed route would be only a little over 30 chains more than by the route crossing the Glebe Island Bridge, from the Pyrmont Bridge, Darling Harbour. Such an arrangement would divert a lot of traffic from George-street West, and from the Parramatta-road, and would give quicker access to the city from Balmain South. The new road which I suggest should be made, would be about 70 chains in length. Forty chains of this could be utilised for connecting the Glebe tram with the Balmain tram. This would save the journey round through Forest Lodge. I estimate the cost of the new road at £28,956 for resumptions, and £10,500 for formation and work necessary to make it convenient for vehicular traffic, or £32,456 altogether.† The gradient would be a very easy one, and I think the road would open up a good deal of property. When we recollect that Glebe Island is only 2 miles, as the crow flies, from the General Post Office, it must be apparent that at some future date it will be a very busy place. You know how Balmain is going ahead now, and the new water frontage that I speak of will give much greater accommodation for shipping. I would respectfully impress upon the Committee the desirability of preventing the erection of permanent works which have the effect of shutting up the foreshores of the harbour from commercial use. In my opinion, it would be a mistake to perpetuate the evil created by the present bridge.
2400. Do you consider that the water frontage which you speak of would be closed against shipping if we replaced the present Glebe Island Bridge by a causeway, having a central swing span giving an opening wide enough to allow the largest ships to pass through? I think it must be apparent that where you have free waterway, to which you can get access at any time without hindrance, the value of the foreshores is greatly increased. We know what a hindrance to trade and what a congestion to traffic the Pyrmont Bridge now causes, and, no doubt, as time goes on the same thing will occur at Glebe Island.
2401. Are you in favour of keeping the Abattoirs at Balmain? I am very hopeful that the Abattoirs will be removed before very long.
2402. Suppose they are not removed? Then the traffic will have to come round the road I speak of.
2403. Do you think that that would be convenient? No doubt the arrangement would cause some inconvenience, but in view of its advantages, I do not think that that inconvenience should be taken into consideration.
2404. But if you knew that the Abattoirs were to be remodelled and improved and established at Glebe Island permanently would you recommend the abolition of the Glebe Island Bridge? I would, for the reasons I have stated.
2405. *Mr. Hoskins.*] If your proposal were carried into effect persons coming to Sydney from Ryde and places on the north side of the Parramatta River would have a much longer journey to make? They would have to travel 30 chains further than they travel now. I should like to get rid of all the bridges—the Iron Cove Bridge, the Gladesville Bridge, and the Hawkesbury Bridge. I think that they should never have been constructed.
2406. Do you think people would like to travel a longer distance? No doubt they would grumble at having to do so, but the individual interest must be sunk in the public good.

2407.

NOTE (on revision):—* There would be no such expense with the new road I propose.
NOTE (on revision):—† I am prepared to carry out formation for the sum named.

R. J. H.
Knapp, C.E.
27 Aug., 1897.

2407. How do you consider that the welfare of the community would be served by making this traffic travel half a mile further than it has to travel now? I admit the the people you speak of would be inconvenienced; but I want to have our harbour frontages thrown open for free access, so that we shall be able to meet the keen competition that will take place within the course of a few years.

2408. There are a large number of people residing at Ryde, Dobroyde, and other places in the western suburbs who use this bridge;—are not they part of the body politic whose interests you say should be considered? I admit that. Of course they would be inconvenienced slightly.

2409. If an opening is left in the proposed bridge which will be wide enough to admit the largest vessels coming to the harbour, do you think the proposed structure would be a serious hindrance to the commerce of the port? Well, I would object to the proposed causeway, because it would have the effect of silting up that part of the harbour.

2410. We have had it stated in evidence that there is scarcely any flow of the tide there, and that the construction of a causeway, while it might necessitate a little more dredging, would have very little other effect upon the harbour? So much the worse. If there were a good flow of the tide the scour that would be created by the narrow opening under the swing span would deepen the channel, but if there is hardly any flow, in my opinion the place would silt up rapidly.*

2411. *Mr. Wright.*] Possibly you are not aware that it has been stated in evidence before the Committee that our present wharfage accommodation is nearly four times as great as the existing trade requires? Admitting that, it is, in my opinion, no reason why we should not look ahead, so that we may construct only such public works as will be of convenience to the coming generation.

2412. Is your only objection to the bridge your belief that it will close up this waterway? Yes; in my opinion, if the existing bridge had not been built that water frontage would now be in use for commercial purposes. The effect of the construction of that bridge has been to preclude the construction of large wharfs in the locality, although it is one which is admirably adapted for a commercial centre, being within easy range of the city and of the railway.

2413. Has not the water frontage been closed to shipping because of the narrowness of the bridge opening and the small depth of water there? The difficulties would be reduced if the proposal before the Committee were carried out; but you would not have the same free access to that water-way that you would have if there were no bridge.

2414. In the event of its being determined to put either a bridge or causeway there, which would you prefer? I should prefer to have a bridge right across.

2415. *Mr. O'Connor.*] In the event of your proposal being carried out, would not the people of Balmain be greatly inconvenienced? Some of them would have 30 chains further to go; but the greater part of Balmain is so well served by the ferries that the people have no occasion to use this road.

Cecil West Darley, Engineer-in-Chief for Public Works, Department of Public Works, sworn, and further examined:—

2416. *Mr. Hoskins.*] In the event of its being decided to replace the existing Glebe Island Bridge by a new structure, which would you recommend—a bridge, or a causeway with a steel swing-span? A causeway with a steel swing span. C. W. Darley.
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2417. It has been stated by several witnesses that in their opinion the construction of a causeway would bring about the silting up of that part of the harbour;—is that your opinion? I think that there is no foundation for such a belief. The proposed causeway could not possibly have that effect. It is not as if it were placed across a river. The only source from which deposits of silt reach that part of the harbour is the various stormwater drains and some local sewers which open into the heads of the bays. The matter brought down in the sewers is, however, deposited within a very limited area, and we can pick it up at the place of deposit with the dredges. The stormwater sewer delivering into Rushcutters' Bay deposits material within a comparatively limited area in the bay. The material forms a bank near the outfall of the sewer, and we can easily dredge it up. There is no current from the sewers towards the proposed causeway which would have the effect of causing the silt to be precipitated near the causeway. I have explained that we would remove the greater part of the mud and soft material from this part of the harbour, and there would be nothing to cause it to accumulate again.

2418. If you had a causeway, would more dredging be required in that part of the harbour which would be shut in by it than is required there now? No.

2419. *Chairman.*] When you last gave evidence before the Committee, you spoke of a problematic saving of £25,000 in connection with the making of the causeway;—are the Committee justified in believing that that amount could be saved? Yes, under the conditions I stated. My idea is that the whole amount asked for should be voted, and that we should save the amount you mentioned, if possible, by getting as much material as we could from outside sources.

2420. I understand that you would take material for the causeway from Glebe Island;—would the improvement thus effected make Glebe Island a more valuable asset;—could the value given to the island by the improvement be taken into consideration as a set-off against the cost of the proposed work? I think not. The improvement is too remote to value. 2421.

* *NOTE (on revision)*:—In substantiation of my answer to this question, I desire to draw attention to the fact that, in 1860, when I subdivided Glebe Island for the Surveyor-General, both White's Creek and Johnstone's Creek were navigable for small boats. In 1887, when I made a survey, in the Supreme Court case *Onan v. Payne*, the former creek was silted up to the old post-hole in the rock near the junction of Abattoir-road and Cecilly-street, and both high-water mark and low-water mark a good distance from this old post-hole, which was formerly just above high-water mark. The same applies to Johnstone's Creek, and it has necessitated the reclamation of the south arm of Rozelle Bay. Then, again, Blackwattle Bay, by reason of silting up, and giving out an offensive smell at low tide, has also had to be reclaimed. In my opinion, even a bridge is contributory, to some extent, in hastening silting. As proof of this I point to the fact that, in 1864, when I made a survey of the Sawyer Estate, Balmain, I fixed the position of high and low-water of its frontage to Waterview Bay. There was then no Corporation pier at the foot of Cooper-street. The Council subsequently built their pier from the low-water of 1864, extending 80 feet into deep water. In 1886, when I made a subdivision of this land, the pier was high and dry, as low water extended a few feet away out from it. There is much about the same current here as at Rozelle Bay. I could multiply instances from old surveys and field books to support my evidence, but that I think the above sufficient proof.

- C. W. Darley. 2421. Will you tell us, briefly, why you think a swing span preferable to a bascule? That is a matter of detail which it is my intention to investigate before finally working out the plans. So long as an opening is provided, I do not think it matters whether we have a swing span or a bascule.
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2422. Does not the question of cost come in? Yes; the relative costs will have to be investigated. It would take me some considerable time to ascertain which would be the better form of construction in this position. There are many points to be taken into consideration.
2423. *Mr. Black.*] Can you conceive of any set of conditions under which the proposed causeway would prove an impediment to the commerce of the city? No.
2424. You think that very large vessels are not likely, at all events in the immediate future, to seek this portion of the harbour as a place for discharging or taking in cargo? Well, they will not be prevented from going there, because they will be able to go through the opening.
2425. It may be that we shall have vessels coming here too wide for the opening? Well, if it were necessary, you could make the opening larger. That would be as easy to do with a causeway as with a bridge.
2426. *Mr. Wright.*] It has been suggested that it would be an advantage to continue Union-street right through to the Pyrmont Bridge, and raise the height of the bridge? That would add to the expense of the work very largely. You would have to abandon the causeway, and use tall piers.
2427. Would a headway of 20 feet allow the ordinary small boats trading in the harbour to pass under the bridge? Most of them could pass under.
2428. *Mr. Hassall.*] The causeway, as planned, would give them a comparatively level approach to the swing span. Would it be possible to create a slope so as to raise the swing span 3 or 4 feet? That could be done; but if you made the causeway very high it would be difficult to give access to Brown's works, which are close to the bridge. Of course, for every foot that you raised the causeway you would largely increase the cost.
2429. Do you think the advantage gained would justify the increased expenditure? No; small boats trading frequently to that part of the harbour will have masts low enough to go under the bridge.
2430. But if it were necessary the approach could be raised 3 or 4 feet? You could put a gradient on the approach.
2431. You do not know what the additional cost would be? I could not tell you off-hand what it would be.

THURSDAY, 9 SEPTEMBER, 1897.

Present:—

THOMAS THOMSON EWING, Esq. (CHAIRMAN).

The Hon. FREDERICK THOMAS HUMPHERY.	CHARLES ALFRED LEE, Esq.
The Hon. JAMES HOSKINS.	JOHN LIONEL PEGAN, Esq.
The Hon. CHARLES JAMES ROBERTS, C.M.G.	THOMAS HENRY HASSALL, Esq.
The Hon. WILLIAM JOSEPH TRICKETT.	GEORGE BLACK, Esq.
The Hon. DANIEL O'CONNOR.	FRANCIS AUGUSTUS WRIGHT, Esq.
HENRY CLARKE, Esq.	FRANK FARNELL, Esq.

The Committee further considered the expediency of constructing a New Bridge at Glebe Island.

Cecil West Darley, Engineer-in-Chief for Public Works, Department of Public Works, sworn, and further examined:—

- C. W. Darley. 2432. *Chairman.*] The question is whether we should construct a bascule or a swing-bridge; you were to consider the matter and give a definite opinion? I have gone into the matter as far as I could since, and I do not feel inclined to recommend the bascule, but to adhere to the swing-bridge.
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2433. Is your opinion based upon a general consideration of the question? Yes; to make the bascule system economical it would be necessary to make the superstructure as light as possible. We should have to sacrifice to some extent permanency of construction as compared with a swing-bridge. We could not make any saving with a concrete and wood-blocked deck on a bascule bridge; we should have to put on the ordinary timber decking, to make it light.
2434. Would a bascule bridge be more expensive? No; they would both be about the same price.
2435. Then a bascule bridge would not be such a good roadway? You can have no economy. The object in departing from the swing-bridge is to bring about economy. You would have to go in for a cheaper roadway instead of such as would be designed for a swing-bridge. For the swing-bridge we have designed a roadway of trough plates with concrete filling and wood blocks—a good permanent roadway. A bascule bridge with the same class of roadway would cost about the same amount, but there would be really nothing gained by making the change. The bascule bridge is used where there is not sufficient room to work an ordinary swing-bridge, but that reason does not obtain with regard to Glebe Island. I prefer to recommend a swing-bridge.
2436. The mole is your present proposal? I said I strongly recommended the proposal to have embanked approaches with a bridge in the centre. I still adhere to that.
2437. *Mr. Lee.*] You have seen no reason to alter your opinion? No.
2438. *Mr. Wright.*] Have you seen the advisability of raising that bridge, and continuing straight from Pyrmont Bridge? It would be very costly to raise it.
2439. You have not considered that aspect of the question? I think it would be too costly to entertain.
2440. In your estimate you contemplate purchasing the material for making the embankments? No, to excavate at Glebe Island.
2441. *Mr. Lee.*] Supposing you found it unnecessary to cut down Glebe Island, in consequence of getting the material from other places, would you advise the cutting of a new road through the island so as to avoid passing near the Abattoirs? No; I am opposed to that scheme. I think that a new road there would interfere with the laying out and utilisation of the island hereafter. I think it would be a pity to do anything that would limit the usefulness of the island for railway and general shipping purposes. It is hard to say yet how it will develop.
- 2442.

2442. Beyond improving the present road you would not touch it? I do not propose to touch it at present. O. W. Darley.

2443. *Mr. Wright.*] Would it not be possible to bring the bridge a little further south? In lengthening the bridge you would come further south. At present we are on rock on both banks; as you come south you get off the rocks. 9 Sept., 1897.

2444. *Mr. Hassall.*] Did you make any estimate of the cost of raising the embankment 3 or 4 feet? I did not.

2445. Do you think the height sufficient for all purposes? I think so; there is 20 feet clear headway.

2446. *Mr. Wright.*] Could there be any regulation made by the Marine Board to compel all boats up to a certain tonnage to have low funnels and to be without high sticks, so that they could pass under a bridge like that, or that all boats in the harbour should have telescope funnels? I do not think that the Marine Board has power to pass such a by-law. It is recognised by the Board of Trade that vessels of all kinds have a right of way on the water. To make a by-law of that kind, you would require a legislative enactment. Where you have a bridge 20 feet high, the owners will adapt their boats to it so as to save delay. Most of our steamers about the harbour are adapted for running under the Iron Cove Bridge, which has the same headway.

2447. Would it not be advisable, where there is such a traffic as that on Pymont Bridge, to compel the owners of these small boats, where they have no necessity for high sticks, to have low masts and funnels? That is a matter requiring consideration. If I had a steam yacht which would require to go up there for repairs, it would be very hard to have to cut her masts down so as to go under the bridge.

Charles Ulick Carruthers, L.R.C.S., Irel., sworn, and examined:—

2448. *Chairman.*] You are a resident of Balmain? Yes; I have been there about seventeen years.

2449. *Mr. Hassall.*] During that period, have you been in the habit of coming over into the city? Yes; about three times a week. O. U. Carruthers. L.R.C.S., I.

2450. It is proposed to erect a new bridge at Glebe Island;—are you here to give evidence in favour of that proposal? Yes. 9 Sept., 1897.

2451. Will you state the reasons why you think the bridge should be erected? It is almost a necessity; it is almost as necessary to have a bridge there as to have the ferries going across to North Shore—the traffic is so heavy.

2452. You have a bridge at present? The present bridge is not suitable. In driving over to Sydney this morning I was blocked on the bridge because a small boat was passing through. A new bridge is absolutely necessary to accommodate the large district of Balmain, Ryde, Drummoyne, and Pennant Hills—one of the most beautiful districts around Sydney. You could not get a nicer drive than the road across Pymont Bridge, through Drummoyne, on to Ryde, and through the orchard district of Pennant Hills.

2453. During your residence in Balmain, has the population increased to any great extent out to the west? Considerably. I remember when at Leichhardt there was hardly any population. When I first went to Balmain there was no bridge at Drummoyne.

2454. Does the traffic for Leichhardt and those districts to the west come over Glebe Island Bridge? Yes; all the traffic from the west end of Balmain, from Leichhardt and Lillyfield, and all the traffic from the other side of the water—from Drummoyne, Ryde, Birkenhead, and the Field of Mars—comes across there; then there is the Abattoirs, which has a large traffic itself.

2455. Consequently there is a considerable amount of traffic on the bridge every day, and all the day? Yes; and even at night.

2456. The inconvenience, I presume, is caused by the narrow entrance to the bridge where the swing is, and the traffic is also occasionally stopped during the passing of a boat? Yes; it is in the opening of the bridge, and the uncertainty as to whether you will not be blocked upon it.

2457. Can two vehicles pass together on the opening? No; not on the opening.

2458. So that the traffic in one direction has to remain stationary until the traffic from the opposite direction has got through? That is so. Formerly they let the city traffic through first; now the traffic from Balmain gets through first, because there is only room for one trap to pass on the swing.

2459. Then they do not keep the traffic standing on the bridge? No—only whilst the bridge is open; but the minute the bridge is shut, they are so frightened of the weight of the double traffic on the bridge, that now they let the far side traffic through first.

2460. So that practically they reduce the weight on the bridge by 50 per cent.? Yes.

2461. They had to do that? They were frightened of the weight of the second traffic coming on whilst the other traffic is standing on the bridge.

2462. How long have you had to wait there at any time? I think from about twenty-five minutes to half an hour.

2463. I presume, then, that there are occasions when the traffic is delayed for half-an-hour at a time? I should say from twenty minutes to half-an-hour.

2464. What has been the increase in the traffic during the last ten years? I should say that it has increased three times.

2465. There is three times as much traffic now as there was ten years ago? Quite that.

2466. Are there any signs of an increase of business round Balmain to necessitate the building of a larger bridge? Yes; there is a considerable amount of building going on in Balmain and that district at present. Drummoyne is growing very much, and so is Hunter's Hill.

2467. It is principally a fruit-growing district? Yes; and people are going to live there.

2468. The produce has to be brought to market? Yes; at 3 and 4 o'clock in the morning you will see fruit-carts coming through from Pennant Hills.

2469. Have you seen the plans submitted to the Committee? Yes. I did not go particularly into them.

2470. There is an idea of making a causeway with a swing span, with a centre height from the water to the under deck of 20 feet, and providing a sufficient opening for two vessels to pass in opposite directions;—do you think that will be sufficient for all requirements? Yes. I do not know whether it is intended to alter the approaches, but no bridge will be satisfactory the approach to which goes past the Abattoirs.

2471. Why? When I went to Balmain first the Abattoirs were on one side of the road. The Government then erected a large refrigerating chamber that turned out a failure. Now they have made it into

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into a sheep-killing place, and as that is on the opposite side of the road from the other portion of the Abattoirs, in going along that road you have to go through the centre of the Abattoirs.

2472. What would you do to avoid that? You will have to go round on the northern side. Instead of taking the road from the present bridge and going across the Abattoirs, you would turn off after passing Johnstone's Bay and take the northerly direction towards White Bay, and then bear in a westerly direction.

2473. Where would you come out? You might come out on Robert-street.

2474. That would make a detour, would it not? Not a very large one. There is a very bad hill near the Abattoirs. There is a lot of traffic near the Abattoirs, and in passing there you see men with their clothes covered with blood carrying lights and liver, which is most objectionable. I do not think any bridge will be satisfactory the approach to which goes through the Abattoirs.

2475. I suppose it would not be necessary to alter the position of the bridge? Yes; there is a nasty turn on the city side, just at the entrance to the swing.

2476. But with a wider approach, and with a wider bridge, would not that be to a great extent remedied? Yes.

2477. Would the position of that bridge be suitable for the formation of another road leading towards White Bay, and then joining the main Balmain Road at the point beyond Glebe Island? Yes.

2478. In the event of a new road being made, it could be made from that site quite as well as from any other, could it not? I do not think so.

2479. Then it would be a question of shifting the bridge lower down Johnstone's Bay? No.

2480. There would be no difficulty in taking a road from the site of the proposed bridge in the direction you point out? No.

2481. It would not necessitate the shifting of the site of the bridge? No. I think it would be better if the bridge, instead of running across, as shown on the plan, to the end of Glebe Island, were shifted further north and a new road made round the island.

2482. Would not that be inconvenient for the Abattoirs? No; there would be no traffic except to the Abattoirs along that road. Speaking on behalf of the residents of Balmain, I am of opinion that a road should be laid out so as to avoid passing the Glebe Island Abattoirs, carrying the traffic to Balmain and the district to the west.

2483. I presume your opinion is that the present structure has practically outlived its usefulness? Certainly.

2484. It does not answer the requirements of the district, and it causes a very great feeling of inconvenience and loss in consequence of the difficulty of approach and the delays occasioned by the water traffic? Yes. Then, as to the new bridge, I do not think it would be satisfactory unless it is strong enough to carry a light railway or tramway. It is absolutely essential that it should be strong enough to carry either a light railway or a tramway. My reasons for saying that are these: There is an enormous traffic from the Abattoirs, and there is a great nuisance there caused by the cartage of skins, bullocks' heads, &c. The Abattoirs must remain there. I look upon that as essential, because a better place could not be found. I do not think any city in the world has a better place for abattoirs than Glebe Island. The bridge should carry a tramway, so that all those skins and offal could be removed in the morning before the ordinary traffic starts. It is a very disgusting thing when driving in summer to be blocked on that bridge behind a vehicle loaded with skins, bullocks' heads, and other offal covered with flies. This sort of traffic ought to be regulated. The offal ought to be removed early in the morning; and if there is a light railway or tramway, and it would not cost much to bring it down there, that could be done. That would relieve the bridge of a very obnoxious traffic in the daytime. Those heavy trollies, covered over with sacks saturated with blood, are most objectionable. If you get behind one of them on a hot day and you are blocked, you wish you were somewhere else. If the new bridge is strong enough to carry a tramline or a light line of railway, it would not cost very much to make the line from there to Harris-street.

2485. Then the engineers ought to consider whether they could erect a bridge strong enough to carry the additional traffic of a tramline? Yes; and I see that Mr. Law has been advocating that route as the shortest for a tramway to Balmain.

2486. But you have a tramway to Balmain? Yes; and it is forty minutes' journey to Sydney by that tramway. If I am not blocked on the bridge I can go from the General Post Office to my house in twenty minutes.

2487. The Abattoirs are not looked upon as any great annoyance to the residents of Balmain? There is a little annoyance as they are conducted at present; but there ought not to be any if they are rebuilt and reorganised.

2488. You think there should be no annoyance to anyone? No; why should the meat we are going to eat be an annoyance to anyone? It is not very nice to think that you are going to eat meat which is considered to be a nuisance. I do not want to go into the question of the Abattoirs, but the bridge is so mixed up with it that it becomes unavoidable. If the traffic were diverted there would be no necessity to go by the Abattoirs. People do not care to go by the Abattoirs, where they see butchers going about with leather leggings up to their knees covered with blood.

2489. It is a question of getting a different route for the traffic that will not necessitate going by the Abattoirs? Yes.

2490. Speaking on behalf of the people interested, you say that it would be advisable, or rather that it is almost imperative, that some fresh roads should be made to enable people to avoid passing the Abattoirs? Yes; it is imperative in building a new bridge to make a new road round the island.

2491. Do you think it would be advisable to build a bridge and agitate for the road afterwards? It is of no use building a bridge if you have not the approaches.

2492. *Mr. Roberts.*] You spoke of the Abattoir traffic as being a traffic by itself? Yes.

2493. Suppose that the Abattoirs should in the near future be removed, would the necessity for a new bridge still exist? Most decidedly. You cannot do without a bridge there for the people of Balmain, Drummoyne, Pennant Hills, Hunter's Hill, and other places.

2494. That is altogether outside the Abattoirs' traffic? Yes; you must have a bridge.

2495. Is it on account of the delay that takes place in reaching the city from Balmain that you advocate the erection of a new bridge? Yes; that is one reason, and the congestion of the traffic on it. There are always a great many meat-carts passing to and fro. I suppose, as a medical man, I am entitled to go first; but you dare not go near them, because if your buggy came into collision with a meat-cart it would not come off best.

2496. Do you know that the present bridge is in a state of decay? It is hardly fit for the traffic.
2497. If even the present bridge were not worn out, you think it is altogether inadequate for the present traffic? It is quite inadequate for the present traffic of the district and the Abattoirs. There is a very large district out there, and it is becoming a very popular drive on a Sunday. A great many carts and traps go out that way. I look upon it as the most charming district in the vicinity of Sydney in the direction of Hunter's Hill, Lane Cove River, and Pennant Hills. But the road has got a bad name because people do not like to go past the Abattoirs; everyone complains of it.
2498. Do you regard the present site of the bridge as being the most convenient for the people of Balmain and the population to the west of Balmain? Yes; I do not mind a little, one way or the other.
2499. Do you prefer that a road should go from Glebe Point to Mullens-street? That would be absurd. Do you mean to go across Rozelle Bay to Glebe Point.
2500. Yes? It is absurd. You might as well say, do away with the bridge, and let us go by Leichhardt and Parramatta-road, and past the University. I should almost prefer to go that way.
2501. *Mr. Farnell.*] You were speaking about a bridge to carry a tramway;—what sort of one would you recommend? The rails could be put across the bridge.
2502. Do you know there was a proposal to get an electric tram? It does not matter what the motive power is as long as they get the stuff away; a light branch railway would do.

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John Musson, Civil Engineer, sworn, and examined:—

2503. *Mr. Roberts.*] Are you acquainted with the proposed scheme to erect a bridge connecting Glebe Island with Pymont? Yes, I am thoroughly acquainted with it. I lived for some years at Glebe Point, close to it.
2504. Have you looked into the plans? I have.
2505. Perhaps you have prepared a statement? I have a short statement, which I will read:—

J. Musson.
9 Sept., 1897.

THE GLEBE ISLAND AND BALMAIN BRIDGE.

THE question under consideration of your Committee is that of rebuilding the bridge to Glebe Island, on which are situated the slaughter-houses from which the city and suburbs on this side of the island are supplied with fresh meat. The said bridge would also carry all the large and increasing traffic to Balmain and the suburbs beyond, over the iron bridges at Iron Cove and the Parramatta River, to Ryde, &c. One great objection to the present route is having to pass close to and in front of the slaughter-houses, which is certainly objectionable, but cannot be avoided with the existing bridge or one to replace it on the same site. The carriage of meat to the city cannot, however, be dispensed with, and provision for that purpose must be provided, and that I propose doing by constructing a bridge at the Glebe Point, and reaching Glebe Island beyond the slaughter-houses. A bridge in that position, suitable for all purposes required of it, would cost very much less than a bridge on the present site, and the maintenance thereof, for reason that it would be much shorter and the foundations less costly, and would not require to be a swing or drawbridge, and involve the constant daily expenses attending thereto. It would also be a great advantage to Blackwattle Bay in not having a drawbridge to pass through.

The interruption to road traffic and possible tram traffic of such a bridge would not only be very great, but dangerous.

By building the bridge on the site I propose all these difficulties are removed, as there is practically no water traffic beyond such site but what could be met by a bridge some 30 feet above water-level; the land at Glebe Point is even higher than that.

I would propose that a causeway of stone be constructed as approaches to the bridge. Such approach to be 3 feet above water, on which piers would be built to support the floor of the bridge; the approach to serve as a wharf. The causeway of the Departmental bridge is 35 feet high.

I propose that a new street or road be constructed from the Glebe Point to the Pymont Bridge Road near the Wentworth Park. The distance is about 40 chains. On such road could be constructed a tramline or railway that would connect Balmain and Glebe Island with the Darling Harbour station, passing under Ultimo by tunnel.

The distance of my proposed route at a point opposite Glebe Point to the Pymont Bridge is nearly 400 yards longer than the present route, but from nearly all the suburbs the distance would be about $\frac{1}{2}$ mile shorter than the existing route; and, considering that those suburbs get nearly all their supply of meat from Glebe Island, the saving of $\frac{1}{2}$ mile is important.

2506. What is the estimated cost of your scheme? I did not go very particularly into it, but the bridge would cost less than what you propose, for the reasons that it would be shorter and the foundations would be easier.

2507. There would be no swing? I do not propose a swing, although there might be a small bascule. The bridge being 30 feet high it would not be required.

2508. You have not gone into the cost of the bridge? The bridge and the approaches to it, roughly speaking, would cost about £35,000. Iron Cove Bridge cost £40,000. On the Blackwattle Bay side of the Glebe Point road there is no parallel road. A proper street is wanted very much from the end of Glebe Point road through to Wentworth Park. I think that a very favourable arrangement could be made there.

2509. Do you think that a connection with Glebe Point would be as convenient for the Balmain people as the present route? I consider that it would be much more so in every respect. By the route I propose they would avoid the Abattoirs; it is very objectionable going that way; the flies attach themselves to your clothes, and you bring away an odour that is not pleasant. Then you cannot very well have a tramway on a bridge that is frequently open to allow vessels to pass, as would be the case by the present route. At Glebe Point there is already a tramway. A tramway or railway could be constructed direct from there to Darling Harbour. On a previous occasion I submitted plans for a railway from Darling Harbour, and that route would carry any locomotive, and cattle could be carried to Glebe Island, and the offal from the island could be removed at night. The route would cross the park and go under Ultimo by a tunnel at a cost of £8,000 or £9,000. I think the scheme would cost altogether to Darling Harbour about £50,000. I have not gone much into details.

2510. In order to form the new street you speak of in your scheme, would it not be necessary to resume certain portions of land? Yes, less than 4 acres.

2511. Is the land to be resumed all built upon? No; the land, according to the opinion of a competent valuator, is worth about £1,500 an acre.

2512. *Mr. Fegan.*] Have you allowed space in the width of the bridge for a tramway? The bridge I propose would be quite sufficient. I would suggest that the bridge be built strong enough for both a railway and the ordinary traffic.

2513. Would £50,000 cover the whole expense? It would go pretty well over it all. The Iron Cove Bridge cost £40,000, and there is the Parramatta River Bridge; I think that the two cost £90,000. A tram could go right up there. It is an easy road throughout, and it would be an immense advantage to Balmain.

PARLIAMENTARY STANDING COMMITTEE ON PUBLIC WORKS.

New Bridge at Glebe Island.

APPENDIX.

A.

[To Evidence of C. W. Darley, Engineer-in-Chief for Public Works.]

COMPARATIVE STATEMENT OF COST.

Sir, Department of Public Works, Engineer-in-Chief's Office, Sydney, 30 August, 1897.
I have now the honour to forward herewith three tabulated statements, showing in detail the calculations on which was based the diagram giving the annual charge and capital values of the three schemes submitted to the Public Works Committee.

I would also add that in the scheme recommended by me at a cost of £84,500 it is possible, when carrying out the work, a saving may be effected in the item of £25,750 allowed for stone in causeway; but no notice has been taken of this in the attached statements.

The Chairman, Public Works Committee.

I have, &c.,
C. W. DARLEY.

GLEBE ISLAND BRIDGE.

Causeway with Steel Swing Span.

Estimated Cost.

Bridge and Causeway	£81,500
Protecting Platforms	3,000

Total £84,500

TOTAL Annual Charge.

Item.	Prime cost.	Interest.		Renewals.	Sinking Fund to provide for removal and renewal of materials.		Maintenance.	Total.
		Rate.	Amount.		Life.	Amount.		
	£	%	£ s. d.	£	Years.	£ s. d.	£ s. d.	£ s. d.
Tram track	350	4	13 4 0	350	12½	22 2 6	.....	35 6 6
Wood-blocking, &c.	1,350	4	54 0 0	2,550	25	61 4 7	.....	115 4 7
W. I., steel, &c., in bridge...	27,620	4	1,104 16 0	27,620	150	3 1 8	.....	1,107 17 8
Piers, dyke, and approaches	52,200	4	2,088 0 0	Infinity.	...	.....	.....	2,088 0 0
Maintenance of approaches	.....	..	.....	.....	...	.....	241 13 0	241 13 0
„ dyke .....	.....	..	.....	.....	...	.....	240 0 0	240 0 0
Painting bridge .....	.....	..	.....	.....	...	.....	125 0 0	125 0 0
Water required for turning	.....	..	.....	.....	...	.....	234 0 0	234 0 0
Wages .....	.....	..	.....	.....	...	.....	500 0 0	500 0 0
Stores, depreciation, &c.....	.....	..	.....	.....	...	.....	84 11 9	84 11 9
Total	£81,500	...	£3,260 0 0	.....	...	£86 8 9	£1,425 4 9	£4,771 13 6
Protecting Platforms.								
Timber	£3,000	4%	£120 0 0	£3,000	Years. 15	£148 6 6	.....	268 6 6
Total annual charge for bridge, dyke, approaches, and protecting platforms								£5,040 0 0
Capital value of annual charge, at 4 per cent.								£126,000.

GLEBE ISLAND BRIDGE.

Timber Design.

Estimated Cost.

Bridge and Approaches	£56,500
Protecting Platforms	3,000
Total	£59,500

TOTAL Annual Charge.

Item.	Prime cost.	Interest.		Renewals.	Sinking Fund to provide for removal and renewal of materials.		Maintenance.	Total.
		Rate.	Amount.		Life.	Amount.		
	£	%	£ s. d.	£	Years.	£ s. d.	£ s. d.	£ s. d.
Tram track	1,050	4	42 0 0	1,100	8	119 7 7	.....	161 7 7
Sawn timber in planking ...	2,950	4	115 0 0	5,650	8	613 3 8	....	731 3 8
Timber in piles, girders, &c.	18,150	4	726 0 0	29,000	25	696 6 11	.....	1,422 6 11
Wrot. and cast iron, steel, &c., in bridge.	15,050	4	602 0 0	15,050	150	1 13 8	.....	603 13 8
Masonry, piers, and approaches.	19,300	4	772 0 0	.....	Infinity	.....	.....	772 0 0
Maintenance of roadway ...	.....	.....	.....	.....	.....	.....	241 13 0	241 13 0
Painting bridge .....	.....	.....	.....	.....	.....	.....	250 0 0	250 0 0
Water required for turning	.....	.....	.....	.....	.....	.....	234 0 0	234 0 0
Wages .....	.....	.....	.....	.....	.....	.....	500 0 0	500 0 0
Stores, interest, depreciation in machinery, &c.	.....	.....	.....	.....	.....	.....	85 8 8	85 8 8
Total.....	£56,500	.....	£2,260 0 0	.....	.....	£1,430 11 10	£1,311 1 8	£5,001 13 6
Protecting Platforms.								
Timber	£3,000	4%	£120 0 0	£3,000	Years. 15	£148 6 6	.....	268 6 6
Total annual charge for bridge, approaches, and protecting platforms								£5,270 0 0

Capital value of annual charge at 4 per cent. £131,750.

GLEBE ISLAND BRIDGE.

Steel Bridge—Tarred Metal Deck.

Estimated Cost.

Bridge and approaches	£89,400
Protecting platforms	3,000
Total	£92,400

TOTAL Annual Charge.

Item.	Prime cost.	Interest.		Renewals.	Sinking Fund to provide for removal and renewal of materials.		Maintenance.	Total.
		Rate.	Amount.		Life.	Amount.		
	£	%	£ s. d.	£	Years.	£ s. d.	£ s. d.	£ s. d.
Tram track	1,050	4	42 0 0	1,100	12½	69 10 9	.....	111 10 9
Planking, tarred metal, &c.	6,200	4	248 0 0	9,920	25	238 4 0	.....	486 4 0
Timber in cross girders, &c.	4,470	4	178 16 0	8,850	25	212 10 1	.....	91 6 1
Steel and wrot. iron in girders, &c.	35,900	4	1,436 0 0	35,900	150	4 0 3	.....	1,440 0 3
Stone piers and approaches	41,780	4	1,671 4 0	nil.	Infinity	.....	.....	1,671 4 0
Maintenance of approaches	.....	.....	.....	.....	.....	.....	241 13 0	241 13 0
" tarred metal	.....	.....	.....	.....	.....	.....	154 19 4	154 19 4
" roadway.	.....	.....	.....	.....	.....	.....	.....	.....
" of asphalt .....	.....	.....	.....	.....	.....	.....	3 19 6	3 19 6
Painting and tarring .....	.....	.....	.....	.....	.....	.....	250 0 0	250 0 0
Water for turning .....	.....	.....	.....	.....	.....	.....	234 0 0	234 0 0
Wages .....	.....	.....	.....	.....	.....	.....	500 0 0	500 0 0
Stores, depreciation, &c. ...	.....	.....	.....	.....	.....	.....	87 10 4	87 10 4
Total	£89,400	.....	£3,576 0 0	£55,770	.....	£524 5 1	£1,471 8 5	£5,571 13 6
Protecting Platforms.								
Timber	£3,000	4%	£120 0 0	£3,000	Years. 15	£148 6 6	.....	268 6 6
Total annual charge for bridge, approaches, and protecting platforms								£5,840 0 0

Capital value of annual charge, at 4 per cent. £146,000.

[Two plans.]

GLEBE ISLAND CONNECTION

Comparative Cost of Design

A. Barlow
Engineer-in-Chief
for Public Works

Design	Stone Causeway Woodblocked Deck	Timber Bridge Timber Deck	Steel Bridge Tarred Metal Deck	Design
PRIME COST	<u>£ 84,500</u>	<u>£ 59,500</u>	<u>£ 92,400</u>	PRIME COST
ANNUAL CHARGE	<u>£ 5,040</u>	<u>£ 5,270</u>	<u>£ 5,840</u>	ANNUAL CHARGE
CAPITAL VALUE OF ANNUAL CHARGE AT 4 %	<u>£ 126,000</u>	<u>£ 131,750</u>	<u>£ 146,000</u>	CAPITAL VALUE OF ANNUAL CHARGE AT 4 %

ITEMS CONSTITUTING ANNUAL CHARGE	Stone Causeway	Timber Bridge	Steel Bridge	ITEMS CONSTITUTING ANNUAL CHARGE
Working Expenses	£ 734	£ 734	£ 734	
Interest	£ 3,380	£ 2,380	£ 3,696	
Renewals	£ 235	£ 1,579	£ 673	
Maintenance	£ 691	£ 577	£ 737	
Total Annual Charge	£ 5,040	£ 5,270	£ 5,840	

Percy Allan
Engineer in Charge
of Bridge Design. 8/2/97

DEPARTMENT OF PUBLIC WORKS
BRIDGES BRANCH

GLEBE ISLAND CAUSEWAY

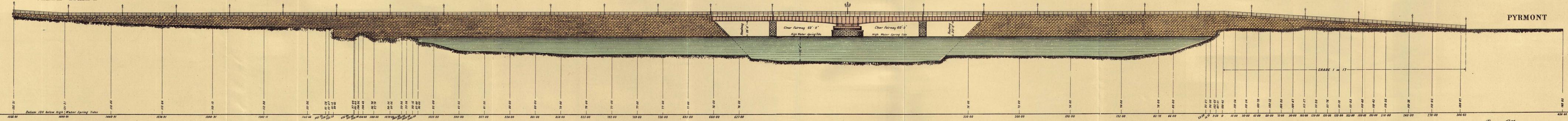
SCALE
FEET 0 10 20 30 40 50 60 70 80 90 100

C. Barstall
P.O. 427
Engineer-in-Chief
for Public Works

GLEBE ISLAND

SWING SPAN

PYRMONT



1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

VACCINATION.

(REPORT FOR 1896.)

Presented to Parliament by Command.

Printed under No. 17 Report from Printing Committee, 26 August, 1897.

The Chief Medical Officer of and Medical Adviser to the Government to The
Principal Under Secretary.

Sir,

Sydney, 14 August, 1897.

I have the honor to forward herewith, for the information of the Chief Secretary, the Annual Returns of Vaccinations performed during the year 1896 by the Government Vaccinators of New South Wales.

The returns show that 951 vaccinations were performed during the year, of which 945 were successful. Of the total number, 78 were performed in Sydney and its suburbs and 867 in country districts. It will be seen that public vaccination was performed in only 13 country districts. In about 100 districts in which there are Government Vaccinators no vaccinations have been reported, and it is presumed that none have been performed.

Of the successful cases, the patients in 60 were under 1 year; in 166 between 1 and 5 years; in 436 between 5 and 10 years; and in 283 upwards of 10 years of age. The unsuccessful cases were 6, or '63 per cent. of the whole number.

The number of births registered in the Colony during 1896 was 36,613, and the vaccinations give a percentage of 2.58 on this number. In addition to vaccinations performed by Government vaccinators, a number are performed by private practitioners; but of these no returns are made. There is reason to believe, however, that these cases would not add very materially to the percentage above given.

The Department continues to supply pure calf-lymph to legally qualified medical practitioners on application to the office. This calf-lymph has up to the present time been procured fortnightly from an establishment in New Zealand, and has been of satisfactory quality.

I have, &c.,

J. ASHBURTON THOMPSON.

RETURN (No. 1) showing the number of Births during the past thirty-six years, and the number of Vaccinations performed by Government Vaccinators during the same period.

Year.	Births.	Vaccinations.	Proportion of Vaccinations to every 100 Births registered.	Year	Births.	Vaccinations.	Proportion of Vaccinations to every 100 Births registered.
1861	14,681	2,349	16.00	1880	28,162	5,029	17.85
1862	15,434	3,155	20.44	1881	28,993	61,239	211.21
1863	15,679	12,970	82.72	1882	29,702	2,188	7.36
1864	16,881	10,696	63.36	1883	31,281	882	2.81
1865	17,283	3,367	48.41	1884	33,946	7,055	20.78
1866	16,950	7,606	44.87	1885	35,043	2,230	6.36
1867	18,317	6,931	37.83	1886	36,284	1,763	4.85
1868	18,485	11,237	60.79	1887	37,236	3,230	8.67
1869	19,243	21,507	111.76	1888	38,525	2,186	5.67
1870	19,648	7,084	36.54	1889	37,295	2,404	6.45
1871	20,143	6,482	32.16	1890	38,960	2,197	5.64
1872	20,250	17,565	86.74	1891	39,458	1,567	3.97
1873	21,444	3,152	14.69	1892	40,041	4,014	10.02
1874	22,178	4,832	21.78	1893	40,342	2,547	6.31
1875	22,528	3,111	13.80	1894	38,952	1,957	5.02
1876	23,298	4,361	18.71	1895	38,715	2,437	6.29
1877	23,851	16,881	70.77	1896	36,613	945	2.59
1878	25,328	3,512	13.86				
1879	26,938	5,569	20.67	Total ...	988,102	258,821	26.19

RETURN (No. 2) showing the number of Persons Vaccinated by the Government Vaccinators in the Colony of New South Wales during the year 1896.

Districts.	Under 1 year of age.				From 1 to 5 years.				From 5 to 10 years.				From 10 years upwards.				Total.			
	Males.	Females.	Total.	Successful.	Males.	Females.	Total.	Successful.	Males.	Females.	Total.	Successful.	Males.	Females.	Total.	Successful.	Males.	Females.	Total.	Successful.
Sydney and Suburbs :-																				
Sydney	6	..	5	5	5	0	11	11	4	2	6	6	3	1	4	4	17	9	26	26
Sydney North .....	..	..	..	..	2	5	7	7	20	8	28	28	12	5	17	17	34	18	52	52
	5	..	5	5	7	11	18	18	24	10	34	34	15	6	21	21	51	27	78	78
Country Districts :-																				
Bega	1	2	3	3	4	5	9	9	4	6	9	9	6	4	10	10	15	16	31	31
Broken Hill	27	20	47	47	9	5	14	14	3	3	6	6	1	1	2	2	40	25	65	65
Candelo .....	..	..	..	..	5	5	10	10	7	7	14	14	7	15	22	22	19	27	46	46
Cooma .....	..	..	..	..	3	2	5	5	5	4	9	8	1	5	6	5	9	11	20	18
Cowra .....	..	..	..	..	1	1	2	1	4	3	7	6	6	5	11	8	11	6	17	13
Dubbo .....	..	1	1	1	26	27	53	53	100	71	171	171	48	61	109	109	174	160	334	334
Emuvallo	1	..	1	1	3	4	7	7	3	2	5	5	..	1	1	1	7	7	14	14
Inverell .....	..	..	..	..	3	1	4	4	2	1	3	3	1	5	6	6	3	7	10	10
Kempsey, West .....	..	..	..	..	..	..	..	..	8	4	12	12	2	4	6	6	10	6	16	16
Narramine	1	..	1	1	7	13	20	20	16	17	33	33	7	14	21	21	31	44	75	75
Orange .....	..	..	..	..	9	5	14	14	14	15	29	29	7	14	21	21	30	27	57	57
Tennora .....	..	..	..	..	2	8	10	10	54	44	98	98	33	29	62	62	89	81	170	170
Wallsend	1	1	2	2	2	2	4	4	5	6	11	11	1	1	2	2	8	10	18	18
	31	24	55	55	71	78	149	148	225	179	404	402	119	146	265	262	446	427	873	867
Summary :-																				
Sydney and Suburbs	5	..	5	5	7	11	18	18	24	10	34	34	15	16	31	31	51	27	78	78
Country Districts	31	24	55	55	71	78	149	148	225	179	404	402	119	146	265	262	446	427	873	867
	36	24	60	60	78	89	167	166	249	189	438	436	134	162	296	293	497	464	961	946

RETURN (No. 3) showing the number of Persons Vaccinated by the Government Vaccinators in the Colony of New South Wales during the year 1895, which was received too late to be included in the Return for that year.

Districts.	Under 1 year of age.				From 1 to 5 years.				From 5 to 10 years.				From 10 years upwards.				Total.			
	Males.	Females.	Total.	Successful.	Males.	Females.	Total.	Successful.	Males.	Females.	Total.	Successful.	Males.	Females.	Total.	Successful.	Males.	Females.	Total.	Successful.
Inverell	3	..	3	3	3	1	4	4	..	..	..	..	6	1	7	7
Rylstone	1	..	1	1	..	..	..	..	..	..	..	..	1	..	1	1
	4	..	4	4	3	1	4	4	..	..	..	..	7	1	8	8

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

TYPHOID FEVER IN SYDNEY AND SUBURBS.

(FROM 1876 TO 1895, INCLUSIVE.)

AND CERTAIN PARTICULARS RESPECTING OTHER INFECTIOUS DISEASES, VIZ.: MEASLES, SCARLET FEVER, AND DIPHTHERIA.

Printed under No. 20 Report from Printing Committee, 28th October, 1897.

The President of the Board of Health to The Principal Under Secretary.

Sir,

Board of Health Office, Sydney, 1 October, 1897.

I have the honor to forward to you, for the information of the Chief Secretary, the enclosed tables on the occurrence of Typhoid Fever and the mortality therefrom in the City of Sydney and Suburbs during the last twenty years, and certain particulars respecting other infectious diseases, prepared from the records in this office.

I have, &c.,

J. ASHBURTON THOMPSON.

RETURN I.

Typhoid Fever—1876 to 1885.

RETURN showing the number of Deaths from Typhoid Fever in the City of Sydney and its Suburbs for each month of the years 1876 to 1885—giving the death-rate per 100,000 for each month.

Year.....	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.
Estimated population on the 30th June of each year.....	167,141	174,249	182,389	192,829	213,316	227,653	237,908	250,803	267,194	282,845
January.....	{ No. of deaths 4	{ No. of deaths 6	{ No. of deaths 14	{ No. of deaths 5	{ No. of deaths 11	{ No. of deaths 9	{ No. of deaths 10	{ No. of deaths 10	{ No. of deaths 22	{ No. of deaths 22
	{ Rate per 100,000 2.39	{ Rate per 100,000 3.44	{ Rate per 100,000 7.65	{ Rate per 100,000 2.59	{ Rate per 100,000 5.15	{ Rate per 100,000 3.95	{ Rate per 100,000 4.20	{ Rate per 100,000 3.99	{ Rate per 100,000 8.23	{ Rate per 100,000 7.78
February.....	{ No. of deaths 5	{ No. of deaths 8	{ No. of deaths 11	{ No. of deaths 15	{ No. of deaths 7	{ No. of deaths 15	{ No. of deaths 19	{ No. of deaths 17	{ No. of deaths 19	{ No. of deaths 31
	{ Rate per 100,000 2.99	{ Rate per 100,000 4.59	{ Rate per 100,000 6.01	{ Rate per 100,000 7.78	{ Rate per 100,000 3.28	{ Rate per 100,000 6.59	{ Rate per 100,000 7.98	{ Rate per 100,000 6.78	{ Rate per 100,000 7.11	{ Rate per 100,000 10.95
March.....	{ No. of deaths 16	{ No. of deaths 12	{ No. of deaths 19	{ No. of deaths 16	{ No. of deaths 5	{ No. of deaths 14	{ No. of deaths 13	{ No. of deaths 10	{ No. of deaths 33	{ No. of deaths 34
	{ Rate per 100,000 9.57	{ Rate per 100,000 6.88	{ Rate per 100,000 10.38	{ Rate per 100,000 8.30	{ Rate per 100,000 2.34	{ Rate per 100,000 6.15	{ Rate per 100,000 5.46	{ Rate per 100,000 3.99	{ Rate per 100,000 12.35	{ Rate per 100,000 12.02
April.....	{ No. of deaths 12	{ No. of deaths 16	{ No. of deaths 20	{ No. of deaths 18	{ No. of deaths 10	{ No. of deaths 8	{ No. of deaths 19	{ No. of deaths 18	{ No. of deaths 33	{ No. of deaths 33
	{ Rate per 100,000 7.18	{ Rate per 100,000 9.18	{ Rate per 100,000 10.93	{ Rate per 100,000 9.33	{ Rate per 100,000 4.63	{ Rate per 100,000 3.51	{ Rate per 100,000 7.93	{ Rate per 100,000 7.18	{ Rate per 100,000 12.35	{ Rate per 100,000 11.66
May.....	{ No. of deaths 9	{ No. of deaths 14	{ No. of deaths 26	{ No. of deaths 14	{ No. of deaths 8	{ No. of deaths 11	{ No. of deaths 32	{ No. of deaths 34	{ No. of deaths 22	{ No. of deaths 34
	{ Rate per 100,000 5.38	{ Rate per 100,000 8.03	{ Rate per 100,000 14.21	{ Rate per 100,000 7.26	{ Rate per 100,000 3.75	{ Rate per 100,000 4.83	{ Rate per 100,000 13.45	{ Rate per 100,000 13.55	{ Rate per 100,000 8.23	{ Rate per 100,000 12.02
June.....	{ No. of deaths 11	{ No. of deaths 20	{ No. of deaths 12	{ No. of deaths 13	{ No. of deaths 8	{ No. of deaths 9	{ No. of deaths 23	{ No. of deaths 21	{ No. of deaths 18	{ No. of deaths 31
	{ Rate per 100,000 6.59	{ Rate per 100,000 11.47	{ Rate per 100,000 6.56	{ Rate per 100,000 6.74	{ Rate per 100,000 3.75	{ Rate per 100,000 3.95	{ Rate per 100,000 9.67	{ Rate per 100,000 8.37	{ Rate per 100,000 6.74	{ Rate per 100,000 10.95
July.....	{ No. of deaths 3	{ No. of deaths 6	{ No. of deaths 18	{ No. of deaths 9	{ No. of deaths 6	{ No. of deaths 2	{ No. of deaths 17	{ No. of deaths 11	{ No. of deaths 8	{ No. of deaths 20
	{ Rate per 100,000 1.80	{ Rate per 100,000 3.44	{ Rate per 100,000 9.84	{ Rate per 100,000 4.67	{ Rate per 100,000 2.11	{ Rate per 100,000 0.88	{ Rate per 100,000 7.15	{ Rate per 100,000 4.38	{ Rate per 100,000 3.00	{ Rate per 100,000 7.07
August.....	{ No. of deaths 4	{ No. of deaths 2	{ No. of deaths 13	{ No. of deaths 3	{ No. of deaths 8	{ No. of deaths 10	{ No. of deaths 10	{ No. of deaths 3	{ No. of deaths 4	{ No. of deaths 14
	{ Rate per 100,000 2.39	{ Rate per 100,000 1.15	{ Rate per 100,000 7.10	{ Rate per 100,000 1.56	{ Rate per 100,000 3.75	{ Rate per 100,000 4.39	{ Rate per 100,000 4.20	{ Rate per 100,000 1.19	{ Rate per 100,000 1.50	{ Rate per 100,000 4.96
September.....	{ No. of deaths 1	{ No. of deaths 1	{ No. of deaths 9	{ No. of deaths 6	{ No. of deaths 8	{ No. of deaths 5	{ No. of deaths 8	{ No. of deaths 5	{ No. of deaths 12	{ No. of deaths 12
	{ Rate per 100,000 0.60	{ Rate per 100,000 0.57	{ Rate per 100,000 4.92	{ Rate per 100,000 3.11	{ Rate per 100,000 3.75	{ Rate per 100,000 2.19	{ Rate per 100,000 3.36	{ Rate per 100,000 2.00	{ Rate per 100,000 4.50	{ Rate per 100,000 4.24
October.....	{ No. of deaths 3	{ No. of deaths 4	{ No. of deaths 7	{ No. of deaths 2	{ No. of deaths 4	{ No. of deaths 7	{ No. of deaths 9	{ No. of deaths 10	{ No. of deaths 10	{ No. of deaths 17
	{ Rate per 100,000 1.80	{ Rate per 100,000 2.29	{ Rate per 100,000 3.83	{ Rate per 100,000 1.03	{ Rate per 100,000 1.87	{ Rate per 100,000 3.07	{ Rate per 100,000 3.78	{ Rate per 100,000 3.99	{ Rate per 100,000 3.74	{ Rate per 100,000 6.01
November.....	{ No. of deaths 4	{ No. of deaths 3	{ No. of deaths 6	{ No. of deaths 5	{ No. of deaths 11	{ No. of deaths 1	{ No. of deaths 5	{ No. of deaths 11	{ No. of deaths 12	{ No. of deaths 15
	{ Rate per 100,000 2.39	{ Rate per 100,000 1.72	{ Rate per 100,000 3.28	{ Rate per 100,000 2.39	{ Rate per 100,000 5.15	{ Rate per 100,000 0.44	{ Rate per 100,000 2.10	{ Rate per 100,000 4.38	{ Rate per 100,000 4.50	{ Rate per 100,000 5.30
December.....	{ No. of deaths 5	{ No. of deaths 11	{ No. of deaths 11	{ No. of deaths 9	{ No. of deaths 7	{ No. of deaths 4	{ No. of deaths 10	{ No. of deaths 16	{ No. of deaths 21	{ No. of deaths 26
	{ Rate per 100,000 2.99	{ Rate per 100,000 6.31	{ Rate per 100,000 6.01	{ Rate per 100,000 4.67	{ Rate per 100,000 3.28	{ Rate per 100,000 1.76	{ Rate per 100,000 4.20	{ Rate per 100,000 6.38	{ Rate per 100,000 7.85	{ Rate per 100,000 9.19
TOTAL.....	{ No. of deaths 77	{ No. of deaths 103	{ No. of deaths 164	{ No. of deaths 115	{ No. of deaths 93	{ No. of deaths 95	{ No. of deaths 175	{ No. of deaths 166	{ No. of deaths 214	{ No. of deaths 289
	{ Rate per 100,000 46.07	{ Rate per 100,000 59.11	{ Rate per 100,000 90.76	{ Rate per 100,000 59.63	{ Rate per 100,000 43.60	{ Rate per 100,000 41.74	{ Rate per 100,000 73.55	{ Rate per 100,000 66.18	{ Rate per 100,000 80.09	{ Rate per 100,000 102.17

RETURN II.

Typhoid Fever—1886 to 1895.

RETURN showing the number of Deaths from Typhoid Fever in the City of Sydney and its Suburbs for each month of the years 1886 to 1895—giving the death-rate per 100,000 for each month.

Year	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.
Estimated population on the 30th June of each year	323,180	340,702	357,556	374,755	390,000	386,860*	406,480	413,370	422,315	406,000
January	{ No. of deaths 33 Rate per 100,000 10·21	{ No. of deaths 24 Rate per 100,000 7·05	{ No. of deaths 14 Rate per 100,000 3·91	{ No. of deaths 21 Rate per 100,000 5·60	{ No. of deaths 23 Rate per 100,000 5·90	{ No. of deaths 20 Rate per 100,000 5·17	{ No. of deaths 10 Rate per 100,000 2·46	{ No. of deaths 9 Rate per 100,000 2·16	{ No. of deaths 21 Rate per 100,000 4·97	{ No. of deaths 13 Rate per 100,000 3·20
February	{ No. of deaths 44 Rate per 100,000 13·61	{ No. of deaths 24 Rate per 100,000 7·05	{ No. of deaths 24 Rate per 100,000 6·71	{ No. of deaths 21 Rate per 100,000 5·60	{ No. of deaths 30 Rate per 100,000 7·69	{ No. of deaths 13 Rate per 100,000 3·36	{ No. of deaths 9 Rate per 100,000 2·21	{ No. of deaths 6 Rate per 100,000 1·44	{ No. of deaths 18 Rate per 100,000 4·26	{ No. of deaths 11 Rate per 100,000 2·70
March	{ No. of deaths 41 Rate per 100,000 12·68	{ No. of deaths 39 Rate per 100,000 11·44	{ No. of deaths 21 Rate per 100,000 5·87	{ No. of deaths 31 Rate per 100,000 8·27	{ No. of deaths 23 Rate per 100,000 5·90	{ No. of deaths 15 Rate per 100,000 3·88	{ No. of deaths 15 Rate per 100,000 3·69	{ No. of deaths 8 Rate per 100,000 1·92	{ No. of deaths 11 Rate per 100,000 2·60	{ No. of deaths 8 Rate per 100,000 1·97
April	{ No. of deaths 41 Rate per 100,000 12·68	{ No. of deaths 17 Rate per 100,000 4·59	{ No. of deaths 28 Rate per 100,000 7·82	{ No. of deaths 36 Rate per 100,000 9·61	{ No. of deaths 21 Rate per 100,000 5·38	{ No. of deaths 14 Rate per 100,000 3·62	{ No. of deaths 12 Rate per 100,000 2·95	{ No. of deaths 11 Rate per 100,000 2·64	{ No. of deaths 13 Rate per 100,000 3·07	{ No. of deaths 8 Rate per 100,000 1·97
May	{ No. of deaths 42 Rate per 100,000 12·99	{ No. of deaths 26 Rate per 100,000 7·63	{ No. of deaths 21 Rate per 100,000 5·87	{ No. of deaths 20 Rate per 100,000 5·34	{ No. of deaths 1 Rate per 100,000 0·26	{ No. of deaths 10 Rate per 100,000 2·58	{ No. of deaths 8 Rate per 100,000 1·97	{ No. of deaths 11 Rate per 100,000 2·64	{ No. of deaths 2 Rate per 100,000 0·47	{ No. of deaths 5 Rate per 100,000 1·23
June	{ No. of deaths 23 Rate per 100,000 7·11	{ No. of deaths 12 Rate per 100,000 3·52	{ No. of deaths 15 Rate per 100,000 4·19	{ No. of deaths 23 Rate per 100,000 6·14	{ No. of deaths 7 Rate per 100,000 1·79	{ No. of deaths 6 Rate per 100,000 1·55	{ No. of deaths 1 Rate per 100,000 0·25	{ No. of deaths 6 Rate per 100,000 1·44	{ No. of deaths 11 Rate per 100,000 2·60	{ No. of deaths 6 Rate per 100,000 1·47
July	{ No. of deaths 19 Rate per 100,000 5·87	{ No. of deaths 7 Rate per 100,000 2·05	{ No. of deaths 9 Rate per 100,000 2·51	{ No. of deaths 16 Rate per 100,000 4·27	{ No. of deaths 3 Rate per 100,000 0·77	{ No. of deaths 4 Rate per 100,000 1·03	{ No. of deaths 6 Rate per 100,000 1·47	{ No. of deaths 2 Rate per 100,000 0·48	{ No. of deaths 3 Rate per 100,000 0·71	{ No. of deaths 2 Rate per 100,000 0·49
August	{ No. of deaths 8 Rate per 100,000 2·47	{ No. of deaths 6 Rate per 100,000 1·76	{ No. of deaths 9 Rate per 100,000 2·51	{ No. of deaths 2 Rate per 100,000 0·54	{ No. of deaths 10 Rate per 100,000 2·56	{ No. of deaths 3 Rate per 100,000 0·78	.....	.....	{ No. of deaths 2 Rate per 100,000 0·47	{ No. of deaths 2 Rate per 100,000 0·49
September	{ No. of deaths 5 Rate per 100,000 1·54	{ No. of deaths 8 Rate per 100,000 2·35	{ No. of deaths 7 Rate per 100,000 1·96	{ No. of deaths 5 Rate per 100,000 1·33	{ No. of deaths 1 Rate per 100,000 0·26	{ No. of deaths 4 Rate per 100,000 1·03	{ No. of deaths 1 Rate per 100,000 0·25	{ No. of deaths 4 Rate per 100,000 0·96	{ No. of deaths 9 Rate per 100,000 2·13	{ No. of deaths 2 Rate per 100,000 0·49
October	{ No. of deaths 6 Rate per 100,000 1·85	{ No. of deaths 10 Rate per 100,000 2·94	{ No. of deaths 3 Rate per 100,000 0·84	{ No. of deaths 7 Rate per 100,000 1·87	{ No. of deaths 4 Rate per 100,000 1·03	{ No. of deaths 2 Rate per 100,000 0·52	{ No. of deaths 3 Rate per 100,000 0·74	{ No. of deaths 4 Rate per 100,000 0·96	{ No. of deaths 5 Rate per 100,000 1·18	{ No. of deaths 4 Rate per 100,000 0·98
November	{ No. of deaths 7 Rate per 100,000 2·16	{ No. of deaths 11 Rate per 100,000 3·23	{ No. of deaths 7 Rate per 100,000 1·96	{ No. of deaths 6 Rate per 100,000 1·60	{ No. of deaths 10 Rate per 100,000 2·56	{ No. of deaths 6 Rate per 100,000 1·55	{ No. of deaths 6 Rate per 100,000 1·47	{ No. of deaths 5 Rate per 100,000 1·20	{ No. of deaths 7 Rate per 100,000 1·65	{ No. of deaths 4 Rate per 100,000 0·98
December	{ No. of deaths 25 Rate per 100,000 7·73	{ No. of deaths 14 Rate per 100,000 4·10	{ No. of deaths 26 Rate per 100,000 7·26	{ No. of deaths 21 Rate per 100,000 5·60	{ No. of deaths 10 Rate per 100,000 2·56	{ No. of deaths 12 Rate per 100,000 3·10	{ No. of deaths 8 Rate per 100,000 1·97	{ No. of deaths 10 Rate per 100,000 2·40	{ No. of deaths 21 Rate per 100,000 4·97	{ No. of deaths 16 Rate per 100,000 3·94
TOTAL.....	{ No. of deaths 294 Rate per 100,000 90·90	{ No. of deaths 198 Rate per 100,000 58·11	{ No. of deaths 184 Rate per 100,000 51·42	{ No. of deaths 209 Rate per 100,000 55·77	{ No. of deaths 143 Rate per 100,000 36·66	{ No. of deaths 109 Rate per 100,000 28·17	{ No. of deaths 79 Rate per 100,000 19·43	{ No. of deaths 76 Rate per 100,000 18·01	{ No. of deaths 123 Rate per 100,000 29·12	{ No. of deaths 81 Rate per 100,000 19·95

* Census population taken 5 April, 1891.

RETURN III.

Typhoid Fever—1886 to 1895.

RETURN of Patients suffering from Typhoid Fever admitted to the Metropolitan Hospitals of Sydney during the years 1886 to 1895, showing the Deaths occurring in, and the number of cases admitted to, each Institution during each month.

1886.

Months	Coast.		Prince Alfred		Sydney.		St. Vincent's.		Children's		Total.	
	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.
January	48	6	20	9	16	2	9	4	2	..	95	21
February	60	9	16	2	10	6	8	..	3	..	97	17
March	47	7	31	3	9	3	12	..	5	1	104	14
April	80	10	23	3	13	2	15	4	7	..	138	19
May	61	8	22	3	13	2	7	3	5	..	108	16
June	31	5	19	3	13	1	3	..	1	..	67	9
July	14	5	10	2	2	2	3	..	2	..	31	9
August	1	..	7	2	1	..	2	..	1	..	12	2
September	10	..	9	2	7	2	3	..	1	..	30	4
October	6	2	6	..	7	1	2	..	2	..	23	3
November	13	1	12	1	10	2	11	..	1	..	47	4
December	29	3	22	4	7	1	4	2	..	..	62	10
Total for the year	400	56	197	34	108	24	79	13	30	1	814	128
Death-rate on cases admitted	14·00%		17·26%		22·22%		16·45%		3·33%		15·72%	

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RETURN III—continued.

1887.

Months.	Coast.		Prince Alfred.		Sydney.		St. Vincent's.		Children's.		Total.	
	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.
January	50	6	25	1	8	2	8	4	...	...	91	13
February	42	8	22	6	5	1	16	...	2	...	87	15
March	48	6	17	5	18	2	8	4	6	...	97	17
April	54	6	17	1	18	2	8	...	7	...	104	9
May	37	2	9	1	3	2	6	...	2	1	67	6
June	11	...	7	1	3	...	...	...	2	...	23	1
July	6	1	9	1	...	...	...	...	...	...	15	2
August	3	...	8	...	6	1	1	...	...	...	18	1
September	5	1	6	2	4	...	...	...	...	...	15	3
October	11	3	17	2	3	1	6	...	...	...	37	6
November	7	2	9	3	1	1	3	1	...	...	20	7
December	12	1	15	...	3	...	3	...	1	...	34	1
Total for the year	286	36	161	23	72	12	59	9	20	1	598	81
Death-rate on cases admitted	12.59%		14.28%		16.66%		15.25%		5.00%		13.54%	

1888.

Months.	Coast.		Prince Alfred.		Sydney.		St. Vincent's.		Children's.		Total.	
	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.
January	32	1	22	3	7	1	7	1	...	...	68	6
February	30	1	20	5	16	5	17	2	1	...	84	13
March	44	2	23	2	12	...	12	...	3	...	96	4
April	34	1	22	3	18	6	22	1	4	...	100	11
May	24	2	30	6	11	3	9	3	5	1	79	15
June	18	2	15	6	6	1	7	...	...	...	46	9
July	5	...	8	2	3	...	4	...	...	...	20	2
August	2	...	4	...	2	...	3	...	2	...	13	...
September	5	...	1	...	1	2	...	...	...	1	7	3
October	6	1	2	...	3	...	...	...	...	...	11	1
November	14	...	16	1	6	...	5	1	2	...	43	2
December	27	3	32	12	12	1	7	...	3	...	81	16
Total for the year	241	13	195	40	97	19	93	8	22	2	648	82
Death-rate on cases admitted	5.39%		20.51%		19.58%		8.60%		9.09%		12.65%	

1889.

Months.	Coast.		Prince Alfred.		Sydney.		St. Vincent's.		Children's.		Total.	
	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.
January	31	2	30	3	10	2	22	1	5	...	98	8
February	43	2	21	3	12	2	17	2	6	1	99	10
March	41	2	43	8	14	2	17	2	4	1	116	15
April	65	4	37	3	17	5	18	1	2	...	139	13
May	33	4	20	3	19	3	4	...	2	...	78	10
June	41	5	19	5	9	1	15	...	5	...	89	11
July	22	2	5	1	5	2	4	...	...	...	36	5
August	7	...	2	1	5	1	3	...	1	...	18	2
September	4	...	2	...	3	2	2	...	1	...	12	2
October	4	...	6	...	3	...	5	...	...	...	20	...
November	3	...	12	...	4	2	10	...	1	...	35	2
December	44	3	36	4	10	2	19	1	2	...	111	10
Total for the year	343	24	232	31	111	24	136	7	20	2	851	88
Death-rate on cases admitted	7.00%		13.36%		21.62%		5.15%		6.90%		10.34%	

RETURN III—continued.

1890.

Months.	Coast.		Prince Alfred.		Sydney.		St. Vincent's.		Children's.		Total.	
	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.
January	37	7	31	4	4	2	17	5	4	...	103	13
February	24	7	24	2	14	1	7	...	1	1	70	11
March	36	5	20	2	14	3	25	2	6	...	101	12
April	23	2	10	2	8	2	13	5	4	...	58	11
May	6	...	6	...	3	...	6	...	1	...	22	...
June	2	...	5	1	6	1	2	...	...	...	15	2
July .....	...	...	3	...	3	2	...	...	...	...	6	2
August	1	...	1	...	2	...	...	...	...	...	4	...
September .....	...	...	3	...	2	...	...	...	...	...	5	...
October	2	...	2	...	5	1	1	...	...	...	10	1
November	3	...	6	3	11	...	2	...	1	...	23	3
December	6	...	15	2	13	4	4	...	...	...	38	6
Total for the year	140	21	126	16	95	16	77	12	17	1	455	66
Death-rate on cases admitted	15.00%		12.70%		16.84%		15.58%		5.88%		14.50%	

1891.

Months.	Coast.		Prince Alfred.		Sydney.		St. Vincent's.		Children's, Glebe.		Children's, Lewisham.		Total.	
	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.
January	15	2	8	3	9	3	5	...	2	...	6	...	45	8
February	15	1	7	2	2	2	4	...	4	...	5	3	45	8
March	17	2	20	5	7	2	10	...	5	...	3	...	62	9
April	6	...	15	2	4	2	6	...	1	...	2	...	34	4
May	10	...	13	1	5	...	4	3	...	...	2	...	34	4
June	3	...	2	...	...	...	1	...	2	...	2	...	10	...
July	3	...	2	1	1	...	3	...	...	...	...	...	10	1
August	2	...	3	...	2	1	...	...	...	...	...	...	7	1
September	2	...	1	...	...	...	3	1	...	...	...	...	6	1
October .....	...	...	1	...	1	...	...	...	...	...	...	...	2	...
November	4	...	3	1	...	...	2	1	...	...	...	...	9	2
December	11	2	5	1	6	1	4	2	...	...	...	...	26	6
Total for the year	88	7	81	16	44	11	42	7	14	...	21	3	290	44
Death-rate on cases admitted	7.95%		19.75%		25.00%		16.66%		.....		14.28%		15.17%	

1892.

Months.	Coast.		Prince Alfred.		Sydney.		St. Vincent's.		Children's Glebe.		Total.	
	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.
January	5	...	11	2	4	3	5	...	...	...	25	5
February	9	2	9	3	2	...	6	...	2	...	28	5
March	13	3	16	3	6	...	4	1	2	1	41	3
April	9	1	8	2	3	...	3	...	...	1	23	4
May	4	1	9	3	5	...	5	...	1	...	23	4
June	3	...	8	...	6	...	2	...	...	...	19	...
July	4	1	2	1	7	...	2	1	1	...	16	3
August .....	...	...	3	...	2	...	...	...	...	...	5	...
September .....	...	...	...	...	...	...	1	...	...	...	1	...
October	5	...	3	...	1	...	...	...	...	...	9	...
November	5	...	5	2	3	...	2	...	...	...	15	2
December	4	1	9	...	4	...	7	...	...	...	24	1
Total for year	61	9	83	16	43	3	36	2	6	2	229	32
Death-rate on cases admitted	14.75%		19.27%		6.97%		5.55%		13.33%		13.97%	

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RETURN III—*continued.*

1893.

Months.	Coast.		Prince Alfred.		Sydney.		St. Vincent's.		Children's.		Total.	
	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.
January	12	...	12	1	3	...	1	...	1	...	29	1
February	9	3	11	...	2	...	1	...	...	...	23	3
March	14	3	13	1	2	...	4	...	1	...	34	4
April	12	1	13	4	3	...	6	2	1	...	35	7
May	7	...	10	2	4	1	5	...	...	...	26	3
June .....	...	...	7	1	...	...	4	1	...	...	11	2
July	4	...	2	1	4	...	...	...	1	...	11	1
August	6	1	2	...	...	...	1	...	...	...	9	1
September .....	...	...	...	...	...	...	...	...	1	...	1	...
October .....	...	...	...	...	2	1	1	...	...	...	3	1
November	3	1	4	...	3	...	2	...	...	...	12	1
December	16	2	14	3	4	...	5	...	3	1	42	6
Total for the year	83	11	88	13	27	2	30	3	8	1	236	30
Death-rate on cases admitted	13.25 %		14.77 %		7.40 %		10.00 %		12.50 %		12.71 %	

1894.

Months.	Coast.		Prince Alfred.		Sydney.		St. Vincent's.		Children's.		Total.	
	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.
January	22	3	29	5	8	1	9	1	2	...	70	10
February	30	4	35	...	7	2	3	1	3	2	83	9
March	15	1	21	1	3	1	5	...	7	...	56	3
April	22	1	15	1	5	2	6	3	2	...	50	7
May	13	...	17	...	7	...	5	1	3	...	45	1
June	4	1	10	4	3	1	2	2	2	...	21	3
July	1	...	...	...	5	1	...	...	2	...	8	1
August .....	...	...	1	...	2	2	...	...	...	...	3	2
September	5	...	2	1	4	2	2	...	2	...	15	3
October	3	...	3	1	4	...	1	...	...	...	11	1
November	8	1	15	1	7	1	2	...	2	...	34	3
December	20	...	41	5	10	4	5	3	4	...	80	12
Total for the year	143	11	189	19	70	17	45	11	34	2	491	60
Death-rate on cases admitted	7.69 %		10.05 %		24.28 %		24.44 %		5.88 %		12.47 %	

1895.

Months.	Coast.		Prince Alfred.		Sydney.		St. Vincent's.		Children's.		Total.	
	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.
January	19	1	32	3	6	2	6	1	7	1	70	8
February	16	2	23	2	7	1	1	...	6	1	62	6
March	15	1	13	1	6	1	...	...	3	...	37	3
April	7	1	21	3	5	...	4	...	6	...	43	4
May	1	...	11	1	4	...	2	...	2	...	20	1
June	4	...	6	1	3	...	2	...	2	...	17	1
July .....	...	...	1	...	2	...	...	...	1	...	4	...
August	6	...	2	...	2	1	...	...	1	...	11	1
September	3	...	4	...	6	...	...	...	2	...	15	...
October	6	...	3	1	5	...	2	...	...	...	16	1
November	9	1	13	...	4	2	...	...	...	...	26	3
December	11	...	18	2	12	4	3	...	1	...	45	6
Total for the year	96	6	147	14	62	11	20	1	31	2	356	34
Death-rate on cases admitted	6.25 %		9.52 %		17.74 %		5.00 %		6.45 %		9.55 %	

RETURN IV.

RETURN showing the number of Persons suffering from Typhoid Fever who were removed to the Metropolitan Hospitals for treatment, from each district of the Metropolis, during the year 1895.

Districts.	Estimated Mean Population, 1895.	Coast.	Prince Alfred.	Sydney.	Saint Vincent's.	Children's, Glebe.	Total.	Total of District.	Cases per 10,000 of population.
SYDNEY	100,000	22	7	34	9	7	79	79	7.90
SUBURBS—									
North-Western.	Balmain	8	5	3	1	17	58	9.27
	Leichhardt	5	18	1	.....	2	26	
	Annandale .....	.....	6	.....	.....	1	7
West Central.	Glebe	1	6	2	8	81	21.31
	Newtown	7	27	.....	.....	3	37
	St. Peter's	2	7	.....	.....	3	12
East Central.	Camperdown	2	8	1	11	40	8.27
	Erskineville	9	10	1	.....	1	21	
	Redfern	5	8	2	.....	.....	15
Eastern	Darlington	1	1	13	2.69
	Waterloo	2	.....	1	.....	1	4
	Alexandria	8	3	.....	.....	.....	11
Western	North Botany	2	1	3	44	7.48
	Botany	5	.....	1	.....	.....	6
	Paddington .....	.....	2	1	.....	.....	3
Southern	Randwick	1	1	2	2	1.21
	Waverley	2	1	.....	1	.....	4
	Woolahra	1	.....	3	.....	.....	4
North Shore	Ashfield	7	1	1	9	14	4.16
	Burwood .....	.....	2	.....	.....	.....	2
	Enfield .....	.....	1	.....	.....	.....	1
Western	Five Dock	2	3	5	44	7.48
	Marrickville .....	.....	9	1	1	4	15	
	Petersham	3	5	.....	2	.....	10
Southern	Parramatta	1	1	2	1.21
	Strathfield .....	.....	1	.....	.....	.....	1
	Canterbury .....	.....	1	.....	.....	.....	1
North Shore	Rockdale	1	1	14	4.16
	North Sydney .....	.....	.....	1	.....	.....	1
	Hunter's Hill .....	.....	2	.....	1	4	7
North Shore	Ryde	1	2	3	14	4.16
	Willoughby .....	.....	1	2	.....	.....	3
CONTRACTED AT HOSPITAL	2	2	4	4
BILOELA GAOL	1	1	1
SHIPPING	1	7	4	12	12
UNKNOWN	1	1	1
TOTALS	406,000	93	145	61	19	31	349	349	8.59

Of the remaining 7 cases admitted, 1 came from a district outside the Metropolitan Division, and 6 had no fixed abode.

RETURN V.

RETURN showing the number of Persons suffering from Typhoid Fever who were removed to the Metropolitan Hospitals from each district of the Metropolis, and whose cases terminated fatally, during the year 1895.

Districts.	Coast.	Prince Alfred.	Sydney.	Saint Vincent's.	Children's.	Total.	Total of District.
SYDNEY	1	3	8	1	.....	13	13
SUBURBS—							
North-Western.	Balmain	1	.....	.....	.....	1	5
	Leichhardt	1	1	.....	.....	1	
	Glebe .....	.....	1	.....	.....	1	
West Central.	Newtown	1	.....	.....	.....	1	4
	Camperdown	1	.....	.....	.....	1	
	Erskineville .....	.....	1	.....	.....	1	
East Central.	Redfern .....	.....	1	.....	.....	1	3
	Botany	1	.....	1	.....	2	
Eastern	Woolahra .....	.....	.....	1	.....	1	1
Western	Ashfield .....	.....	1	.....	.....	1	3
	Five Dock .....	.....	2	.....	.....	2	
North Shore	Hunter's Hill .....	.....	1	.....	.....	1	2
	Ryde .....	.....	1	.....	.....	1	
BILOELA GAOL	1	.....	.....	.....	.....	1	1
TOTALS	6	13	10	1	2	32	32

Of the remaining 2 deaths, 1 was a patient from the country, and 1 had no fixed abode.

RETURN VI.

RETURN respecting prevalence of Scarlet Fever, Diphtheria, and Measles in Sydney and Suburbs during 1895.

Districts.	Scarlet Fever.			Diphtheria.			Measles.		
	Hospital Admissions.	Hospital Deaths.	Other Deaths Registered	Hospital Admissions	Hospital Deaths.	Other Deaths Registered	Hospital Admissions.	Hospital Deaths.	Other Deaths Registered
SYDNEY	11	.....	4	35	11	13	1	.....	.....
SUBURBS—									
North-western {									
Bahnain	1	.....	2	15	4	3	.....	.....	.....
Leichhardt .....	.....	.....	.....	10	3	7	.....	.....	.....
Annandale	1	.....	.....	7	2	1	.....	.....	.....
Glebe	9	.....	.....	13	1	2	.....	.....	.....
Newtown	1	.....	.....	20	3	.....	.....	.....	.....
West Central {									
St. Peter's .....	.....	.....	1	7	.....	1	.....	.....	.....
Camperdown	2	.....	.....	11	2	.....	.....	.....	.....
Esksneville .....	.....	.....	.....	3	.....	.....	.....	.....	.....
Redfern .....	.....	.....	.....	17	3	1	.....	.....	.....
Darlington	2	.....	1	2	1	.....	.....	.....	.....
East Central {									
Waterloo .....	.....	.....	.....	3	.....	1	.....	.....	.....
Alexandria .....	.....	.....	.....	2	.....	.....	.....	.....	.....
North Botany	1	.....	.....	.....	.....	.....	.....	.....	.....
Botany .....	.....	.....	.....	2	1	2	.....	.....	.....
Eastern {									
Paddington	4	1	1	11	4	.....	.....	.....	.....
Randwick	5	.....	1	4	1	.....	.....	.....	.....
Waverley	5	.....	.....	10	3	.....	.....	.....	.....
Woollahurst	1	.....	1	3	1	.....	.....	.....	.....
Ashfield .....	.....	.....	1	6	2	3	.....	.....	.....
Burwood	1	.....	.....	2	2	4	.....	.....	.....
Concord .....	.....	.....	.....	1	1	.....	.....	.....	.....
Western {									
Drummoyne .....	.....	.....	.....	1	1	.....	.....	.....	.....
Enfield .....	.....	.....	.....	3	.....	.....	.....	.....	.....
Granville .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Marrickville	10	.....	1	1	.....	1	.....	.....	.....
Petersham	1	.....	1	3	.....	.....	.....	.....	.....
Southern {									
Canterbury .....	.....	.....	.....	1	.....	1	.....	.....	.....
Hurstville .....	.....	.....	.....	3	.....	2	.....	.....	.....
Kogarah .....	.....	.....	.....	6	.....	.....	.....	.....	.....
North Shore {									
Mosman .....	.....	.....	1	.....	.....	.....	.....	.....	.....
North Sydney	1	.....	.....	9	.....	.....	.....	.....	.....
Willoughby .....	.....	.....	.....	1	.....	1	.....	.....	.....
CHILDREN'S HOSPITAL	4	.....	.....	.....	.....	.....	.....	.....	.....
NORTH SHORE HOSPITAL	1	.....	.....	.....	.....	.....	.....	.....	.....
COUNTRY .....	.....	.....	.....	3	.....	.....	.....	.....	.....
TOTALS	61	1	15	215	46	43	1	.....	.....

1897.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

BOARD OF HEALTH.

(MEMORANDUM BY THE PRESIDENT OF THE, ON PREVENTION OF TUBERCULOSIS IN MAN AND IN CATTLE.)

Printed under No. 22 Report from Printing Committee.

Memorandum by The President of the Board of Health on Prevention of Tuberculosis in Man and in Cattle.

August, 1897.

It has already become generally known that tuberculosis or consumption is a disease common to man and some animals, that it is communicable from animals to man, and that man is liable to acquire it by eating the milk or flesh of consumptive beasts. The following case pointedly directs attention to the danger which the public, and especially children among them, run at present of catching consumption by means of milk.

2. On 1st June Mr. Veterinary Inspector Melhuish, M.R.C.V.S., made report to the Board of his annual inspection of dairies in a populous suburban district. He remarked of the district in general that the execution of the Act as regarded inspection of cows was "most perfunctory." He went on to mention especially the dairy of one X who had a herd of eighteen cows, and supplied a large number of customers with milk by retail. His premises were in good condition—well-paved, clean, safely connected with the sewers, and supplied by constant service with water from the mains only; but among the herd there was a cow "which was a most glaring case of disease. The animal had very extensive glandular swellings around the throat, the breathing could be heard some distance away, and on exertion there was a troublesome cough. The appearance was sufficient to justify any inspector in condemning her for dairy purposes. When the inspector of dairies to the local authority and I spoke to X about her condition, he stated that it happened about three weeks ago, and the swelling was produced by the kick of a horse. He fetched her from the paddock, and I examined her in the bail and condemned her. X said that the milk was mixed with that obtained from the other cows, and was distributed around. There is no doubt that this animal has been in this condition for several months, and it is hard to conceive how any man could be so depraved as to keep an animal in this condition in a dairy. He stated that he had had this cow for two years."

3. On 2nd June a letter was delivered to the clerk to the local authority, in which he was informed that this animal was obviously in the last stages of consumption, and should have been detected by the local inspector; that having been killed, its internal organs had been found riddled with tuberculous abscesses; and, as it had been long ill, that it was certain that the cow-shed had become infectious, and probably that other animals of the herd had acquired the disease. The likelihood that more or fewer children among X's customers had consequently been infected with consumption was mentioned; and the local authority was requested immediately to cancel X's registration, and to prevent him from trading until the premises had been cleansed and disinfected. X's name was forthwith erased from the register by the local authority, and in consequence he became unable to sell the milk of his herd to any person in any district whatever.

4. On 3rd June the required disinfection of the premises was begun under veterinary supervision, and the other seventeen cows were put to the tuberculin test. Six were found to react well, two indcisively. The value of the six animals having been agreed upon, in order that X might be compensated if any of them were found after death not to be diseased, they were slaughtered in presence of the Board's inspector and a veterinary surgeon acting in X's interests. All of them presented marked signs of consumption.

5. On 17th June the consumptive cows having been destroyed, and the premises cleansed and disinfected to satisfaction of the Board, the local authority was informed that X's name might be restored to the register, and resumption of business by him consequently allowed.

6. What is the nature and extent of the danger thus betokened? The report of the Royal Commission appointed to inquire into the effect of food derived from tuberculous animals on human health, which sat at Westminster, and reported in April, in 1895, furnishes the answer to this question; and it is only necessary to add that the conclusions drawn are at bottom matters of fact, that is to say, they rest on demonstrations furnished by a large number of trustworthy experimenters, who have worked during many years past in various parts of the world. In some lesser respects they are supported by consideration of a large body of evidence of other than experimental, but still of trustworthy kind.

7. The following is a very brief statement of some of the more important points mentioned in the evidence just referred to:—Consumption or tuberculosis is one and the same disease in man and in the food-animals. Every person who takes tuberculous matter into his body as food incurs some risk of acquiring consumption. Of the several forms of the one disease (tuberculosis) from which mankind suffer—consumption of the lungs, of the brain, of the bowels, and of glands or of joints—some are almost peculiar to children; and probably the proportion of persons who acquire consumption through food is larger among children than among their seniors (an opinion in accordance with the experience which shows that the young of all susceptible animals are especially easily infected by feeding them on the meat and milk of consumptive animals). Milch cows are especially liable to acquire tuberculosis; and to all the tuberculous among bovine animals, cows contribute the largest proportion. Thus there are two reasons why milch cows should be watched with great care; they are more likely to be tuberculous; children are easily infected by the milk of tuberculous cows. The conditions requisite to render the milk of consumptive cows infective to those who drink it is that the udder shall be affected. Affection of the udder is not peculiar to advanced stages of the disease, and occurs in mild cases. Nor can it always be easily detected; for “if reliance be placed on the general condition of the cow, and on physical examination of the udder, an accurate diagnosis of tubercular disease of the udder is not possible”; in other words, given a tuberculous cow (and, as will appear later, whether a bovine is tuberculous or not often cannot be determined by ordinary examination) the healthiness of its udder cannot be vouched for, although on physical examination it appears to be healthy. Besides that, disease of the udder sets in suddenly, and progresses with alarming rapidity; so that an udder thought to be healthy after a physical examination, may be seen to be obviously diseased at a second examination made only a fortnight later. Consequently “no tuberculous animal of any kind should be allowed to remain in a dairy. The milk of cows affected with tuberculosis of the udder possesses a virulence which can only be described as extraordinary”; that is to say, the infection is much more likely to take, and causes a form of the disease which runs a much more rapid course when animals are inoculated or fed with tuberculous milk than when they are inoculated or fed with tuberculous meat or tuberculous matter of other descriptions. Pigs are especially easily infected by feeding on tuberculous milk or meat. It is important to note this for two reasons: one has reference to the feeding of pigs on separated milk which is so common in this country, and to their being fed on the flesh of condemned, and consequently often tuberculous animals, which still is common though in course of prevention under the Noxious Trades and Cattle-slaughtering Act, which has lately been extended to apply to pig-keepers; the other is that it is possible by this means to produce in pigs, whose throats have specialities of construction in which they closely resemble the human throat, some of those slower forms of consumption which affect the throat of man; for thus is suggested “the possibility of widely different forms of human tuberculosis owning an origin in milk.” Lastly, “as to the proportion of tuberculosis acquired by man through his food, or through other means, we can form no definite opinion, but we think it probable that an appreciable part of the tuberculosis which affects man is obtained through his food.” To this it may be added that while it is generally considered that practically all the consumption of the bowels among children is due to tuberculous milk, it is also considered that consumption of parts of the body remote from those with which food comes into immediate contact are also often due to infection received through the bowels. These are the main facts now known concerning causation of this prevalent and fatal disease; they reveal a removable risk which all persons alike run at present. But all persons exposed to this risk do not succumb, because the natural defences of the healthy body against infection are potent. Hence consumption is not so prevalent among raw-milk drinking children (for instance) as from the above facts might at first sight be expected. Yet those natural defences are weakened or lost during ill-health, or do not avail against large doses of the infection; and therefore, notwithstanding their usual efficiency, consumption is still very common among children. Adults, it must be repeated, have their share in this risk, though the lesser share; they are more liable to contract the disease from eating meat infected with tuberculous matter. The points of most importance in connection with the case of X’s dairy are that consumption is common among children; that the young, both of man and of the lower animals, are especially liable to acquire it from feeding on the milk of consumptive cows; and that consumption is entirely preventable, both among man and among animals.

8. All risk of infection by milk might be avoided by the simple expedient of never drinking uncooked milk; but in order to deprive it of its infective power it must be cooked with knowledge, care, and unflinching regularity. For this purpose Pasteurisation (though valuable with milk in other relations) is useless; raising the temperature of the milk to between 160° F. and 170° F. for a moment, in which the process of Pasteurisation consists, does not suffice to kill this infection. It can be killed with certainty if the milk be raised to 185° F., and kept at that temperature for five minutes. The simplest instruction is to raise it to boiling-point, and to keep it briskly bubbling for one minute; then it is quite safe. Easy to apply as this safeguard is in itself, however, it is likely that no considerable proportion of any population could be depended upon to boil all milk with scrupulous care and unflinching regularity before taking it; but there is no need in this matter to speculate on probabilities. The Board has accumulated a very considerable body of actual experience in connection with outbreaks of typhoid fever in earlier years, which, also, might have been prevented had all the milk been boiled; and the fact revealed by its inquiries seems to be that while scarcely one family in fifty even professes to boil its milk, still fewer boil it with a semblance of regularity. The meat of consumptive beasts may be spoken of in similar terms; if it were always thoroughly cooked—if it were always raised throughout its thickness to the temperature attained by the exterior in the course of roasting, for example—there would be no danger of contracting consumption from that source. But the necessary temperature is seldom attained towards the centre, either by roasting or boiling. Suppose, however, that meat and milk were always and regularly exposed to the temperature known to be necessary to kill this infection if it happened to be present in them, still the source of danger—presence of the disease among food-animals—would be left untouched; other precautions, therefore, must be taken, which shall have prevention of the disease at its origin for their object, that is to say, among the cattle at breeding stations.

9. Steady and determined attempts to prevent consumption among cattle have begun to be made but recently; and the reasons are two. First, the minute organism which is the actual or essential cause of the disease was discovered only in 1882. Until then, therefore, it was little more than an opinion that consumption was maintained and diffused by communication of one or other sort—direct or roundabout—
between

between diseased animals and those which were still well; but as soon as the essential cause was discovered it became a matter, not of opinion and of strong probability, but of demonstration or of fact appreciable to the senses that the disease was spread by direct or by roundabout communication between the sick and the healthy. Merely to know that the disease spread by contagion, however, was not enough to permit effectual efforts to be made to prevent it, because of that peculiarity of consumption in cattle which has been alluded to above; namely, that the disease can take hold of a beast and progress to a serious extent before betraying its presence by obvious external signs. Consequently, as long as only ordinary means of detecting tuberculosis were at command, efforts to prevent its spread by separating the diseased from the healthy could not succeed; for although the obviously sick animals were separated from the rest, there would still remain a number really affected, and capable of communicating their disease, which perforce would not be detected. And, therefore, the second reason why systematic attempts to eliminate tuberculosis from herds have but lately become possible, is that the means of detecting the disease in its early stages have only been discovered recently, namely in 1891. In that year the injection of tuberculin as a test of freedom from consumption first began to be tried with cattle, and during three or four subsequent years its usefulness and trustworthiness for this purpose were thoroughly established. To-day tuberculin, used with certain precautions, is relied upon by breeders in all countries for this purpose; although, it should be added, it is not absolutely infallible.

10. At the present date, then, two things are known with certainty; first, that if an animal (whether man or other species) has consumption, it is because it has taken into its body the essential cause of that disease, *and taken it from some other animal already suffering*; secondly, that the fact of freedom from disease or (notwithstanding external appearances) of infection with it can be ascertained by injecting tuberculin, a proceeding which produces no important effect on healthy beasts. From these two items of knowledge, the breeder can draw all the procedure required to eliminate consumption from his herd. First, he must ascertain with tuberculin which of his herd are affected; then he must remove the affected from the healthy; lastly, he must never add fresh animals to his herd until they have been tested, and thus proved to be free from disease. These are the chief steps, stated very briefly; but there are others of importance. Consumption cannot appear unless the essential cause is taken into the body from some previously affected animal. That is invariably true; but it was remarked above of children that not all who drank infected raw milk contracted the disease, because a healthy body has certain natural powers of defence, a statement which applies also to lower animals. Consequently, the essential cause alone, though taken in, is not always sufficient to give the disease; and usually there must be present also some secondary causes. These are such as lower the general health; they are comprised under darkness, dampness, filth, want of ventilation, and improper or insufficient food. It is therefore necessary that both breeder and dairyman should take care that none of these foul conditions exist on their premises; and the first essential is that cow-sheds, bails, dairies, and other buildings used either for cows or to handle milk in shall be suitably designed, and constructed of materials, which, from their non-absorbent nature and comparatively smooth surface, can be kept clean with little trouble. This is one reason why the Board strongly objects to the use of wood for floors in dairies, bails, and cow-sheds. But there is still another qualifying circumstance which must be mentioned, and which has special importance in relation to cattle. It is, that if the essential cause be introduced by inoculation, even a healthy animal will succumb. If a healthy animal, unaffected by the secondary causes just mentioned, breathe in or swallow the essential cause, it still has many chances of conquering it, and of escaping; but if that cause be injected under the skin, for instance, then good health will stand in little stead, and it will almost certainly become ill. And therefore, when inoculating to protect against pleuro-pneumonia, care must be taken that the matter to be inoculated has been taken from a beast which was not suffering from tuberculosis, otherwise that disease may be communicated as well as the mild attack of pleuro it was intended to cause.

11. The ways in which consumption spreads which are of greatest practical importance may be summarised as follows, namely, as from man to man, from man to the lower animals, from lower animals to lower animals, and from lower animals to man.

- (1.) From man to man.—For all practical purposes the sole danger lies in careless scattering about by consumptives of their expectoration, which contains the essential cause of the disease; from drying of this, so that it can break up into dust, and float on the air; and from breathing into the lungs of this infective dust by people who are in such a state of health that the essential cause when thus breathed in can take root in their lungs, live, and grow there, and thus cause them to become consumptive.
- (2.) From man to animals.—Here again the danger of spreading lies in the expectoration of the consumptive man; but animals may either breathe it as dust or swallow it, and infection may consequently take place either by the lungs or by some part of the digestive tract. Dogs, cats, and fowls have been observed to become consumptive from swallowing the expectoration of consumptive man rather often; cows, on one or two occasions (their risks from this source being manifestly likely to be fewer than those of the other animals named).
- (3.) From lower animals to lower animals.—The ways are more varied, and should be more carefully considered. It is unnecessary to mention all of them; they include every chance by which the essential cause, thrown off from the body of a consumptive animal, can gain access to the body of a healthy animal, and the more obvious are the following:—In the first place the expectoration, saliva, &c., of consumptive animals is as infective as that of man; tuberculous bovines which are stalled, therefore, or fed out of the same manger or box, or which lick their calves, may communicate the disease either directly (by coughing, licking, &c.), or by depositing their expectoration on mangers, walls, &c., whence it can be either breathed in after drying, or swallowed by the healthy. Secondly, the infection can be communicated by means of milk to the calves; to pigs fed either on whole or separated milk derived in whole or in part from consumptive cows; and to others of the lower animals who get such milk. Here it is to be noted once more that young animals of all species are especially liable to acquire consumption from infective milk. Thirdly, communication can occur when healthy animals feed on the flesh of consumptive animals; consequently, pigs, dogs, cats, and fowls are likely to contract the disease in

this

this way.* Fourthly, the influence of heredity, or of a consumptive bovine on its offspring cannot at present be exactly defined, but it is possible for a calf to be already infected when dropped. Heredity, therefore, has importance, and tuberculous animals should not be used for breeding.

- (4.) From lower animals to man. Here the danger of infection is practically confined to eating meat and milk produced by consumptive animals. Infection takes place by way of the digestive tract, but, as has already been remarked, the disease does not always develop at the point by which the infection entered. Without having done any damage at that place, it may reach other parts of the body and cause the first signs of illness to show themselves there. Once again, the young—whether infants and young children, or calves, &c.—are especially susceptible to infection by swallowing, the medium in their case being infected milk for the most part.

12. The scheme for preventing this disease can be deduced without difficulty from the foregoing facts. *In the case of man, isolation is unnecessary*, for man is an intelligent animal, and can be caused to take the small amount of trouble with his expectoration which is necessary to prevent risk to others; but periodical disinfection, cleansing, and thorough exposure to light of the quarters occupied by consumptives are necessary. *In the case of animals, on the contrary, separation of the sick from the healthy is an essential step in prevention*, for, of course, the lower animals are not intelligent in the present sense. For separation to be effectual, the disease must be detected early, and before it has proceeded so far as to be recognised by ordinary methods of examination. Tuberculin, used according to certain rules, must be employed for this purpose. No bovine which has not withstood the tuberculin test should be allowed to remain in the herd with healthy animals, should be allowed to suckle its own calf, should be used for breeding, should remain on dairy-farms or premises, nor should be used as a source of milk or meat, whether for human beings or for lower animals. After death, the bodies of infected animals must be safely disposed of either by burning or else by boiling-down at places to which no other live animals have access. Every time, after discovering an infected animal in a herd, the stalls, cow-sheds, bails, feeding-boxes, &c., must be very carefully cleansed and disinfected to prevent communication of the disease to the healthy in any of the roundabout ways already referred to.

13. It will now be apparent that prevention of that part of the incidence of consumption on mankind which is due to eating meat and milk produced by consumptive beasts is inextricably bound up with prevention of this disease among herds, and is only secondarily connected with inspection of dairies and slaughter-houses. That it can be entirely prevented among cattle has been proved by many individual breeders in different countries, who, acting on the lines indicated above, actually have eliminated it, and now possess herds which are free from tuberculosis. Those breeders can safely undertake to sell stock under the condition that every beast shall withstand the tuberculin test, and, in short, under a guarantee that every beast sold is free from consumption. This is a result of very great value to the public health, how great it is not possible at present to say exactly, but it has importance of another kind which concerns commerce, and which, practically, is not less worth attention. Stock-breeders and farmers have a direct personal interest in freeing their herds from tuberculosis; for this disease, though it progresses rather slowly, nevertheless causes cattle to die prematurely; and it is felt by all that the losses thus incurred, though they have never been estimated in this (nor, as far as information goes, in any other) country, must be great. They have also another direct interest, which is of even greater commercial importance. Sanitarians and breeders alike are now aware both that consumption is preventable among herds, and that the meat, milk, and butter produced from consumptive animals are sources of real danger to man; consequently, guarantees of the healthiness of the animals which have furnished the meat, butter, and milk which are offered for sale in the world's markets are being demanded by purchasers with more and more stringency day by day. At no great distance of time such products, when they are furnished from animals among whom consumption is known to be a rare disease will have a very great advantage over other such products derived from animals among which consumption is either known to be rife, or concerning which no good information is procurable. It only remains, then, to consider how the business of preventing tuberculosis among cattle can be best set going; for although self-interest is a powerful incentive, it often takes people long to learn where their profit truly lies.

14. It is convenient at this point to recapitulate the preventive measures already in force in New South Wales. In the first place, it has been shown that the public could protect themselves by very thorough cooking of meat and milk; but it has also been observed that this is not, and never could become, a good practical safeguard on the public scale. As regards milk, the Dairies Supervision Act, 1886, gives certain powers of inspection and control over dairies to local authorities, under supervision of the Board; and, as the case of X shows, those supervisory powers are exercised by the Board not only habitually but also promptly and effectively on special occasion appearing. But the occasion in that case (and in too many others) was detected by the Board's inspectors in course of execution of their annual supervision, and not, as it should have been, by the local authority in the course of its daily duties. Further, even if the action both of local authorities and of the Board as a supervising authority were continuous and always thoroughly efficient, still diseased cows would be constantly drafted to dairy herds from breeding stations. Those cows, if they were in the earlier stages of illness, would be used for production of milk, because their disease could be detected only by a rather lengthy process of testing; and thus there would be no end, neither to the labour of testing herds at individual dairies, nor yet to the losses which the dairymen would suffer in consequence. The case with animals used for food is slightly different.

*Although pig-keeping (as has already been noted) and poultry-farming were declared noxious trades on 31st December, 1896, under the provisions of the Noxious Trades and Cattle-slaughtering Act, 1894, and although by by-laws framed to regulate those trades, it is illegal for any pig-keeper or poultry-farmer to receive on his premises any diseased animal or the body of any dead animal, the following events happened after condemnation of X's first, or obviously diseased, cow. X said he would send the animal to a boiling-down works, and this arrangement was considered satisfactory by the Board's veterinary inspector. But when the latter came to get the address of the man to whom it had been sold for 10s., and the next day went there to examine the carcase, it turned out that the premises were used not for boiling-down or fat-extracting but as a poultry-farm; and the veterinary inspector, accompanied by the inspector to the local authority in whose district the premises were situate, found the carcase partly cut up, and saw fowls, a dog, and a cat feeding upon it. The veterinary inspector then discovered that this poultry-farmer was trading illegally, without being licensed, for which he was subsequently prosecuted by the local authority and fined; and that this was the case was due to the neglect of the local authority to perform the duty cast upon them by the law. All the animals mentioned can acquire tuberculosis by feeding, although in the ordinary course of life they do not usually suffer, and fowls are food-bodies might very easily, and in such a neighbourhood very likely would, be eaten by pigs, which also can take the disease, and, again, are food-animals.

different. Under the Diseased Animals and Meat Act, 1892, the Noxious Trades and Cattle-slaughtering Act, 1894, and the several older Cattle-slaughtering Acts, the Board has legal powers which are sufficient to prevent diseased meat from entering into consumption; and here the labour of testing is not necessary, because the animals are to be killed, and disease can be easily detected by inspection of their carcasses. But, as matters stand at present, just as the cow-keepers losses from condemnation for tuberculosis would be continuous as long as diseased beasts were bred and sold to him, so the butcher's losses actually are continuous for that very reason. Probably all butchers would agree that the flesh of diseased animals is not suitable for the food of man, and that the flesh of tuberculous animals cannot be consumed by him without an appreciable direct risk to life; but, on the other hand, the loss caused by condemnations of diseased carcasses under the provisions of the laws mentioned fall upon them alone, and that they feel to be a hardship. It is the interest of every person concerned, of the public, the dairyman, butchers, agents, and all other middlemen, back to the breeder, to take steps to eliminate tuberculosis from herds, to prevent the disease itself. How can breeders in general be brought to take the necessary precautions?

15. Consideration of X's case furnishes a valuable hint. Six of his cows, it will be remembered, were apparently in average health; even a veterinary surgeon could not have told, or at all events could not have made sure, by ordinary methods of examination, that they were suffering from tuberculosis; and yet, as soon as they were suitably tested, it turned out that they were tuberculous—a conclusion which was amply supported as soon as their carcasses were examined after slaughter. Having lost six cows, X desired to supply their places, to do which he must go into the open market. There he would handle the stock for sale, and with every care would select six which were in apparent good health. But his recent experience had taught him that freedom from tuberculosis cannot be ascertained by inspection; and, consequently, he felt that, notwithstanding all his care, he might nevertheless buy beasts which were not sound. This being the case, what guarantee had he that officers of the Board might not visit him again after he had spent his money, and having used the tuberculin test condemn his new purchases? And, if that happened, what end could he force to his losses? This dilemma is unfair. Choice must be made between relinquishing attempts to protect the public health by withdrawing tuberculous beasts from the dairy, and making such systematic efforts to prevent the disease itself, as would not merely protect the public, but would largely benefit every branch of this business. There can be no doubt that the latter course will, and indeed, must be taken. X, and all dairymen, all butchers, and all breeders must be able to buy under a guarantee of freedom from tuberculosis. There seems to be only one way of effecting this: the sale of every bovine animal, and of every pig, though ostensibly "with all faults," must, nevertheless, be conducted legally, subject to an implied agreement that every such animal shall withstand the tuberculin test applied under conditions to be fixed. Gradually, under the necessity which would thus be imposed upon them, breeders would weed their herds, and in four or five years might and should be in a position to regard this legal condition with indifference, for it would by that time cease to operate against them. At the same date they would find that their prosperity had been materially enhanced and had become assured.

16. If this condition were imposed it would still be necessary to continue supervision over slaughter-houses and dairies; but the present methods require improvement. As regards slaughter-houses, the legal powers already conferred on local authorities and on the Board as the supervising authority are sufficient; but the circumstances under which much slaughtering is at present done are such as sometimes hinder efficient inspection. For the sake of the home trade—that is to say, for protection of the public health of the people of New South Wales, slaughtering for export being done already under convenient conditions—it is necessary that private slaughtering should be abolished as much as possible, and without exception at every considerable centre of population. With this object in view, and amendment of the Noxious Trades and Cattle-slaughtering Act, 1896, by which local authorities, alone or in combination, might erect a public slaughter-house at any convenient point within or outside their district, and by which the Board should have power as soon as such a public slaughter-house had been established to declare private slaughtering illegal thence forward within such radius as might be deemed by it to lie within reasonably easy reach of the public slaughter-house. No advantage has as yet been taken of this provision, which, it should be noted, is merely an improvement on powers granted by the principal Act so far back as 1894; and it has now become a question whether local authorities should not be obliged to establish public slaughter-houses on being required to do so by the Board. The investment (under a monopoly of slaughtering within the radius) would be safe and even remunerative unless it should be thought desirable to apply profits to reduce slaughtering fees; and it might be advisable to allow local authorities to borrow the required capital from the Government at a low rate of interest.

17. With the Dairies Supervision Act the case is a little different. Power to systematically test dairy herds with tuberculin should be explicitly given; and in case it should be thought at first sight that this (and the consequent destruction of some animals) might involve hardship, it is well to mention here that one of the large milk companies, which has its own circle of suppliers in country districts under contract with it, has made it a condition of contract already that every beast found by its inspector to be tuberculous shall forthwith be slaughtered, no compensation being paid to owners unless it is found after death that a mistake has been made, and that the animal was not diseased. This condition has so far been cheerfully accepted, and there is no reasonable doubt that it will continue to be accepted without demur, provided the dairymen find that they can supply the places of the slaughtered animals with sound stock, and thus in return for their losses find that they are gradually acquiring a herd entirely free from consumption; but very many of such dairymen are themselves breeders. It is therefore important that they should be made aware of the steps necessary to eliminate tuberculosis; and for that purpose it is essential that they should be systematically instructed. This is not practicable with the veterinary staff at present under control of the Board, and with those methods of inspection which, efficient as they are, were designed without special reference to the prevention of tuberculosis. Inspection, weeding out, and instruction in management and breeding so as to prevent consumption can only be given (a) by qualified veterinary surgeons who (b) shall be resident in the district of which they have charge. It should be made illegal to return to suppliers any separated milk from creameries, butter factories, &c., except after boiling it. It should be made illegal to inoculate for pleuro-pneumonia except with virus taken from animals ascertained to be free from tuberculosis. Lastly, the distribution of tuberculin should be in the hands of the Board, which alone can give the necessary guarantees of purity and efficiency; and it should be made illegal to use any that has not been approved by it.

J. ASHBURTON THOMPSON.

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

REPORT

OF THE

ROYAL COMMISSION

TO INQUIRE INTO THE MANAGEMENT OF THE

MARINE BOARD OF NEW SOUTH WALES.

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1897.

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Commission.

VICTORIA, by the Grace of God, of the United Kingdom of Great Britain and Ireland, Queen,
Defender of the Faith, and so forth,—

To Our Trusty and Well-beloved:—

JOSEPH BARLING, Esquire, one of Our Justices of the Peace of Our Colony of New South Wales, Associate of the Institution of Civil Engineers, and Chairman of the Public Service Board;

TIMOTHY AUGUSTINE COGHLAN, Esquire, one of Our Justices of the Peace of Our said Colony and

GEORGE ALEXANDER WILSON, Esquire, one of Our Justices of the Peace of Our said Colony,—

Greeting:—

KNOW ye, That We, reposing great trust and confidence in your ability, zeal, industry, discretion, and integrity, do, by these presents, authorise and appoint you, or any two of you, as herein-after mentioned, to make a diligent and full inquiry into the management of the Marine Board of New South Wales, incorporated under the provisions of the Navigation Act of 1871, 35 Victoria No. 7, and to report whether, and if so by what means, that Department can be placed upon a more efficient and economical basis: And We do, by these presents, grant to you, or any two of you, at any meeting or meetings to which all of you shall have been duly summoned, full power and authority to call before you all such persons as you may judge necessary, by whom you may be better informed of the truth in the premises, and to require the production of all such books, papers, writings, and all other documents as you may deem expedient, and to visit and inspect the same at the offices or places where the same or any of them may be deposited, and to inquire of the premises by all lawful ways and means: And We do give you power, at your discretion, to procure such clerical and other assistance as you may deem necessary for enabling you duly to execute this Our Commission: And Our further will and pleasure is that you do, within three months after the date of this Our Commission, certify to Us, in the office of Our Chief Secretary, under your or any two of your hands and seals, what you shall find touching the premises: And We hereby command the said Marine Board and all persons employed by them, and all Government Officers and other persons whomsoever within Our said Colony, that they be assistant to you and each of you in the execution of these presents: And We appoint you, the said JOSEPH BARLING, Esquire, to be President of this Our Commission, which said Commission We declare to be a Commission for all purposes of the Act 44 Victoria No. 1, intituled "*An Act to regulate the taking of Evidence by Commissioners under the Great Seal.*"

In testimony whereof, We have caused these Our Letters to be made Patent, and the Great Seal of Our said Colony of New South Wales to be hereunto affixed.

Witness Our Right Trusty and Well-beloved Cousin, HENRY ROBERT, VISCOUNT HAMPDEN, Our Governor and Commander-in-Chief of Our Colony of New South Wales and its Dependencies, at Government House, Sydney, in New South Wales aforesaid, this fourth day of February, in the year of Our Lord one thousand eight hundred and ninety-seven, and in the sixtieth year of Our Reign.

By Deputation from His Excellency,

(L.S.)

FRED. A. DARLEY,
Lieutenant-Governor.

By His Excellency's Command,

JAMES N. BRUNKER.

Entered on Record by me, in REGISTER OF PATENTS No. 18, page 309, this sixth day of February, one thousand eight hundred and ninety-seven.

For the Colonial Secretary and Registrar of Records,

CRITCHETT WALKER,
Principal Under Secretary.

VICTORIA, by the Grace of God, of the United Kingdom of Great Britain and Ireland, Queen,
Defender of the Faith, and so forth,—

To our Trusty and Well-beloved—

JAMES POWELL, Esquire, one of Our Justices of the Peace of Our Colony of New South
Wales,—

Greeting:—

WHEREAS by an instrument under the Great Seal of Our Colony of New South Wales, bearing date of the fourth day of February, one thousand eight hundred and ninety-seven, We did appoint certain gentlemen therein named to be Commissioners, to make a diligent and full inquiry into the management of the Marine Board of New South Wales, incorporated under the provisions of the Navigation Act of 1871, 35 Victoria No. 7, and to report whether, and if so by what means, that Department can be placed upon a more efficient and economical basis: And whereas it hath appeared to Us to be expedient to appoint an additional Commissioner: Now therefore know you, that We, of Our special grace, have thought fit to appoint, and do hereby appoint, you to be such additional Commissioner accordingly.

In testimony whereof, We have caused these Our Letters to be made Patent, and the Great Seal of Our said Colony of New South Wales to be hereunto affixed.

Witness Our Right Trusty and Well-beloved Cousin, HENRY ROBERT, VISCOUNT HAMPDEN, Our Governor and Commander-in-Chief of Our Colony of New South Wales and its Dependencies, at Government House, Sydney, in New South Wales aforesaid, this twenty-second day of March, in the year of Our Lord One thousand eight hundred and ninety-seven, and in the sixtieth year of Our reign.

(L.S.)

HAMPDEN.

By His Excellency's Command,
JAMES N. BRUNKER.

Entered on record by me, in register of patents No. 18, page 369, this twenty-fourth day of March, one thousand eight hundred and ninety-seven.

For the Colonial Secretary and Registrar of Records,

CRITCHETT WALKER,

Principal Under Secretary.

ROYAL COMMISSION TO INQUIRE INTO THE MANAGEMENT OF THE MARINE
BOARD OF NEW SOUTH WALES.

WHEREAS it is necessary to extend the time within which the Commissioners are to make their return in the above matter: Now therefore, I do hereby, with the advice of the Executive Council, extend the time within which the said Commissioners are to make such report for a period of three months,—to take effect from the 4th proximo.

Given under my hand, at Government House, Sydney, this twenty-sixth day of April, one thousand eight hundred and ninety-seven.

HAMPDEN.

By His Excellency's Command,

JAMES N. BRUNKER.

ROYAL

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ROYAL COMMISSION ON MARINE BOARD.

MINUTES OF PROCEEDINGS.

The first meeting of the Royal Commission on Marine Board, was held at the offices of the Public Service Board, 50 Young-street, Sydney, at 12 o'clock noon, on Monday, 22nd March, 1897.

Present :—Mr. Joseph Barling, J.P., President, Messrs. George Alexander Wilson, J.P., and James Powell, J.P.

Captain Francis Hixson, R.N., President of the Marine Board of New South Wales, attended.

The President announced that this was a Commission appointed to make diligent and full inquiry into the management of the Marine Board of New South Wales, incorporated under the provisions of the Navigation Act of 1871, 35 Victoria, No. 7, and to report whether, and if so by what means, that Department can be placed upon a more efficient and economical basis; Mr. A. F. Basset Hull, would act as Secretary, and he would call upon him to read the Commission.

The Commission, dated the 4th February, and a letter from the Principal Under Secretary, accompanying the Commission, and dated the 9th February, 1897, were read by the Secretary.

The President announced that since the Commission had been issued, James Powell, Esq., J.P., had been added to the Commission.

Captain Francis Hixson, R.N., President of the Marine Board of New South Wales, was sworn, and examined.

The Commission, at 12:25 p.m., adjourned until Wednesday, the 7th April.

The second meeting of the Commission was held at the offices of the Public Service Board, Sydney, 7 April, 1897, at 2:15 p.m., on Wednesday, 7th April, 1897.

Present :—Mr. Joseph Barling, President, Messrs. T. A. Coghlan and James Powell.

The minutes of the previous meeting were read and confirmed.

The Secretary read the Commission appointing James Powell Esq., J.P., as an additional Commissioner.

The Secretary read an opinion given by the Crown Solicitor, upon the effect of the repeal of the Imperial Act 17 and 18 Vic., c. 104, upon the Navigation Act of 1871.

Certain correspondence was also read.

The examination of Captain Francis Hixson, R.N., President of the Marine Board, was continued.

The Commission, at 4:45 p.m., adjourned until 10 a.m. on Thursday, 8th April.

The third meeting of the Commission was held at the Offices of the Public Service Board, Sydney, 8 April, 1897, at 10:15 a.m. on Thursday, 8 April, 1897.

Present :—Mr. Joseph Barling, President, and Mr. James Powell.

The examination of Captain Francis Hixson, President of the Marine Board, was continued.

Captain Hixson produced certain returns.

The minutes of the previous meeting were read and confirmed.

The Commission, at 12:30 p.m., adjourned until Wednesday, 21 April, at 10 a.m.

The fourth meeting of the Commission was held at the offices of the Public Service Board, Sydney, 21 April, 1897, at 10 a.m. on Wednesday, 21 April, 1897.

Present :—Mr. Joseph Barling, President, Messrs. G. A. Wilson, T. A. Coghlan, and James Powell.

The minutes of the previous meeting were read and confirmed.

The President stated that the period granted for execution of the Commission would expire on the 4th proximo, and that in consequence of the Commissioners being engaged on other urgent matters, it would be necessary to ask for an extension of time, which, he suggested, should be for three months.

The suggestion meeting with the approval of the Commissioners, the Secretary was instructed to write to the Principal Under Secretary, requesting that the necessary steps be taken to secure such extension.

The Commission, at 10:15 a.m., adjourned until 10 a.m. on Friday, the 23rd April, 1897.

The fifth meeting of the Commission was held at the offices of the Public Service Board, Sydney, 23 April, 1897, at 10 a.m. on Friday, 23rd April, 1897.

Present :—Mr. Joseph Barling, President, Messrs. G. A. Wilson and James Powell.

The examination of Captain Francis Hixson, R.N., President of the Marine Board, was continued.

Commander George Sidney Lindeman, R.N., Secretary to the Marine Board of New South Wales, was sworn, and examined.

Mr. Francis Rule, Accountant of the Marine Board of New South Wales, was sworn, and examined.

The minutes of the previous meeting were read and confirmed.

The Commission, at 12:55 p.m., adjourned until 10 a.m. on Tuesday, the 27th April, 1897.

- 27 April, 1897. The sixth meeting of the Commission was held at the offices of the Public Service Board, Sydney, at 10.25 a.m. on Tuesday, 27th April, 1897.
Present :—Mr. Joseph Barling, President, Messrs. G. A. Wilson, and James Powell.
 The following witnesses were sworn, and examined :—
 Captain James Edie, Government Shipping Master, Sydney.
 Mr. William Douglas Cruickshank, Chief Engineer Surveyor, Marine Board.
 Captain John Henderson Bedford, Examiner in Seamanship, Marine Board.
 Mr. Lion Henry Walford, Tide Surveyor, Customs Department; and
 Mr. William Hare, Clerk in the Registration of Shipping Branch, Customs Department.
 Mr. Hare produced certain papers in connection with shipping registered at Sydney and Newcastle.
 The minutes of the previous meeting having been read and confirmed, the Commission, at 1 p.m., adjourned until Wednesday, the 28th April, at 10 a.m.
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- 28 April, 1897. Seventh meeting. The Commission met at Circular Quay, at 10 a.m., on Wednesday, the 28th April, 1897, and proceeded by the Marine Board's steam launch, "Nea," to the lightship "Bramble," at Port Jackson Heads.
Present :—Messrs. G. A. Wilson and James Powell.
 Captain Joseph Leddra, Superintendent of the lightship "Bramble," was sworn, and examined.
 After inspecting the lightship, the Commission proceeded to the pilot steamer "Captain Cook."
 The following officers and members of the crew of the "Captain Cook" were sworn, and examined :—
 Captain Joseph Creer, Master-in-charge of the Pilot Service;
 Mr. Herbert Orton, cook and providore;
 Captain James Fotheringham, chief officer;
 Captain Andrew William Jack, senior pilot;
 Mr. Edward Brodrick, chief engineer;
 Mr. James Nuth, leading fireman;
 Mr. George Avelar, seaman;
 Mr. John Moncrieff, seaman; and
 Mr. E. Stratton, seaman.
 Statements were made by two representatives of the firemen.
 The Commission, at 1.20 p.m., adjourned *sine die*.
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- 30 April, 1897. The eighth meeting of the Commission was held at the offices of the Local Marine Board, Newcastle, at 10 a.m. on Friday, the 30th April, 1897.
Present :—Messrs. G. A. Wilson and James Powell.
 The following witnesses were sworn, and examined :—
 Captain Herbert Robert Cross, President of the Local Marine Board, Newcastle; Messrs. Duncan John McLean and Frank Gardner, members of the local Marine Board, Newcastle; and Captain Henry Newton, Harbour Master at Newcastle.
 At 1 p.m. the Commission adjourned until 2.30 the same afternoon.
 At 2.30 p.m. the Commission received a deputation from representatives of the commercial and shipping interests of Newcastle, who urged that a steam-pilot-boat be at once sent to Newcastle.
 At 3.15 p.m. the members of the deputation withdrew.
 The Commissioners then granted an interview to pilots Sweet and Morris, of the Newcastle Pilot Station, who asked that the anomalies in the salaries at present paid to the pilots be removed, by increasing the salaries paid to the junior pilots.
 The Commission, at 3.45 p.m., adjourned until Saturday, 1st May.
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- 1 May, 1897. Ninth Meeting. The Commission met at 10.30 a.m. on Saturday, 1st May, 1897.
Present :—Messrs. G. A. Wilson and James Powell.
 Captain Henry Newton, Harbour-master at Newcastle, conducted the members of the Commission round the harbour in his launch, to view the general aspect of the harbour; and pointed out what might be done in the way of dredging and the construction of ballast jetties, &c., to provide increased accommodation for shipping.
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- 3 May, 1897. The tenth meeting of the Commission was held at the offices of the Local Marine Board, Newcastle, at 10 a.m. on Monday, 3rd May, 1897.
Present :—Messrs. G. A. Wilson and James Powell.
 The following witnesses were sworn, and examined :—
 Mr. Thomas Brooks, Lloyd's Surveyor, Newcastle;
 Mr. William B. Sharp, Shipping Agent and Colliery Shipping Manager, Newcastle;
 Mr. Henry William Finch, Shipping Clerk to R. B. Wallace, Newcastle; and
 Mr. George Melville, Assistant Harbour-master, Newcastle.
 At 12 o'clock noon the Commissioners received a deputation representing the Chamber of Commerce, Newcastle, upon general matters appertaining to the Port of Newcastle, mainly as to the urgent necessity for a steam-pilot-boat.
 The Commission, at 1 p.m., adjourned until 7.30 p.m. the same day.
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The eleventh meeting of the Commission was held at the "Great Northern Hotel," Newcastle, at 8 May, 1897, 7:30 p.m. on Monday, 3rd May, 1897.

Present:—Messrs. G. A. Wilson and James Powell.

The Commissioners granted an interview to Messrs. William G. Adams, — M'Kinnon, and Roderick M'Leod upon the question of hours of duty, uniforms, and wages paid to the boatmen at Newcastle.

The Commission, at 8 p.m., adjourned *sine die*.

The twelfth meeting of the Commission was held at the offices of the Public Service Board, Sydney 19 May, 1897, at 2 p.m. on Wednesday, the 19th May, 1897.

Present:—Mr. Joseph Barling, President, and Messrs. G. A. Wilson and James Powell.

The following witnesses were sworn and examined:—

Mr. Joseph Henry Storey, J.P., merchant, and Chairman of the Underwriters' Association;

Captain James Fotheringham, Chief Officer of the Pilot steamer "Captain Cook" (second examination); and

Mr. John Lawrence, clerk to Harbour-master, Marine Board.

Letters from Mr. J. Vine Hall, Mr. T. R. Allt, and the Under Secretary for Finance and Trade were read and dealt with.

The minutes of the six previous meetings were read and confirmed.

The Commission, at 3:45 p.m., adjourned until Friday, 21st May, at 12 noon.

The thirteenth meeting of the Commission was held at the offices of the Public Service Board, Sydney, at 12:10 p.m. on Friday, 21st May, 1897.

Present:—Mr. Joseph Barling, President, and Messrs. G. A. Wilson and James Powell.

The following witnesses were sworn and examined:—

Mr. Thomas Robert Allt, J.P., Chairman of the North Coast Steam Navigation Company (Limited);

Mr. Francis John Thomas, Manager of the Newcastle and Hunter River Steamship Company (Limited); and

Mr. John See, M.L.A., merchant, and Director of the North Coast Steam Navigation Company (Limited).

A letter from Mr. B. B. Nicoll, with reference to his giving evidence before the Commission, was read, and the Secretary was instructed to arrange with Mr. Nicoll for a time that would be mutually convenient.

The minutes of the previous meeting were read and confirmed.

The Commission, at 3:55 p.m., adjourned *sine die*.

The fourteenth meeting of the Commission was held at the lighthouse, Yamba, Clarence River, at 30 May, 1897, 3:30 p.m. on Sunday, 30th May, 1897.

Present:—Messrs. G. A. Wilson and James Powell.

Mr. Henry M'Auley, pilot at Yamba, was sworn, and examined.

The Commission, at 4 p.m., adjourned *sine die*.

The fifteenth meeting of the Commission was held at the Court-house, Ballina, at 12 noon on 1 June, 1897, Tuesday, 1st June, 1897.

Present:—Messrs. G. A. Wilson and James Powell.

Mr. Robert Adie Fraser, pilot at Ballina, was sworn, and examined.

The Commission, at 12:30 p.m., adjourned until 2:30 p.m. the same day.

The sixteenth meeting of the Commission was held at the office of the District Engineer, Harbours and Rivers Department, Ballina, at 2:30 p.m. on Tuesday, 1st June, 1897.

Present:—Messrs. G. A. Wilson and James Powell.

Mr. Thomas William Keele, District Engineer, Harbours and Rivers Department, Ballina, was sworn, and examined.

The Commission, at 2:45 p.m., adjourned *sine die*.

The seventeenth meeting of the Commission was held at the "Freemason's Hotel," Lismore, at 2 June, 1897, 8 p.m. on Wednesday, 2nd June, 1897.

Present:—Messrs. G. A. Wilson and James Powell.

Mr. J. F. O'Flynn, Mayor of Lismore, was sworn, and examined.

The Commission, at 9 p.m., adjourned *sine die*.

The eighteenth meeting of the Commission was held at the "Australian Hotel," Tweed Heads, at 5 June, 1897, 7:45 p.m. on Saturday, 5th June, 1897.

Present:—Messrs. G. A. Wilson and James Powell.

Mr. William MacGregor, pilot at Tweed Heads Station, was sworn, and examined.

The Commission, at 8:45 p.m., adjourned *sine die*.

18 June, 1897. The nineteenth meeting of the Commission was held at the offices of the Public Service Board, Sydney, at 2 p.m. on Friday, 18th June, 1897.

Present:—Mr. Joseph Barling, President, and Mr. Powell.

The following witnesses were sworn and examined:—

Mr. Frederick William Jackson, Manager of the Union Steamship Company of New Zealand;
 Captain Francis Hixson, R.N., President of the Marine Board (second examination);
 Captain Henry Pettit, Harbour-master, Marine Board;
 Captain Frederick Bracegirdle, Assistant Harbour-master, Marine Board;
 Captain Thomas Robertson Thompson, Assistant Harbour-master, Marine Board; and
 Captain Alexander Sangster, Water Bailiff and Inspector of Shipping, Marine Board.

The Secretary was instructed to summon several owners of sailing vessels trading to the northern rivers for the next meeting.

The minutes of the six previous meetings were read and confirmed, and the Commission, at 5 p.m., adjourned until Monday, 28th June.

28 June, 1897. The twentieth meeting of the Commission was held at the offices of the Public Service Board, Sydney, at 10.30 a.m. on Monday, 28th June, 1897.

Present:—Mr. Joseph Barling, President, and Messrs. G. A. Wilson and James Powell.

The following witnesses were sworn and examined:—

Mr. Bruce Baird Nicoll, merchant, and formerly owner of steamers trading to the northern rivers;
 Mr. Alfred William Meeks, of Messrs. Gibbs, Bright, and Co., & Chairman of the Chamber of Commerce;

Mr. Alfred Settree, merchant, and owner of sailing vessels trading to the northern rivers.

Mr. Alfred Langley, merchant, and owner of sailing vessels trading to the northern rivers; and

Mr. George de Franc, owner of the subsidised steam-tug at Camden Haven.

A letter from Mr. Henry Selfe, Engineer Surveyor, Marine Board, relating to an economical method of lighting the entrance to Sydney Heads, was read, and the Secretary was instructed to summon Mr. Selfe for the next meeting of the Commission.

A letter from the Secretary of the Chamber of Commerce, Newcastle, with reference to a system of signalling vessels entering and leaving the Port of Newcastle, was read, and the Secretary was instructed to prepare copies of evidence, correspondence, and papers relating to the matter, and already in the hands of the Commission, for consideration at the next meeting, and to summon Captain Hixson to give evidence on the question.

The minutes of the previous meeting were read and confirmed.

Arrangements were made for a visit to the Macquarie light at South Head on Friday, 2nd July, and to the pilot station at Wollongong on Saturday, 3rd idem.

The Commission, at 12.45 p.m., adjourned until Thursday, 1st July, at 2 p.m.

1 July, 1897. The twenty-first meeting of the Commission was held at the offices of the Public Service Board, Sydney, at 2.15 p.m. on Thursday, 1st July, 1897.

Present:—Mr. Joseph Barling, President, and Messrs. G. A. Wilson and James Powell.

The following witnesses were sworn and examined:—

Mr. Cecil West Darley, J.P., Engineer-in-Chief, Public Works Department;

Mr. Henry Selfe, Engineer Surveyor, Marine Board;

Captain Francis Hixson, R.N., President of the Marine Board (third examination); and

Captain William Newton, Inspector of Shipping, Marine Board.

The Secretary reported that, acting under instructions from the President, he had written to Captain Hixson, President of the Marine Board, requesting him to intimate to the Wardens of the Marine Board that this Commission would be glad to take any evidence they might desire to tender. A reply had been received from the Secretary of the Marine Board stating that the Wardens had no wish to see the Commissioners.

The minutes of the previous meeting were read and confirmed.

The Commission, at 4.15 p.m., adjourned until the following day.

2 July, 1897. The twenty-second meeting of the Commission was held at Sydney at 10.30 a.m. on Friday, 2nd July, 1897.

Present:—Messrs. G. A. Wilson and James Powell.

The Commission proceeded to South Head, and there inspected the Macquarie light, the Hornby light, and the signal station.

The Commission, at 3 p.m., adjourned until the following day.

3 July, 1897. The twenty-third meeting of the Commission was held at the Custom House, Wollongong, at 11 a.m. on Saturday, 3rd July, 1897.

Present:—Mr. Joseph Barling, President, and Mr. James Powell.

The following witnesses were sworn and examined:—

Mr. Andrew Thompson, Pilot and Harbour master, Wollongong; and

Mr. Edmund Potts, Customs Officer, Wollongong.

Port Kembla was visited,

The Commission, at 12.30 a.m., adjourned *sine die*.

The twenty-fourth meeting of the Commission was held at the offices of the Public Service Board, 5 July, 1897. Sydney, at 12 noon, on Monday, 5th July, 1897.

Present:—Mr. Joseph Barling, President, and Messrs. G. A. Wilson and James Powell.
Mr. Thomas Martin Davis, M.L.A., was sworn, and examined.
The Commission, at 1.30 p.m., adjourned *sine die*.

The twenty-fifth meeting of the Commission was held at the offices of the Public Service Board, 9 July, 1897. Sydney, at 10.15 a.m., on Friday, 9th July, 1897.

Present:—Mr. Joseph Barling, President, and Messrs. G. A. Wilson and James Powell.
The minutes of the four previous meetings were read and confirmed.
A letter from Mr. Francis Buckle, intimating that he would be glad to give evidence, was read, and the Secretary was instructed to summon Mr. Buckle for Monday, 12th July, at 10 a.m.
Mr. Robert Rowan Purdon Hickson, Under Secretary for Public Works, was sworn, and examined.
The Commissioners then proceeded to consider their Report.
Arrangements were made for inspection of the hulks "Tinonee" and "Argo" the same afternoon.
The Commission, at 12 noon, adjourned until 2.30 p.m. the same day.

The twenty-sixth meeting of the Commission was held at Sydney, at 2.30 p.m. 9 July, 1897.

Present:—Mr. Joseph Barling, President, and Messrs. G. A. Wilson and James Powell.
The Commissioners proceeded by launch to Kerosene Bay and Johnstone's Bay, and viewed the hulks "Tinonee" and "Argo," both of which were found to be in a totally unseaworthy condition.
The Commission, at 4 p.m., adjourned until Monday, 12th July, at 10 a.m.

The twenty-seventh meeting of the Commission was held at the offices of the Public Service Board, Sydney, at 10 a.m. on Monday, 12th July, 1897.

Present:—Mr. Joseph Barling, President, and Messrs. G. A. Wilson and James Powell.
Mr. Francis Buckle, owner of the subsidised steam-tugs at the Bellinger, Nambucca, and Macleay Rivers, and at Port Macquarie, was sworn, and examined.
Mr. Buckle was asked to prepare certain estimates in regard to the tug service, and his examination was adjourned until the 14th July.
The Commissioners then further considered their Report.
The minutes of the two previous meetings were read and confirmed.
The Commission, at 11.20 a.m., adjourned until Wednesday, 14th July, at 10 a.m.

The twenty-eighth meeting of the Commission was held at the offices of the Public Service Board, Sydney, at 10 a.m. on Wednesday, 14th July, 1897.

Present:—Mr. Joseph Barling, President, and Messrs. G. A. Wilson and James Powell.
The examination of Mr. Francis Buckle was concluded.
The minutes of the previous meeting were read and confirmed.
A letter from Captain Hixson, R.N. President of the Marine Board, with reference to the suggested fixed light at the Sow and Pigs, was read and received.
The Commissioners then proceeded to further consider their Report.
The Commission, at 12 noon, adjourned until Friday, 16th July, at 10 a.m.

The twenty-ninth meeting of the Commission was held at the offices of the Public Service Board, Sydney, at 11.30 a.m., on Friday, 16th July, 1897.

Present:—Mr. Joseph Barling, President, and Messrs. G. A. Wilson and James Powell.
The minutes of the previous meeting were read and confirmed.
The Commissioners further considered their Report.
The Commission, at 12.30 p.m., adjourned until Tuesday, 20th July, at 10 a.m.

The thirtieth meeting of the Commission was held at the offices of the Public Service Board, Sydney, at 10.5 a.m., on Tuesday, 20th July, 1897.

Present:—Mr. Joseph Barling, President, and Messrs. G. A. Wilson and James Powell.
Captain Angel Cooper Turner, Managing Director of the Illawarra Steam Navigation Company, was sworn, and examined.
The minutes of the previous meeting were read and confirmed.
A letter from Mr. Alfred Setttee, asking that certain portions of his evidence be omitted, was read.
Agreed to.
Mr. Alfred Langley having added some remarks in revising the copy of his evidence, it was decided to treat such remarks as a letter.
The Commissioners then proceeded to further consider their Report.
The Commission, at 11.10 a.m., adjourned until Friday, 23rd July, at 10 a.m.

The thirty-first meeting of the Commission was held at the offices of the Public Service Board, Sydney, at 10.15 a.m. on Friday, 23rd July, 1897.

Present:—Mr. Joseph Barling, President, and Messrs. G. A. Wilson and James Powell.
The minutes of the previous meeting were read and confirmed.
The Commissioners considered and adopted their Report.
The Commission, at 11.45 a.m., adjourned until Monday, 26th July.

6 July, 1897. The thirty-second meeting of the Commission was held at the offices of the Public Service Board, Sydney, at 10 a.m. on Monday, 26th July, 1897.

Present:—Mr. Joseph Barling, President, and Messrs. G. A. Wilson and James Powell.

The minutes of the previous meeting were read and confirmed.

Certain portions of the Report were reconsidered and amended.

The Commission, at 11:50 a.m., adjourned until the following day, at 10 a.m.

27 July, 1897 The thirty-third meeting of the Commission was held at the offices of the Public Service Board, Sydney, at 10 a.m. on Tuesday, 27th July, 1897.

Present:—Mr. Joseph Barling, President, and Messrs. G. A. Wilson and James Powell.

The minutes of the previous meeting were read and confirmed.

The Report was finally adopted.

The proceedings of the Commission terminated at 10:40 a.m.

ROYAL COMMISSION ON MARINE BOARD.

REPORT.

To His Excellency the Right Honorable Henry Robert, Viscount Hampden,
Governor and Commander-in-Chief of the Colony of New South Wales
and its Dependencies.

MAY IT PLEASE YOUR EXCELLENCY,—

We, the Commissioners appointed by your Excellency on the fourth day of February, and the twenty-fourth day of March, 1897, to make a diligent and full inquiry into the management of the Marine Board of New South Wales, incorporated under the provisions of the Navigation Act of 1871, 35 Vic. No. 7, and to report whether, and, if so, by what means, that Department can be placed upon a more efficient and economical basis, have the honor to submit the following Report:—

1. Owing to the important and extensive nature of the inquiry, the necessity for visiting and inspecting distant branches of the Marine Board Department within the Colony, and also to your Commissioners being engaged upon other urgent matters, it became necessary to request an extension of the time granted within which to make a report, and Your Excellency was pleased, on the 26th day of April, to grant an extension to the 4th day of August, 1897.

Extension of time for report.

2. Our investigation was commenced as early as practicable. Thirty-three meetings were held, 20 in Sydney, and 13 at Newcastle and the more important pilot stations on the coast. Fifty-four witnesses have been examined, and considerable time has also been spent by us, together or separately, in visiting the offices and branches of the Marine Board in the country as well as in Sydney, in order to gain a clear insight into the system and working of the Department, and matters appertaining thereto.

Extent of investigation; meetings held, and number of witnesses examined.

3. We have to acknowledge the willing testimony given by a number of gentlemen of extensive shipping and commercial experience, whose valuable evidence has enabled us to frame many of the recommendations embodied in this Report. In response to a letter intimating to the Wardens of the Marine Board that your Commissioners would be glad to take any evidence they might desire to tender in the matter of this inquiry, the following reply was received:—"That they have administered their Department according to law; and they have no wish to see the Commissioners in respect thereto, unless it is necessary to meet any charges that have been made against them."

Willing evidence given by commercial and shipping representatives; and attitude of Wardens of the Marine Board.

4. Under authority of the Navigation Act of 1871, the Marine Board of New South Wales is incorporated by the Governor by Letters Patent under the Seal of the Colony. The Board consists of seven members, viz., a President and six Wardens. The President and three Wardens are appointed by the Governor, and the other three Wardens are elected for a term of three years, and are eligible for re-election. The election of Wardens is directed to take place on the first Monday in April in every third year. The qualification of an elector is the registered ownership of foreign-going or coast-trade ships employed in trading without or within the jurisdiction,

Constitution and powers of the Marine Board under 35 Vic. No. 7.

Sec. 5.

Sec.

Sec. 9.

jurisdiction, registered at the port of Sydney, or at any other port in the Colony. For not less than—

100 tons, such elector has	1 vote for each	Warden.
250 " "	2 votes	"
450 " "	3 "	"
750 " "	4 "	"
1,100 " "	5 "	"
1,500 " "	6 "	"

and one vote for every 500 tons over 1,500, but the number of votes may not exceed ten for any one Warden.

Sec. 14. An elective Warden must be a qualified elector, and also the registered owner of not less than 250 tons of foreign-going or coast-trade shipping registered in New South Wales.

Secs. 87, 88. In cases of alleged incompetency or misconduct of any master, mate, or engineer, or of shipwreck, collision, or other casualty the Marine Board may institute an investigation or direct a local Marine Board to institute the same. The local Marine Board must have the assistance of a local Stipendiary Magistrate, or, if none, a competent legal assistant. Where there is no local Marine Board, or where the local Marine Board is unwilling to investigate, power is given to the Marine Board to direct an investigation to be instituted before two Justices of the Peace or a Stipendiary Magistrate. This power, we are informed, has never been exercised, all investigations having been conducted either by the Marine Board at Sydney, or the local Marine Board at Newcastle.

Comparison of constitution and powers of Marine Board with those of Great Britain and Australasian Colonies. 5. In support of our principal recommendation hereinafter contained, we venture to give a brief outline of the present constitution and powers of Marine Boards and Courts of Marine Inquiry in Great Britain and the Australasian Colonies.

57 and 58 Vict., c. 60. Sec. 464. Sec. 465. (a) In the United Kingdom, under the Merchant Shipping Act, 1894, in cases of marine casualty involving loss or abandonment of or damage to ships, or loss of life, a preliminary inquiry may be held by the inspecting officer of the coastguard or chief officer of customs residing at or near the place where the casualty occurs, or by any person appointed for the purpose by the Board of Trade.

Sec. 466. Where it appears necessary to such authorised person, he may apply to a Court of summary jurisdiction to hold a formal investigation. A Wreck Commissioner, appointed under the Act, may hold such investigation with the assistance of one or more assessors of nautical engineering or other special skill or knowledge, to be appointed out of a list of persons approved for the purpose by a Secretary of State, such list of assessors to be in force for three years only. Where the investigation involves cancelling or suspension of certificate, the Court shall have the assistance of not less than two assessors. The Court shall, after hearing, report to the Board of Trade.

Sec. 471. For inquiries into the alleged incompetency or misconduct of the holder of a certificate, the Board of Trade may appoint a person or direct a local Marine Board to hold the inquiry. The local Board shall hold the inquiry with the assistance of a Stipendiary Magistrate or competent legal assistant appointed by the Board of Trade, to which body report must be made. The Lord Chancellor may appoint a wreck commissioner or commissioners, so that there shall not be more than three at any one time. A Court of Survey, consisting of a Judge, sitting with two skilled assessors, may survey any ship, inspect and report upon the machinery, equipment, cargo, &c., release or detain the ship, and report to the Board of Trade.

41 Vic. No. 3. Sec. 5. Sec. 37. (b) In Queensland, under the Navigation Act of 1876, the Marine Board is appointed by the Governor, and consists of a Chairman and four other members, such Chairman being the Portmaster of the Colony for the time being. The Board may themselves investigate, or may cause an investigation to be held by Justices, in any case of wreck or casualty to vessels, and incompetency of master, mate, or engineer.

(c)

- (c) In South Australia, under the Marine Board and Navigation Act, 1881, the Governor is empowered to appoint eight persons to be President and first Wardens, the latter to hold office for three years, and, at the expiration of that time, to appoint seven persons to be Wardens, to hold office for three years. Of these seven Wardens, one is nominated by the South Australian Chamber of Commerce, one by the Adelaide Underwriters' Association, and two by the owners of ships registered at any port of registry in the province, who have votes at the nomination of a Warden as follows:—

50 tons, 1 vote ;

250 tons, 2 votes ; and for additional tonnage in the same proportion as in New South Wales. An elective Warden must be a qualified elector and the registered owner of 100 tons of shipping.

A Court of Marine Inquiry is constituted, consisting of the Judges of the Supreme Court of the Province, all Special Magistrates of the Province, and nautical or engineering assessors appointed by the Governor from a list of persons approved of as eligible, and furnished from time to time by the Marine Board.

The Court of Marine Inquiry is authorised to make inquiry into charges of incompetency or misconduct, and also as to shipwrecks and other casualties affecting ships; and for such purposes a quorum of the Court shall consist of a Judge of the Supreme Court with two assessors, or a Special Magistrate with two assessors, according to the nature of the Inquiry.

- (d) In Victoria, the Marine Act, 1890, constitutes a Board consisting of twelve persons, three to be appointed by the Governor, two to be elected by merchants and traders, one by underwriters, two by owners of ships registered in Victoria, one by Port Phillip pilots, one by masters, one by certificated engineers, and one by seamen. The Governor has the power of appointment of President and Vice-President from among the members. The registered owner of ships registered in Victoria of not less than 30 tons has one vote in respect of every 30 tons owned, but the number of votes is not to exceed three. The Board makes preliminary inquiries into wrecks, casualties, &c., and reports to the Court of Marine Inquiry, which consists of the Police Magistrates of Victoria and any number of persons, not exceeding ten, possessed of nautical, engineering, or other special skill, appointed by the Governor. The Court of Marine Inquiry is authorised to hold investigations into all cases so reported; and a quorum of such Court shall consist of one or more Police Magistrates and two skilled members, such members to be nautical or engineering or other specially skilled members, according as the investigation is into a charge against a master or engineer, or into some matter requiring special skill or experience, respectively.

- (e) In Tasmania, under the Marine Boards Act, 1857, the Governor in Council is empowered to establish Marine Boards in Hobart and Launceston, having control of ports, wharves, &c., and all other executive matters within their respective jurisdiction. Local Boards may also be established at out-ports.

By two separate Acts passed in 1885 and 1886 the number of Wardens of the Hobart and Launceston Marine Boards was increased to nine in each case. Two Wardens are appointed by the Governor, two are nominated by the Municipal Councils, and two by the Chambers of Commerce, in each city respectively, while the Mayor, the Collector of Customs, and the Chairman of the Chamber of Commerce are *ex officio* Wardens.

The Enquiry into Wrecks Act, 1874, provides that in all cases of marine casualty involving loss of or damage to ships, or loss of life, the principal officer of Customs, or an officer appointed by him, may make an inquiry, and, either with or without such inquiry, may apply to any two Justices of the Peace or to a Police Magistrate to hear the case. Such Justices or Magistrate may cancel or suspend any certificate.

(f)

42 Vic., No. 35.

41 Vic., No. 54.
Sec. 237.

Sec. 241.

Sec. 244.

60 Vic. No. 37.
Sec. 3.Judicial functions
generally separated
from executive.Desirability of
adopting the same
system.Insufficient
qualifications of
certain elective
Wardens.Small interests re-
presented by elective
Wardens.

(f) In New Zealand the executive functions are carried out by local governing bodies, styled "Harbour Boards," and under the Shipping and Seamen's Act, 1877, in cases of shipping casualties, &c., the Collector of Customs, or any other person appointed by the Minister for the purpose, may make a preliminary inquiry into such casualty, and, with or without such preliminary inquiry, may apply to any two Justices or to a Resident Magistrate to hold a formal investigation. Such Justices or Magistrate shall have the assistance of an assessor or assessors of nautical, engineering, or other special skill or knowledge, to be appointed by them for the purpose. The said Justices or Magistrate, subject to confirmation by the Governor, may cancel or suspend the certificate of any master, mate, or engineer. Where such investigation is likely to involve cancellation of a certificate, one of the assessors to be appointed shall be a person having experience in the merchant service. In 1896 the Shipping and Seamen's Act Amendment Act provided that where any investigation relates to a steamship casualty, and a question may arise affecting the engine department or a person employed therein, at least one of the assessors must hold a first-class engineer's certificate.

6. From this *resumé* of the practice at the present day obtaining in Great Britain, and in the Australasian Colonies other than New South Wales, it will be seen that in all cases, with a partial exception in the case of Queensland, the judicial functions now exercised by the Marine Board of New South Wales are entirely separated from the executive or administrative functions properly devolving upon a Marine Board, and are carried out by a legally qualified Court, duly constituted by Statute, provided over by a Judge, Commissioner, Magistrate, or Justices, assisted by assessors of nautical, engineering, or other special skill.

7. We cannot too strongly express our opinion as to the desirability of adopting the system so universally in vogue, and we are moved in no small measure to make this recommendation by our sense of the inadvisability of placing the judicial control in the hands of gentlemen whose ordinary avocations may bring them into business relations with persons upon whose conduct they are called upon to pass judgment.

We do not desire in any way to reflect upon or impugn the perfect impartiality of the members of the Marine Board, but as a question of principle, we feel that there should be no possible ground upon which complaint of supposed bias could be founded. We are of opinion that if the private interests of any member of a Board exercising judicial functions might in any way conflict with his public duties, such interests form an insurmountable bar to his proper qualification for the performance of such duties.

8. One of the qualifications required by section 14 of the Navigation Act for an elective Warden is the ownership of 250 tons of coast-trade or foreign-going shipping registered in this Colony. We have ascertained that two of the present elective Wardens based their claim to such qualification upon the ownership of the ships "Tinonce" and "Argo." Both of these vessels are, and have been for upwards of two years, mere hulks, that under no imaginable circumstances could be considered as seaworthy, or even capable of being put into that condition, short of entire reconstruction. We understand that the Wardens referred to have, since this inquiry was commenced, obtained the necessary qualification by purchase.

9. With regard to the present elective system, there is still another point to be taken into consideration, viz., the very small maritime interests represented directly by the elective Wardens. They are elected by the owners of locally registered shipping, of which the aggregate annual tonnage entering the ports of the Colony does not exceed 100,000 tons; while intercolonial and foreign shipping, amounting to over one and half million tons annually, is absolutely without direct representation on the Board, although the officers in charge of the vessels are all subject to its judicial control. In cases of collision between locally registered and foreign ships, the question of conflicting interests at once arises, and a most undesirable state of affairs is brought about.

If

If the present system of vesting the judicial control in an elective Board were to be continued, it is clear that every interest should be represented; but, as already pointed out, your Commissioners hold that the whole principle is entirely wrong, and the judicial functions should be carried out by a Bench which would be far above all conflicting interests. This view is supported by the general consensus of opinion expressed by the witnesses examined in this Inquiry, who, in fact, are almost unanimous upon the point, although they represent widely differing interests.

10. In view of the evidently obsolete and undesirable constitution of the present Marine Board, we unhesitatingly recommend that the whole of the judicial functions now carried out by that Board should be vested in a Court of Marine Inquiry, presided over by a District Court Judge, assisted by two or more assessors of nautical, engineering, or other special skill or knowledge, who shall be nominated by the Government and paid by fees. This Court should be invested with power to inquire into and adjudicate upon all marine casualties, misconduct, &c., under sections, 87, 88, 89, and 90 of the Navigation Act, involving collision, loss or abandonment of ships, or loss of life. A duly authorised registered list of such assessors should be prepared annually, from which a panel could be selected by the Judge for each inquiry. The list should be published or exhibited, in order that the parties interested may have an opportunity of exercising the right of challenge.

Judicial functions should be carried out by Court of Marine Inquiry.

Your Commissioners do not think that the additional work thus thrown upon the District Court Judges would necessitate the appointment of another Judge. The number of inquiries into marine casualties and charges of misconduct held by the Marine Board at Sydney, during the period of five years from 1892 to 1896 inclusive, was 92, or an average of a little over 18 per annum. These inquiries occupied the Marine Board at 220 sittings, or an average of 44 per annum. Of these sittings, however, a considerable proportion were merely formal meetings for the purpose of delivering reserved judgments. During the past ten years 65 inquiries have also been held at Newcastle.

The system recommended would be of very great advantage from the facilities which would be afforded for conducting an Inquiry in any part of the Colony where it might be required, and where witnesses could be at once obtained, thus effecting a saving both of time and expense.

11. The executive or administrative functions of the Marine Board, consisting of the collection and disbursement of moneys, issue of certificates and licenses, inspection of ships and machinery, control of the Pilot Service, management of light-houses and lightships, care of harbours, beacons, buoys, and signals, and all other administrative details, should be placed under the control of an Advisory Board, consisting of three members—a Superintendent of Harbours, Lights, and Pilots, as Chairman, who shall perform the Departmental duties now devolving upon the President of the Marine Board; the Shipping Master, and the Engineer Surveyor to be *ex officio* members. This Board should meet as often as occasion may require for the issue of certificates and the performance of other matters of executive detail now performed by the Marine Board.

Advisory Board to be appointed to perform executive functions.

12. In connection with the foregoing recommendations we quote the following salient points of evidence:—

Salient points of evidence.

A. W. Meeks, Esq., Chairman of the Chamber of Commerce, said:—"The present Constitution is wrong in principle. I doubt whether a Marine Board is wanted. The administration is really in the hands of the President and Secretary; the other gentlemen on the Board are only for inquiries about disaster, &c., which would be better dealt with by a Judge or Magistrate as Chairman, and such assessors as the case might require. I would advise the nomination of a formal panel, and take them in rotation as the Judge might require their services."

F. W. Jackson, Esq., Manager of the U.S.S. Co. of N.Z.:—"A Board presided over by a competent legal authority, say, a District Court Judge, with selected assessors, would be a much more satisfactory tribunal than the present."

John See, Esq., M.L.A.:—"The most important point is to get these inquiries conducted by impartial people. The Court should be exactly like the Courts of law—judicial. I think that the Board should be a nominee Board entirely. Three men would be ample, a first-class nautical man, a first-class engineer, and a man something like one of our District Court Judges as Chairman. You would get rid of all that trouble about shipowners, sailors, engineers, and merchants electing men to the Board."

Bruce B. Nicoll, Esq., Jate Shipowner:—"I do not think a Board is wanted. Instead of a Board, I think it would be quite sufficient to have a harbour-master as head of the branch to supervise pilots, lights, and harbours. I do not think the elective principle is the right one. I think the judicial

judicial functions of the Board should be separated from the executive. They inquire first, hear the case, summon a man to answer a charge which they prefer, and sentence him themselves. I approve of a Court presided over and directed by a Judge or Stipendiary Magistrate, with nautical or other assessors. I think the Board should be nominated, and an Appeal Court constituted."

Captain Brooks, Lloyd's Surveyor, Newcastle:—"I do not think the elective principle has been a success as representing the general interests of the Colony. Outside of Sydney is not represented at all."

W. B. Sharp, Esq., Newcastle:—"Judicial inquiries should be free from political influence. Inquiries should be conducted by a District Court Judge, with two nautical assessors. In New Zealand the Courts are under judicial jurisdiction, and assessors are appointed. In England similar provision is made. I think this plan would be equitable for all concerned."

The President, Chamber of Commerce, Newcastle:—"I am decidedly of opinion that the Marine Board is not the proper tribunal for trying cases. I am in favour of a Marine Court presided over by a District Court Judge with assessors. Such a court would deal with all marine disasters. The local board can act as a board of inquiry, but it cannot issue a license certificate. Things were very much better done before we had a Marine Board."

T. M. Davis, Esq., M.L.A.:—"I recommend the complete severance of the judicial from the executive functions. The executive functions should be entrusted to an officer subject to the Treasurer. I would not continue the Board. I would have an executive officer. I would take away the elective principle altogether. If a Board is considered necessary, it should be an Advisory Board. Have two nautical assessors who will give to the Judge a proper nautical outline of what is right and what is wrong, to cross-examine witnesses and bring out the truth, and let both of them sum up, and let the Judge decide on points of law. The assessors can do the technical work between them and let the Judge do the legal. I think this proposal would be an immense improvement, a benefit to all classes. I unhesitatingly say it would be much better than the present Board. It will be less expensive, and it certainly cannot give less satisfaction."

Mr. Cruickshank, Engineer-Surveyor, Marine Board:—"I think two nautical assessors would under a Judge, be better than the present arrangement. In many cases our wardens cannot sit because they are interested personally, and it is the opinion of those who are capable of judging that representatives ought not to be shipowners, because they are personally interested."

Captain A. C. Turner, Managing Director of the Illawarra Steam Navigation Company:—"The Marine Board is a body that is nearly obsolete now. . . . We should have a Board constituted somewhat after the lines they have in the Old Country and in many other countries. Where the certificate of a master or a mate is to be dealt with, it should be dealt with by two nautical assessors, men experienced in marine matters, presided over by a Stipendiary Magistrate to assist them on any legal point upon which they might require his assistance. The Marine Board is composed of persons who are all more or less interested in business—some ship chandlers, some marine surveyors, others on Boards of steam companies, and such like, which must clash with the proper working of the Board."

Mr. Hare, Registry Clerk, Customs Department:—"The bulk of the votes for Wardens are held by the owners of small vessels. Two of the elected Wardens hold qualifications given by vessels not sea-going. The Revision Court sits annually, and is conducted by two justices. Appeals are not frequent; I have never known of one during the six years I have been in charge. No interest is taken in the courts."

Mr. Walford, Tide Surveyor, Customs Department:—"Both vessels (the "Tinonee" and the "Argo") are quite unfit for sea. The decks are blown out of the "Argo" from end to end, and I think nearly every deck beam is broken. She has been laid up for about four years. They are using the "Tinonee" as a hulk for any spare gear at the dock. She is not in a sea-going condition. She has been laid up for about four years."

Captain Hixson, R.N., President of the Marine Board:—"The tonnage not registered in Sydney is not represented at the Board. The large mail steamers have no representation. The British and foreign shipping visiting our ports is about 1,500,000 tons, and the Colonial registered about 90,000 tons. Our own shipping is our first care; but I admit that the money spent in the port by British ships is very much greater than that spent by Colonial ships."

II. *The Officers and Employees of the Marine Board; their salaries, emoluments, and duties.*

13. Your Commissioners have to report that in their opinion the present salaries and wages paid to officers and employees of the Marine Board are in some cases excessive, when the nature of the duties performed is taken into consideration. They are much higher than those paid to officers in other Departments, and these salaries, not being controlled by the Public Service Board, present a contrast when compared with the salaries paid throughout the Service generally, which is undesirable and

Salaries and wages excessive. Unsatisfactory effects of the increment system.

and unfair. The Marine Board, under the powers conferred by the Navigation Act, recommend for appointment their Secretary, Surveyors, Inspectors, and other officers at such remuneration as the Governor may think adequate.

The Governor, with the advice of the Executive Council (13 August, 1885), approved of certain Regulations concerning the officers of the Marine Board, not classified under the 7th section of the Civil Service Act of 1884; fixed the salaries—minimum and maximum; the value of quarters, fuel, and light, and the annual increments payable to each officer. The increment system is, in the opinion of Captain Hixson, still in abeyance, and he wishes to continue the increments as a contract with all concerned. It is unnecessary for us to dilate here upon this contention, and the demands which would be made upon the Government if it were upheld. The increment system is answerable for much confusion and dissatisfaction throughout the Marine Board Department. There are twelve pilots employed at Sydney and Newcastle with salaries varying from £200 to £398 per annum. At the present time four pilots receive £398 per annum each, three receive £353 each; there are one each at £250, £218, and £209 respectively, and two at £200 per annum each. Several of these officers entered the Service under the Regulations of 1885, expecting to receive the annual increments of £10 until the maximum pay fixed by the Regulations was reached. The duties performed by the pilots are of the same kind, and the same responsibilities attach to all. The pilots at £200 and those under the maximum complain that their salaries are not only inadequate, but that the Regulations under which they accepted their positions have not been complied with. The salaries of the second-class pilots employed at the out-ports vary from £240 to £150. These salaries are very unsatisfactory to the pilots, whose contention is that they expected the salaries to be increased according to the Regulations.

The salaries now paid by the Marine Board are far in excess of the salaries in the year 1883 for services of the same kind. This is partly due to the increment system authorised by the Treasurer in 1885.

It may be pointed out that the Regulations above referred to provided for comparatively high maximum rates of pay; and in the case of boatmen, an unnecessarily brief period elapsed between entering the Service and qualifying for maximum pay, the period in this case being only five years, while pilots could only attain the maximum salary after twenty years' service.

14. We are informed by Captain Hixson that many of his officers entered the Service late in life, and that the larger number of the men employed by the Board had passed the prime of life before they entered the Service. There are 32 men over the age of 60 now in the Department, of whom 13 are over the age of 65. Of this number, the Marine Board has recommended the retirement of 7, ranging from 65 to 76 years of age, but the Public Service Board thought it undesirable to move in the matter pending the report of this Commission. The majority of the other 25 who are over 60 should also retire, but there are two or three exceptions, active men who are still well fitted to perform their duties. Advanced age of officers.

15. We would call attention to the absence of any systematic check upon the Departmental accounts, other than the annual check by the Treasury Inspector and the Audit Department. Want of a Departmental check upon accounts.

The frauds carried on for a considerable period by a former Accountant of the Marine Board conclusively pointed to the necessity for some effective system of control over the accounts. No effort appears to have been made in this direction, and we have the evidence of the Secretary (Commander Lindeman) showing that he has no control over, or responsibility in connection with, the accounts; and that of the Accountant himself, who states that beyond the initialling of his pass-book by the President, his accounts are not in any way controlled or checked, except by the Treasury and Audit Department officers at long intervals. We consider that in the light of previous experience such a state of affairs should not be allowed to continue.

16. We have merely touched upon the lines where reforms are needed in regard to the office management and the salaries paid to officers, and advise that, in order to secure a proper and effective reorganisation of the Department, it should be placed upon the same footing as other branches of the Public Service. Marine Board should be placed on same footing as other branches of the Public Service.

Salient points of evidence.

17. The following are the salient points of evidence in connection with the foregoing recommendation :—

Captain Hixson, R.N., President of the Marine Board :—“ A great many officers are over the age of 60, having entered the Service late in life. The larger number of the men employed by the Board have passed the prime of their lives in the Mercantile Marine Service before they entered the service of the Board.

“ The system of increments was stopped in my Department by Ministerial authority ; it is still in abeyance ; the men have what they consider to be a claim.

“ The increment system is necessarily continued by the Marine Board, although increments under the Civil Service Act were abolished in October, 1886.

“ The Secretary has no control over the officers, save in my absence. I do not find any inconvenience in checking the expenditure (£50,000). I am sure the Secretary has less time to do it.

“ Our maximum wages would be considerably higher than the maximum of the wages paid in the merchant service.”

Commander Lindeman, Secretary to the Marine Board :—“ I never had any supervision over the accounts. If I had been responsible to the President the frauds mentioned would never, I think, have gone on. For a whole year the late Accountant was not checked, except by the President. I did draw the President's attention to the unsatisfactory state of the Accountant's work. I have no control.”

Mr. Rule, Accountant :—“ There is no inspection except that of the Treasury Inspector who visits the office about every twelve months. There is no other check. Captain Hixson initials the pass-book at the end of the month. He does not check at all, he merely looks at it and initials it. He does not compare it with any documents. The collections in my office are about £1,600 per annum. Captain Hixson signs the salary abstracts which I prepare. He does not demand anybody's signature as a guarantee of correctness. There is practically no check upon me, except the Treasury and the Audit Office checking. Captain Lindeman has no control whatever over the accounts.”

III. The Pilot Service.

Efficiency of service.

18. The Pilot Service appears to be in a satisfactory state of efficiency, both at Port Jackson and at the out-stations. The necessity for a steam pilot service at Newcastle was very strongly urged upon us, and is very apparent, but as the “ Ajax ” has been recently selected for service at that port, it is unnecessary to refer any further to the matter in this Report.

Excessive cost.

19. While recognising the general efficiency of the service, we are compelled to point out that it has been established and is being maintained at a cost altogether disproportionate to actual requirements and the benefits accruing from its operations. The pilot steamer “ Captain Cook ” is a most expensive vessel, having cost £22,500. Her general appearance, fittings, and appointments are those of a private steam-yacht, rather than a serviceable pilot boat. The total annual cost for salaries and wages amounts to about £3,300, inclusive of the wages of four boatmen employed on a steam-launch used for taking pilots from outward-bound vessels. The salary of the master, £416 per annum, is much higher than the pay of masters in first-class vessels on the coast. The master, mate, engineers, and pilots are paid a liberal victualling allowance of 18s. per week each, and a cook and providore is also paid £143 per annum to make all necessary purchases and arrangements. The sailors are paid on a less liberal scale, and rations are not found for them. We are of opinion that the victualling could be carried out much more economically by contract. Although maintained at such a heavy cost, the “ Captain Cook ” is idle for the greater part of her time. During the month of March last she was away from her moorings for thirty-eight hours only. That the men are idle fully two-thirds of their time is admitted by Captain Hixson.

Pilot steamer should be in charge of a pilot.

It has been suggested that a considerable saving could be effected by placing the pilot steamer in charge of a pilot instead of a master ; and that the pilot last on board should be in command of the vessel until his turn comes for a ship, and be replaced in due order, the first officer, who is also a qualified pilot, being in return command when the two pilots have been placed in charge of vessels.

When the Navigation Acts Amendment Bill was before the Legislative Council in 1894, a comparison was instituted between the system of a Government Pilot Service as adopted in this Colony and the New York system of licensing pilots, who compete for employment.

We carefully considered this aspect of the question, and came to the conclusion that, although the licensing system may be admirably adapted to a country where the population is large, and the shipping trade correspondingly so, we think it would

not

not be wise to wholly depend upon such a system; but, by reference to the following paragraph, it will be seen that we recommend the grafting on to the present system of a modification of the licensing system.

20. We are informed that the cost of the Port Jackson Pilot Service is equal to 57 per cent. of the whole; that of Newcastle, 27 per cent.; and that of the out-stations is represented by the remaining 16 per cent. In 1896, 629 vessels were attended by pilots at Sydney, and 837 at Newcastle. There are twelve pilots employed—five at Sydney and seven at Newcastle. It will thus be seen that the number of vessels to each pilot for the year was 126 at Sydney and 119 at Newcastle, or about one vessel per pilot every third day; but at Newcastle the pilots are also engaged in the harbour removals of vessels, which are much more frequent than at Sydney. We consider that the number of staff pilots might be reduced, and those not retained on the staff might be employed for occasional services as licensed pilots, and paid at per ship or otherwise.

Work performed by pilots. Staff might be reduced.

21. There appears to be a considerable loss of revenue owing to the irregular and unauthorised removal of vessels in and from the harbour. It will be the duty of the Superintendent of Harbours, if such an officer be appointed, as suggested in paragraph 11 of this Report, to stop this leakage of revenue.

Loss of revenue.

22. In connection with the foregoing recommendations, we quote the following salient points of evidence:—

Salient points of evidence.

Captain Hixson, R.N.:—"If you take the intermediate wage of the captain and officers of the 'Captain Cook,' I do not think they are high, but if you take the maximum they are. I have no doubt that you could get men to fill these offices at the salaries named, viz.:—mate, £15; second mate, £12; fireman, £10; seamen and boatmen, £9, per month. The men are idle much longer than they are engaged—perhaps two-thirds of their time idle. (Captain Cook's crew.) There are times when all hands are more or less unemployed."

F. J. Thomas, Esq.:—"I think £416 a year, and 18s. a week, is too much for the master of the 'Captain Cook,' considering that men of equal qualifications can be obtained for less in other services."

J. H. Storey, Esq.:—"I was a member of the Civil Service Commission. We thought the officers on board the 'Captain Cook' grossly overpaid."

Captain Creer, Master of the "Captain Cook":—"I cannot see that in any single case my officers are overpaid. I would not reduce the number, nor advise the reduction of wages."

Captain Cross, Newcastle:—"I think the duties of the Newcastle are very much more onerous than those of the Sydney pilots. I think the master of the 'Captain Cook' is very well paid. I consider the master of the 'Ajax' well paid at £250 per annum, and 18s. per week allowance."

Captain Hixson, R.N.:—"The amount paid for victualling the 'Captain Cook' (£470 per annum) does seem large for seven people. It would, perhaps, be more economical to put all hands on sea-going wages, and feed them by contract. The Pilot Service outside the Port of Sydney is carried on at a considerable loss."

IV. Lighthouses, Lightships, and Beacons.

23. The salaries of lightkeepers are not paid in accordance with the relative importance of the lights. There should, in our opinion, be a classification of the lights, taking into consideration their relative value to shipping, isolated or dangerous position, &c., and the salaries should be fixed in accordance with the nature of the duties.

Necessity for classifying lights.

24. A large proportion of the lightkeepers are men of advanced years. It would be well to fix a limit of age for all lightkeepers in accordance with the provisions of the Public Service Act.

Advanced age of lightkeepers.

25. The Members of the Marine Board make an annual tour of inspection of the lighthouses and pilot stations. We are informed that it not infrequently happens that some of the lighthouses cannot be visited owing to bad weather, and, consequently, they sometimes remain for two years without any inspection, being visited only by the steam-tugs which are under contract to carry supplies to them. Such a condition of affairs should not be allowed to continue, and we recommend that it should be the duty of one of the responsible officers of the Department to visit all lighthouses and pilot stations at irregular intervals at least once in every year, thus ensuring a far more efficient supervision. This could be accomplished without an addition to the staff.

Insufficient inspection of lighthouses and pilot stations.

Excessive cost of
lightship "Bramble."

26. The lightship "Bramble," on the Sow and Pigs, is maintained at what your Commissioners consider the excessive cost of £800 per annum in salaries and quarters. A suggestion has been made to us that it would be possible to connect the Macquarie and Hornby Lights, and a fixed light on the Sow and Pigs by cable, and light all three by electricity generated at the one station. Whether this scheme will be found practicable or not, there is no doubt that the present cost of maintenance of the lightship might be considerably reduced without in any way impairing its efficiency. Gas is supplied within a few yards of the Hornby Light, and it appears desirable that it should be laid on for lighting purposes.

Evidence.

27. We quote the following evidence in connection with the foregoing recommendations:—

Captain Hixson, R.N.:—"It has been the practice of the Marine Board to visit the lighthouses and stations annually with our secretary. We used to pay £400 for the steamer, and the unofficial members of the Board were paid 15s. per day as travelling allowance. The lighthouse-keepers and their assistants look forward to the visit of the Board, and have everything shipshape. I think men might be employed up to 65 years of age at lighthouse work, except at places like Solitary and Montagu Islands."

Captain A. C. Turner:—"Touching the lighthouses, the inspection is almost a farce. The people at all the lighthouses know a month before that there is going to be a picnic, and, of course, everything is got in order for the inspection. It should be done as it is in the other colonies. The Superintending Engineer goes round occasionally when he is not expected, and he sees things as they are, and not as they are got ready for inspection by the Marine Board."

Bruce B. Nicoll, Esq.:—"I think there should be an Inspector of Lighthouses and Pilot Stations, to go right along the coast. They want looking to occasionally. I think these places should be visited more than once a year."

V.—The Tug Service.

Tug Service should
be amalgamated
with Pilot Service.

28. The tug service at the Northern Rivers has received our earnest attention, and we are of opinion that it could be rendered very much more useful, both to the settlers and shipowners trading to those rivers, by combining it with the pilot service in such a manner that the whole would be directly under Government control. It has been suggested to us that it was an unnecessary step on the part of the Government to take up such an expensive work in the first instance, as it was carried on for many years without any assistance, and wherever trade appeared vessels were found ready to undertake the necessary towage work without subsidy; but your Commissioners think that, taking into account the great importance of the trade of the flourishing districts drained by these Rivers, and the comparative absence of railway facilities which other parts of the Colony enjoy, a wise policy has been pursued in establishing a tug service. They, however, consider that each tug should be entirely under the control of the Government pilot and his crew.

Advantages to be
gained.

29. The advantages to be anticipated from a combined pilot and tug service are very great, both on the grounds of economy and efficiency. As at present maintained, the two services are carried on at a very heavy cost to the Government, and, in the case of the tugs, to shipowners also. Both services are maintained for the same object, viz., to afford facilities to navigation; but being under separate control, the one of the Government and the other of private enterprise, there is a frequent clashing of interests, resulting in friction between the pilots and the tug-masters. The object of the latter is to earn what they can for their principals in addition to the subsidy, and to avoid risk of damage to their vessels as far as possible. It can therefore be easily understood that, in attempting to do the best for their employers, the tug-masters come into conflict with the Government pilot, and thus the public interests suffer. The evidence taken by your Commissioners conclusively shows that it is very desirable in the best interests of the public that the two services should be combined and placed under control of the pilots.

Greater usefulness of
combined services.

30. It has been proved to your Commissioners that the northern river pilots are in most instances unemployed for a large proportion of their time, and they are not only willing, but anxious to do more work. If they had a steam tug at their disposal they could, in the intervals of towing work, perform the duties of sounding and buoying the river bars, attending to leading lights, and other necessary details, with far greater expedition than is possible at present. When not required for the work of the Marine Board, the tug would also be available for occasional service in connection with the Public Works Department.

31. The following evidence is quoted in connection with the foregoing Evidence. recommendations :—

John See, Esq., M.L.A. :—“The pilot men have not got enough to do. The Government should provide the tugs, using the present pilots' crews to man the tug boats. There would be a considerable saving, and a much better service for the shipowners and steamers. The North Coast Company paid the tugs £1,025 in 1896. The present charges are excessive. I give my cordial support to having the tugs (Government) on the rivers. The life of a tug on the Richmond would be about fifteen years. I do not think the tug service as capable and efficient as it might be, unless the boats are absolutely under the control of the pilots. At present it is a money-making business, and it ought not to be. I am sure that with what they would save, and with the towages earned, the Government would make an enormous saving on the whole service. I would propose that the tug boat be the pilot boat.”

J. H. Storey, Esq. :—“The tugs are absolutely necessary. I have been long of opinion that tugs should be the property of the Government, manned by the pilot and a proper crew. Whenever vessels get into difficulties, the tug owners make special charges for any services they render, over and above the tonnage charge.”

T. R. Allt, Esq. :—“The tug service and the pilots do not work well together. The pilot should have full charge of the tug. Whilst the pilot and the tug services are separate, there will always be trouble on the rivers. During the last five years we have paid the tug services £3,220. Most of the tugs draw six feet. The service at present is very unsatisfactory. I am strongly of that opinion.”

Bruce B. Nicoll, Esq. :—“The pilots are generally at loggerheads with the tug-masters. The pilot has not the slightest control. He may want to go out and sound the bar, and because it is rough the tug-master may refuse to go. I used to pay the tug at the Richmond £1,500 a year for towages. I have known ten or twelve vessels waiting at the heads to go out, and the tug has gone to Lismore to tow a vessel 65 miles. The pilot could do nothing. I have known the same kind of thing to happen at the Tweed. The Government should own the tugs, and have them under the control of their officers. I do not think it would be more expensive than the present system. A boat suitable for the Richmond could be built for £3,000; the boats for the other rivers need not be so costly. The cost of the crew would not come to the cost of the subsidy; if you put the pilot's crew on it would be much cheaper. There always will be friction between the pilots and the tug-masters. The boiler of such a tug as you describe would last ten years, and the hull twenty years. The machinery, with care, would last all the time.”

Captain A. C. Turner :—“The principle of subsidising tugs for the pilot service is a very good thing for the owner of the boats. We used to pay in the olden days, and now the Government are good enough to step in and pay the subsidy, and so reduce the towing expenses.”

T. M. Davis, Esq., M.L.A. :—“The Government might take up the tugs. I think it would be more economical to subsidise boats. If the Government had the tug the pilot would be the master. At present the pilot and the tug captain get at loggerheads. The captain of the tug-boat is the real captain.”

R. R. P. Hickson, Esq., Under Secretary for Public Works :—“I have always held that there was a very large unnecessary expense in connection with the pilotage and the tug service of those ports. With regard to the northern rivers, it is, of course, necessary to have a steamer, but I think the steamer and the pilot service ought to be amalgamated. Where the tug-boats are required they should be placed under the charge of the pilot, and have only the one service. I think it would be better for the Government to supply the tugs themselves. I am quite satisfied that the service could be kept up at the present cost of the pilot service alone, if the pilots had the tugs.”

T. W. Keele, Esq., District Engineer, Ballina, Richmond River :—“It would be more reliable if the Government owned the tugs and utilised the services of the pilot as master and the boatmen as crew. I think the sole control should be in the hands of the pilot. I have always been of that opinion; it would save all this friction and would give a better and, I think, a cheaper service. They have a very good man on the tug, but he is not a trained seaman; he is a landsman. The pilot might think it right to go out and sound the bar, and the master of the tug, representing the owner's interest, might think it wrong. If the pilot had full control he would have all the power and all the responsibility.”

Pilot Thompson, Wollongong :—“I have not had occasion to take the tug out once this year to date for our own purposes. Tug subsidy, £28 per month.”

Captain McAuley, Pilot, Yamba :—“I do not see why we could not work a tug of our own with the station crew. I think it would work. The master of the tug and myself have had little differences—a little friction—that would all be removed if we had our own tug. I think there is no question that we might work a tug of our own—it can be done all right by my crew.”

Captain Fraser, Pilot, Richmond River :—“I think the tug must have got £1,500 beyond the subsidy in 1896, outside what she received from the Dredging Department. There is always a certain amount of friction with the master of the tug. The insurance is a heavy item; it is against the boat going out in bad weather when she is most wanted.”

C. W. Darley, Esq. :—“There are some most active and efficient pilots, and men, who, if they had charge of the tugs, would get good work out of them.”

Captain Hisson, R.N. :—“I am adverse to any changes in the present system. If you give £10,000 to the Richmond you would have to give it to every other river in the country. I think it would be a very great mistake to introduce such a plan as that you suggest. Private enterprise does the work as effectually as the Government could do it. I have seen many of these schemes—they look well on paper—but they do not turn out well. I am very adverse to it. There is really no necessity for a tug at the Clarence River.”

VI.—Miscellaneous.

Present limited powers of Newcastle Local Marine Board.

32. Very great stress was laid by the members of the Local Marine Board and the members of the Chamber of Commerce, at Newcastle, upon the limited powers of the Local Marine Board as at present constituted. Complaints were made that for such a simple matter as the issue of a waterman's license, it was necessary to remit the fee to Sydney and obtain the signatures of the principal Board to the license before it could be issued. Such restricted powers appear to be altogether inadequate, when the importance of the port of Newcastle is taken into consideration. Should the recommendation of your Commissioners with regard to the establishing of a Court of Inquiry be acted upon, such Court will of course be opened at Newcastle for the purpose of conducting local inquiries.

We quote the following evidence in regard to the Local Marine Board at Newcastle :—

Captain Cross, Chairman of the Local Marine Board :—“ We have no powers. We are subordinate to the Board in Sydney. We cannot issue certificates of any kind. We cannot issue a waterman's license. We send the fee to Sydney, and when the license is signed by the President and members of the Board it is returned. It is very irksome to be in such a subordinate position, having to refer everything to the Sydney Board.”

Duncan J. McLean, Esq., member of the Local Marine Board :—“ The merest trifle has to be referred to Sydney. The Board, as now constituted, is not satisfactory to the public at Newcastle. With the experience I have gained, I do not consider it desirable to continue the Local Board as it is.”

Necessity for greater ballast accommodation at Newcastle.

33. The urgent necessity for greater ballast accommodation was prominently put before us at Newcastle. Great dissatisfaction has been expressed by the shipping community with regard to the limited berthing space now available for vessels discharging ballast, there being frequently three or four ships abreast, either waiting their turn or discharging over the intermediate vessels.

Life-boat Services.

34. The Life-boat Service is apparently in a most unsatisfactory and inefficient condition both at Port Jackson and Newcastle. When your Commissioners were visiting the latter place, evidence was given that the life-boat had for some time been considered absolutely dangerous; but since that visit we are informed that a new life-boat has been placed on the station. We are of opinion, however, that there is far too little practice on the part of the crew, and that in proportion to the work done the present cost is excessive. Twenty-two boatmen are paid £12 per annum each, and a coxswain £50 per annum, for manning the life-boat, which appears to have been taken out “ about once a month ” or “ about twice a quarter,” according to two different accounts.

The Port Jackson arrangements are of a surprisingly haphazard nature. A signal is hoisted on the flagstaff at irregular intervals to notify to casual fishermen and others that a crew is required to take the life-boat out for exercise. As 10s. is paid to each of the crew it is not difficult to secure a complement, but whether the same spirit of competition for a place in the boat would be shown in a case of shipwreck in heavy weather is altogether a matter for conjecture. Captain Creeer as “ organiser ” receives £1 each time the boat goes out.

In pleasing contrast to the foregoing we found that the pilot at the Clarence had improvised a life-boat by fitting a whale-boat with air-tight tanks. This boat is manned by the pilot and his boatmen, and they neither ask nor receive any special pay for this duty.

Obstructions to navigation of Northern Rivers.

35. The Mayor of Lismore called our attention to the difficulty of keeping the waters of the north arm of the Richmond River in a clear state for navigation, and of preventing the blocking of the fairway by timber rafts and fallen timber. He pointed out that, in order to procure the prosecution of offenders, it was necessary to refer each case to the Marine Board at Sydney, and obtain authority to take proceedings. Valuable time was thus lost and the difficulty of securing a conviction increased, while the obstructions remained as a menace to navigation. He suggested that some officer residing in the district should be appointed as representing the Government, with power to remove obstructions and take proceedings against

against offenders. We consider that it is necessary to provide for either executive or legislative action to empower local officers to take immediate steps in such cases. The Navigable Waters Protection Act of 1862 contains provisions regulating the discharge of ballast and preventing any obstruction being placed in navigable waters. The administration of this Act was entrusted to the Public Works Department, which provided a wholesome check; but after the Navigation Act came into force it was decided that the Marine Board alone had jurisdiction in respect of the navigable waters. Since that decision no further action appears to have been taken by the Public Works Department. The Engineer-in-Chief for Public Works informs us that his Department maintains an expensive staff to take snags out of the Northern Rivers; that residents fell trees into or across the rivers, and men have to be sent to remove them. Reports have been made to the Marine Board, but "their system is so cumbersome and troublesome as to be practically unworkable."

The powers conferred by the Navigable Waters Act of 1862 might be revived, and the administration carried out, as before, by the Public Works Department.

36. Dissatisfaction has been expressed to us by seamen and boatmen that a certain preference is shown towards some of the boatmen (18 at Sydney and 2 at Newcastle) who are each supplied with two suits of uniform every year. These boatmen, we are informed by Captain Hixson, are employed in conveying distinguished visitors about, and it is considered necessary that their appearance should be presentable. Your Commissioners are of opinion that, as the uniform is supplied to such a large proportion of the men, it should be supplied to all, which would, at a small expense, remove a cause of complaint. Uniforms for boatmen.

37. Steamship owners are of opinion that the law requiring that all passenger-carrying steamships shall be surveyed twice at least in every year, at such convenient times as the Marine Board may direct, is harsh and oppressive. It is urged that the opening up of machinery every six months is not necessary, and that the delay caused by such examinations inflicts serious loss upon owners. It is pointed out that the present active competition compels them, in their own interests, to maintain their vessels in a high state of efficiency, and that consequently the half-yearly inspection is both harassing and unnecessary. The Navigation Act gives the fullest power to the Marine Board to suspend certificates at any time, and in other ways to protect the travelling public. The additional fees imposed by the Act 60 Vic. No. 36 have largely increased the cost of these frequent examinations, and consequently with the added delay caused by the half-yearly overhaul, and the loss of the earnings of the vessels, the charges against passenger steamships have become greatly increased in this Colony.

38. The following evidence is quoted as bearing upon the subject of periodical surveys:— Evidence.

F. W. Jackson, Esq., Manager, Union Steamship Company of New Zealand:—The delay is anything from three days to a week. We, as well as other companies, feel it very much, because, for our own sakes, we keep our steamers in good order. We do not want to court a break down. The engineers on board are supposed to, and they do, keep the vessels in good order; but, according to the laws here, we have to stop our ships every six months, in order that the authorities may examine them. The Government engineers at ports of call, and other authorities, can go on board the steamers, and satisfy themselves whether or not the vessels are being kept up; and, if they have reason to find fault, they can call upon the owners at any time to put the steamers into seagoing order. The fees are increased also—an additional £1 is charged for every 300 tons or part thereof; that is somewhat a tax upon us. One steamer the other day cost us £10 or guineas, instead of £4—the maximum charge before November, 1896, for certificate fees.

Captain A. C. Turner, Managing Director of Illawarra Steam Navigation Company:—In New South Wales certificates (steam) are granted for six months. That was necessary with the old boats; but now, owing to competition, an owner cannot allow his boats to get into disrepair. It is the owners' interest to keep the boats in good running. We find it rather irksome opening everything up every six months, and we think it is unnecessary.

Mr. D. Cruickshank, Chief Engineer Surveyor:—"We are compelled to have examinations every six months. Of course, we have the power to make an examination as often as we like. It is necessary to have frequent examinations of small steamers because there is no skilled labour in them, but in the large ships there is always skilled labour. The shipping people have complained several times. I regard that as a defect in the Act. I think, with provision to meet special cases, an annual examination would be sufficient."

SUMMARY OF RECOMMENDATIONS.

To sum up we recommend :—

1. That the judicial functions of the Marine Board be separated from the administrative functions; that a Court of Marine Inquiry be constituted, to be presided over by a District Court Judge, assisted by two or more assessors of nautical, engineering, or other special skill or knowledge, nominated by the Government, and paid by fees; and that the judicial functions of the Marine Board be vested in such Court of Marine Inquiry.
2. That a Marine Board be nominated, consisting of a Superintendent of Harbours, Lights, and Pilots as Chairman; the Shipping Master, and the Engineer-Surveyor, who shall carry out the administrative functions of the Department.
3. That the Officers of the Marine Board Department be graded at salaries upon a scale uniform, as far as possible, with that current in other Branches of the Public Service.
4. That several officers of advanced age be retired.
5. That a systematic check upon the Departmental Accounts be instituted.
6. That the lighthouses and pilot stations be inspected at irregular intervals by a responsible officer of the Department.
7. That the Public Works Department be re-invested with the necessary authority to deal with obstructions in Harbours, Rivers, and Creeks in manner provided by the Navigable Waters Act of 1862.
8. That the Tug and Pilot services be amalgamated and placed under control of the pilots—the service to be carried out by steamers either owned or chartered by the Government.
9. That the Life-boat service be reorganised.
10. That the Navigation Act, 35 Vic. No. 7, sec. 29, be amended and made to accord with the Merchant Shipping Act of the United Kingdom, and the Acts of other of the Australian Colonies, which require that steamships intended to carry passengers shall be surveyed once at least in each year.

In closing our Report we desire to state that our colleague, Mr. T. A. Coghlan, left the Colony shortly after the work of the Commission began, and consequently he has not had an opportunity of acting, except during two of the earlier sittings. We also desire to acknowledge our obligation to Mr. A. F. Basset Hull, the Secretary of the Commission, for the zealous and efficient service rendered to us in carrying out the details of the Commission.

We have the honor to be,

Your Excellency's most obedient Servants,

J. BARLING, President.
G. A. WILSON,
JAMES POWELL.

A. F. BASSET HULL, Secretary.

Sydney, Tuesday, 27th July, 1897.

WITNESSES EXAMINED.

1. Captain Francis Hixson, R.N., President of the Marine Board.
2. Commander George Sidney E. Lindeman, R.N., Secretary of the Marine Board.
3. Francis Rule, Accountant, Marine Board.
4. James Edie, Government Shipping Master.
5. William Douglas Cruickshank, Chief Engineer and Surveyor, Marine Board.
6. John Henderson Bedford, Examiner in Seamanship, Marine Board.
7. Lion Henry Walford, Tide Surveyor, Customs Department.
8. William Hare, Clerk in the Registration of Shipping Branch, Customs Department.
9. Joseph Leddra, Superintendent of the lightship "Bramble."
10. Joseph Creer, Master-in-charge of the Pilot Service.
11. Herbert Orton, Cook and Provodore, "Captain Cook."
12. James Fotheringham, Chief Officer, "Captain Cook."
13. Andrew William Jack, Senior Pilot, "Captain Cook."
14. Edward Brodrick, Chief Engineer, "Captain Cook."
15. James Nuth, Fireman, "Captain Cook."
16. George Avelar, Seaman, "Captain Cook."
17. John Moncrieff, Seaman, "Captain Cook."
18. E Stratton, Seaman, "Captain Cook."
19. Herbert Robert Cross, President of the Local Marine Board, Newcastle.
20. Duncan John McLean, Member of the Local Marine Board, Newcastle.
21. Frank Gardner, Member of the Local Marine Board, Newcastle.
22. Henry Newton, Harbour-master, Newcastle.
23. Thomas Brooks, Lloyd's Surveyor, Newcastle.
24. William B Sharp, Shipping Agent and Colliery Shipping Manager, Newcastle.
25. Henry William Finch, Shipping Clerk to R. B. Wallace, Newcastle.
26. George Melville, Assistant Harbour-master, Newcastle.
27. Joseph Henry Storey, J.P., Merchant, and Chairman of the Underwriters' Association.
28. James Fotheringham, Chief Officer, "Captain Cook" (second examination).
29. John Lawrence, Harbour-master's Clerk, Marine Board.
30. Thomas Robert Allt, J.P., Chairman of the North Coast Steam Navigation Company, Limited.
31. Francis John Thomas, Manager of the Newcastle and Hunter River Steamship Company, Limited.
32. John See, M.L.A., J.P., Merchant, and Director of the North Coast Steam Navigation Company, Limited.
33. Henry McAuley, Pilot at Yamba, Clarence River.
34. Robert Adie Fraser, Pilot at Ballina.
35. Thomas William Keele, District Engineer, Harbours and Rivers Department, Ballina.
36. J F O'Flynn, J.P., Mayor of Lismore.
37. William Macgregor, Pilot at Tweed Heads.
38. Frederick William Jackson, Manager of the Union Steamship Company of New Zealand, Sydney.
39. Captain Francis Hixson, R.N., President of the Marine Board (second examination).
40. Henry Pettit, Harbour-master, Marine Board.
41. Frederick Bracegirdle, Assistant Harbour-master, Marine Board.
42. Thomas Robertson Thompson, Assistant Harbour Master, Marine Board.
43. Alexander Sangster, Water Bailiff and Inspector of Shipping, Marine Board.
44. Bruce Baird Nicoll, Merchant, and formerly Owner of Steamers trading to Northern Rivers.
45. Alfred William Meeks, J.P., of Messrs. Gibbs, Bright, & Co., Merchant, and Chairman of the Chamber of Commerce.
46. Alfred Settree, Merchant, and Owner of Sailing Vessels trading to the Northern Rivers.
47. Alfred Langley, Merchant, and Owner of Sailing Vessels trading to the Northern Rivers.
48. George de Fraine, Owner of Subsidised Steam Tug at Camden Haven.
49. Cecil West Darley, J.P., Engineer-in-Chief, Public Works Department.
50. Captain Francis Hixson, R.N., President of the Marine Board (third examination).
51. William Newton, Inspector of Shipping, Marine Board.
52. Andrew Thompson, Pilot and Harbour Master, Wollongong.
53. Edmund Potts, Customs Officer, Wollongong.
54. Thomas Martin Davis, M.L.A.
55. Robert Rowan Purdon Hickson, Under Secretary for Public Works.
56. Francis Buckle, Lighterman and Steam-tug Proprietor.
57. Angel Cooper Turner, Managing Director of the Illawarra Steam Navigation Company.

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

MARINE BOARD OF NEW SOUTH WALES.

(EVIDENCE AND APPENDICES TO THE REPORT OF THE ROYAL COMMISSION APPOINTED
4 FEBRUARY, 1897.)

Presented to Parliament by Command.

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ROYAL COMMISSION ON MARINE BOARD.

MINUTES OF EVIDENCE.

MONDAY, 22 MARCH, 1897.

PRESENT :—

JOSEPH BARLING, Esq., J.P., PRESIDENT.
 GEORGE ALEXANDER WILSON, Esq., J.P.
 JAMES POWELL, Esq., J.P.

Captain Francis Hixson, R.N., sworn and examined :—

1. *President.*] You hold the position of President of the Marine Board? I have held the office of President of the Marine Board of New South Wales for the last twenty-six years—since the Act of Incorporation was passed by Parliament. Captain
Hixson, R.N.
22 Mar., 1897.
2. Then you have continuously occupied the office and discharged its duties for twenty-six years? Yes; I have discharged the duties of the office since the Act of Incorporation was passed in the year 1871.
3. Prior to that you occupied another position? Yes; I was Superintendent of Pilots, Lighthouses, and Harbours.
4. And you carried out all the duties of the Board? Yes, in connection with the members of the Marine Board.
5. This is merely a formal sitting; it is not intended to go on at once, but we should like you to be good enough to produce some documents, of which I will give you a list, and then we shall ask you a few questions? I shall be very glad to produce what you require.
6. We would ask you to supply us with the following documents :—
 - (a) Return of the number of inquiries held by the Marine Board at Sydney concerning wrecks and other marine casualties, from 1887 to 1896 (both inclusive), showing the number of vessels and total tonnage for each year.
 - (b) Return of the number of inquiries held by the Marine Board at Newcastle, concerning wrecks of vessels and other marine casualties, from 1887 to 1896 (both inclusive), showing the number of vessels and total tonnage for each year.
 - (c) Return of the number of inquiries held by the Marine Board concerning wrecks of vessels and other casualties, from 1887 to 1896 (both inclusive), at ports or on rivers other than at Sydney or Newcastle, showing the number of vessels and total tonnage for each year.
 - (d) Return showing the total revenue of the Marine Board Department for the year 1883, under the several headings, viz., pilotage, harbour, light, and removal dues; fees, licenses, charges, &c.
 - (e) Return of the total expenditure of the Marine Board Department for the year 1883, showing the amount paid for contingent expenses, the amount of salaries and fees paid to members of the Board, and the amount of salaries and allowances paid to each officer, together with his full name, age, and position held for each station during that year.
 - (f) Return of steamers subsidised by Marine Board, showing where located, amount of annual subsidy, periods of existing contracts, dates when contracts expire.
 - (g) Return showing names of present members of Marine Board at Sydney and Newcastle, distinguishing those appointed by the Governor from those elected by shipowners and merchants; dates when their respective tenures of office close; stated times of meeting; individual attendances of members during year ended 31st December, 1896; rates of remuneration granted to members (a) by salary, (b) by fees; amount of salaries, fees, or allowances received by each member during year ended 31st December, 1896.
 - (h) Return of officers and employees, classified under the various branches, such as office staff, engineers, surveyors and inspectors, pilot boats and boatmen, lighthouse keepers. The particulars to be furnished respecting each officer and employee are :—Surname; Christian name in full; age last birthday; date of appointment—(a) by examination, (b) by nomination, (c) by whom recommended; length of service up to 28th February, 1897; break in service (from to); position held; amount of annual salary; amount of allowances, fees, or other emoluments; total amount of salary and emoluments; description, in detail, of duties performed.

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- (i) Two copies of regulations under which officers and employees of the Marine Board were granted annual increments of their salaries from the year 1884.
- (j) Two copies each of "Navigation Act of 1871," 35 Vic. No. 7 and 36 Vic. No. 30; also, any subsequent Acts on the same subject, and 60 Vic. No. 36. Regulations issued by the Marine Board to pilots, light-keepers, &c. Laws and regulations (abstract) issued by the Marine Board, 1897.
7. Can you tell us, Captain Hixson, how many steamers and launches you have? There are seven or eight, I think. 1. The pilot steamer "Captain Cook," employed at the Heads; 2. The "Carrington"; 3. The "Premier"; 4. The "Nen"; 5. The "Gladys"; 6. The "Sol"; 7. The small pinnace, and a steamer employed at Newcastle, the name of which is the "Barrossa."
8. All these, with the exception of the one at Newcastle, are employed at Sydney? Yes.
9. Can you supply us with the primary cost of these vessels, and the cost of maintaining the service in which they are employed? Do you require it at once?
10. No. You can prepare it? Yes, I will prepare a return.
11. How long will it take, do you think, to prepare that information? I think it will take a week or two.
12. If we adjourn until this day fortnight, do you think that will give you sufficient time? Yes; I think it could be prepared in that time. I might say that we have really no staff in the office, and are not able to prepare important returns at once. We have a secretary and an accountant, but very little else.
13. Several of the returns are merely formal? I think the returns can be prepared in the time, but I should be glad if you could make it any other day but Monday; this is my Board day.
14. Say Wednesday afternoon? Yes; that would do better.
15. If we gave you temporary assistance could you not do it in a week? I do not think so. You see it is work of a character that can only be done by the men in the office. If you give me until Wednesday fortnight I think it can be done.
16. In the meantime we might inspect the Marine Board Offices, and, although it has not been settled, we might find it necessary to visit some of the lighthouses at Newcastle, Wollongong, and on the Clarence and Richmond Rivers;—could you give us a typical lighthouse? Yes; the Macquarie Light, or Smoky Cape, or Solitary Island; but Solitary Island would be difficult to get at. You would have to go by sea, and would then have to be hoisted up by a rope, which would be rather inconvenient to the members of the Commission. It would incommode the Commission to go there, perhaps; but Smoky Cape would not be either so inconvenient or so difficult.
17. *Mr. Powell* (to the President): When you referred to the cost of the steam and launch service, did you mean the cost and working of each launch? *The President*: I mean first to get the primary cost of the vessels, and then the cost of keeping up the service. *Witness*: We have only twelve men for all the reliefs, and some go to work at 6 o'clock in the morning and some at 7. It is arranged so as to bring it as nearly as possible to the eight-hour system. We cannot keep the men always on duty.
18. We shall be glad, Captain Hixson, of your assistance in this matter? I shall be glad to help you in every way possible.

WEDNESDAY, 7 APRIL, 1897.

PRESENT:—

JOSEPH BARLING, Esq., J.P., PRESIDENT.
TIMOTHY AUGUSTINE COGHLAN, Esq., J.P.
JAMES POWELL, Esq., J.P.

Captain Hixson, R.N., further examined:—

19. *President*.] Captain Hixson, we asked you to kindly furnish us with returns, and that you have done;—are these the returns? Yes. (*Vide Appendices 3, 4, 5, 6, 7, and 9.*)
20. *Mr. Powell*.] It appears from one of these returns that 227 persons are at present employed in the Department? Yes.
21. I see that there are ninety-nine who are under 41 years of age, ninety-nine who are under 61, and twenty-nine who are over 60? Are these the numbers given in one of the returns?
22. Yes;—do you accept them as correct? Yes.
23. Is it a fact that the Board has recommended the retirement of seven officers? Yes.
24. The Board has recommended the retirement of G. Whitnall, 76; J. R. Lawrence, 73; S. Williams, 71; W. May, 69; J. Skelton, 69; W. Gambell, 68; and J. Pain, 65; and are continuing six others over the age of 65, and nineteen over the age of 60? We are scarcely retaining these others, but we are making a commencement with the seven.
25. Does it not appear to you that the master of the "Captain Cook," a man 70 years of age, should give place to a more active man? He would have followed if the first batch had been retired. According to the Act he should retire.
26. Are there not charges made against him? Yes, partially.
27. What was the nature of such charges? The second officer, a man named Hay, was strongly recommended to me. He was officially recommended to me. Eventually he was appointed second mate of the pilot steamer. He gave a lot of trouble. He was once summoned before the Marine Board, and was very rude to the Board. He suggested that Captain Creer, master of the "Captain Cook," was never wholly sober. The Board held an investigation, but the charge was not proved.
28. Will you lay the papers on the table? Complete papers are not available, but the Board were satisfied that the charges were groundless.
29. *President*.] You did not take the evidence on oath? I am not sure whether this man was sworn or not. It was a departmental matter, and I am not sure whether we have the power to take evidence on oath in such cases.

30. You are not sure whether you have the power to take evidence on oath when it is only a departmental matter? I am not. I am sure we do not consider we have.

31. *Mr. Powell.*] Have the salaries paid to the officers of the "Captain Cook" been reduced since this report of 1894? No; except in accordance with the regulations. But I have never seen an official report relating to the "Captain Cook." Was there one?

32. Yes; there was one. [*Copy report handed to witness*]? Oh, yes! But this document never appeared before the Marine Board.

33. Since that time have they been reduced? Those who have been taken on since have been taken on at a lower rate of pay.

34. There have been taken on two at £173, two at £118, and one at £101, and that shows a saving of £8 a month? Yes.

35. And as to the other employees all along the coast? These men have also been taken on at a lower rate of pay.

36. *President.*] As new men came on, they were put on at a lower rate of pay; while those who were on were left at the rate they were getting in 1883? Yes. Ever since then the Board—just like the Public Service Board have been doing—have been grading the men.

37. And, as the old men fell out, the new men came in under the revised scale? Yes.

38. *Mr. Powell.*] There are two look-out men—one paid £165 per annum, and the other £150 per annum;—what are the duties of these look-out men? They keep a look-out at night. They look out from South Head. I may mention that the look-out at South Head is one of the most important of the stations around Sydney. We have a system of signals there, the night signals being coloured lights. One of these men attends to the leading lights—apart from his duty as look-out man—for which he gets £1 per month; the other also attends to the leading lights in his turn, and in addition is second coxswain of the life-boat, for which he receives some remuneration.

39. I should like to understand exactly how these men's duties are arranged? There are two men, and the watch is divided; one being on watch the first part of the night, and the other the latter part. They are not both on the look-out duty at the same time. The man who is not on look-out duty attends to the leading lights. This is an economical way of providing for this duty.

40. I see that the man who acts as coxswain of the life-boat also receives £12 per annum for that duty? Yes.

41. The duties of the second coxswain are purely nominal, I think? He has to keep the life-boat in order, and be available in the event of the boat being wanted.

42. The man who receives £165 per annum, I understand, is 56 years of age; and the other, who receives £150 per annum, is 66 years of age? Yes. The Board drew the attention of the Government some time ago to the fact that there were many over the age, and recommended that they should be gradually retired. It was then proposed that this man, Francis, who is 66 years of age, should be one of those to go.

43. Are rations supplied to all the officers on board the "Captain Cook"? Yes.

44. The pilots as well? Yes, to the officers and pilots.

45. Are rations supplied to the seamen? No.

46. To the boatmen? No.

47. To the look-out men? No. The pilots are sometimes on the steamer and sometimes on shore; they are thus taken away from their homes, and allowance is made to them and to the officers who mess with them on the steamer.

48. Is the "Captain Cook" continually outside the heads? No; only occasionally.

49. Does she only go out when vessels are signalled? No. I send her away on occasions, and she is used in case of fire breaking out in the harbour.

50. She only goes out for pilot duty when vessels are signalled? Yes; except that she lies between the Heads in thick weather when signals cannot be seen.

51. How many pilots go out with the vessel? There are two put on board and left there until they are shipped, and then others take their places.

52. Do the pilots live on board the ship? They are obliged to remain on board when once signalled for, and are only released by being shipped.

53. Is it a fact, as stated in your evidence before the Civil Service Commission, that the "Captain Cook" cost over £23,000? £22,500. This question was put to me unexpectedly, and I did not attempt to make up an exact estimate.

54. Is the reduced wages account for the vessel, as it stands now, £3,300 per annum? Yes.

55. Without including the salaries of pilots? Exclusive of the salaries of pilots.

56. There are four sea-pilots at £398, and one at £250 per annum; I suppose that difference is explained by the regulations? Yes.

57. *President.*] Due to seniority? Yes. We found that it has established quite an *esprit de corps* by taking young men at small salaries and increasing them gradually.

58. *Mr. Powell.*] Are the pilots all engaged on the same kind of duty? Yes.

59. Is the salary paid to the pilots a net salary, or are there any deductions or payments? The only deduction is the percentage to the Superannuation Fund.

60. An allowance of 18s. per week is made to the master, engineer, and two pilots for rations;—to whom is that allowance paid? It is for the men on board the vessel, and is actually paid to the master, the same as the other payments.

61. There is a cook and providore shown on the list;—I suppose he caters and cooks for the seven officers? Yes, and for the crew as well.

62. The provisions for the crew are not supplied by the Government? No.

63. Is there anything to show that the providore actually expends this £6 6s. per week allowed by the Government? In early days there was an inquiry into this matter by a Select Committee of the House, and the report advised that the money should be given to the master in place of the providore, and this practice is still followed.

64. How does he deal with the money? I do not know exactly.

65. Is it possible that the 18s. per week is paid to the persons for whom it is intended, and they allowed to expend it in purchasing their provisions? No. I do not think so.

66. *President.*] All you know is that the money is paid to the master, and you make no inquiry as to how

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how it is spent, and you have heard no complaints? None. The money is expended for those on board the vessel, and I am pretty sure the master can show how it is expended.

67. *Mr. Powell.*] The cook receives a high salary? Yes.

68. Is this 18s. per week paid from a Parliamentary Vote or from Contingent Expenses? From Contingent Expenses.

69. Can you explain why the seamen are paid sea-going wages, which includes board, of £8 per month, and the boatmen £128 per annum, an average of £10 13s. 4d. per month? They are taken on according to the regulations at £8 per month, and their salaries gradually increased.

70. I see that there are six seamen and four boatmen employed? You are now referring to another class of boatmen. These men are engaged on the "Carrington," and are called the "up harbour boatmen." Attached to the crew of the pilot steamer there are the four boatmen and two look-out men.

71. What is the "Carrington"? She is a small screw steamer that takes the pilot off the vessel after he has brought his ship into port.

72. Speaking generally, all seamen are boatmen? Yes.

73. And most boatmen are seamen? Yes.

74. There is no reason why there should be such a discrepancy in the salaries except that you explained? No.

75. *President.*] The regulations are passed by the Marine Board? Yes.

76. This "Carrington" was a steam launch? She has always been in the service upon which she is at present engaged.

77. *Mr. Powell.*] Are not the wages paid to the officers and crew of the "Captain Cook" high in comparison with those paid on first-class passenger steamers? If you take the intermediate wage, I do not think they are; but if you take the maximum, they are.

78. With regard to the salaries of Captain Creer and the mates, are they not high compared with those paid on first-class passenger steamers? They are if you only consider the maximum salary; but if you take the average, I do not think so.

79. The money actually paid? It is, perhaps, high now.

80. *President.*] What you mean is that by the working of the regulations the amount fluctuates, and that at the present time it is abnormally high, but will come down? That is so.

81. *Mr. Powell.*] Are not the wages paid by the Marine Board very much in excess of the wages paid in the other colonies to all concerned? Perhaps they are in some cases, in others not so. We have papers where pilots at Newcastle compare the lowness of their wages with those of pilots in the other colonies.

82. In some cases the wages paid appear to be double? Yes.

83. Is not the pay of £25 per month higher than that received by the masters of vessels of about 1,500 tons? Yes, I think it is; but if you refer to the master of the pilot steamer, I must point out that he is the Chief Officer of the Department in Watson's Bay. Everything is under his control there.

84. He appears as master of the "Captain Cook"? Yes; but he has control over everything in Watson's Bay.

85. The firemen are paid, one at £123, one at £145, one at £123, and one at £120 per annum;—that seems rather high in comparison with the pay of leading firemen on the steamers? The men on these steamers are found. Our maximum wages are, no doubt, liberal.

86. Looking at it from an economical point of view, do you think there would be any difficulty in getting a master for the "Captain Cook" at £25 per month, mate at £15, second mate at £12, firemen at £10, seamen, boatmen, and look-out men at £9, without allowances, or any of the other officers at their respective salaries? I have no doubt you could obtain men to fill these offices at those salaries without allowances.

87. You have a Chief Engineer on the "Captain Cook" at £272 per annum, and a second engineer at £200, with an allowance for rations of 18s. per week? Yes; the regulations are responsible for that.

88. Are not the engineers' salaries regulated by their Association? We have never heard anything about the Engineering Association, but you will find by the regulations that they come in at a minimum wage and arrive at this stage by servitude.

89. *President.*] How long does it take a man to rise to the top of his grade? It takes a pilot twenty years; a boatmen several years.

90. *Mr. Powell.*] Comparing the number of hands engaged in unskilled labour on the "Captain Cook" with the number on intercolonial ships, does not the number seem excessive; there are fifteen men on board the "Captain Cook" in addition to the officers? I must point out that the service in that ship is different to any other service on the coast, as these men are always on duty, Sundays, holidays, &c., and we must have a strong crew. We have excessive numbers on account of the constant duty the men have to perform. Leave must be given to some of them.

91. They have nothing to do but stand there all the time? They have to keep their ship and engines in proper order.

92. *President.*] I suppose they keep a correct log of their work? Yes.

93. Could you tell us, roughly, for about what period during the twenty-four hours they are actually employed? They are lying idle much longer than they are engaged—perhaps two-thirds of their time they are idle.

94. *Mr. Powell.*] Is it a fact that it is proposed to alter the "Ajax" at a cost of £4,000 for the Pilot Service at Newcastle? Yes.

95. Will that amount be sufficient for the purpose? I have reason to believe it will not.

96. Parliament has voted £1,573 for the salaries of a crew for that vessel? Yes.

97. No one is yet employed for that particular service? No.

98. What is the reason for paying the master of the "Captain Cook" a salary of £416 and rations, while it is only proposed to pay the master of the "Ajax" £250 per annum? This is a special case, and these men will be taken on for their first service in the Government.

99. *President.*] I understood that you had recommended Captain Creer's retirement; in that event, what salary would you give for the position? We would probably recommend one of the pilots; whether he would receive anything in addition I do not know.

100. What would you consider the commercial value of that position? I should say about £350 per annum.

101. And that you would think a fair proportional value in comparison with the "Ajax"? Yes.

102. *Mr. Powell.*] Are there fewer difficulties to contend with at Newcastle than at Sydney? In Sydney, the captain has independent charge; at Newcastle there is a harbour master on the spot. 103.

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103. If the proposed arrangement is carried out and the "Ajax" goes to Newcastle, the masters and the officers will be treated in the same way as the master and officers of the "Captain Cook"? Yes; probably.
104. Why are the crew not supplied with rations? There would be no trouble as far as the boat at Newcastle is concerned; but, if we were to pay the crews of these two vessels for rations, we should be called upon to pay all the lighthouse men, boatmen, &c. on the coast, as well.
105. *Mr. Coghlan.*] Is there any difference between paying this allowance to the officers and to the crew? The officers are taken from their homes; the men are supposed to live on board their vessel.
106. *President.*] Would the men be more active at Newcastle? Yes.
107. Would you think the "Ajax" would be employed for two-thirds of her time? Perhaps she would.
108. *Mr. Powell.*] In that case the "Ajax" would be doing more work than the "Captain Cook"? Yes.
109. The engineers' salaries seem to be much lower than on the "Captain Cook"? They are put down according to regulations.
110. In the "Captain Cook" you have four firemen and six seamen, and you only propose for the "Ajax" three firemen and two seamen? There are four men on shore at Newcastle who would be transferred to the "Ajax."
111. Then the Estimates do not show the whole cost of this vessel? No.
112. These four men do not appear on the books of the "Ajax"? No.
113. In the return of the Collector of Customs, it appears that the pilots in Sydney attended in all 629 vessels in the year 1896, and that 847 vessels were attended by the pilots at Newcastle? That is so.
114. Twelve pilots seems a very large staff for that work? If we knew when the vessels were coming a smaller staff would suffice; but as it is, I do not think we could reduce the pilots at Sydney or Newcastle. These men are kept constantly on board the vessel waiting for a job.
115. *President.*] Have you ever compared the relative shipping with the expenses in Newcastle and Sydney? No I have not, but this could be easily done.
116. *Mr. Powell.*] Is it a fact that there are times when all hands, more or less, are unemployed? Yes.
117. In your estimate for 1896-7, the cost of the Newcastle pilot system is shown at £5,158 per annum, while the collections for 1896 were £18,650; so that it cost 27 per cent. at Newcastle to maintain the service? Yes.
118. At Sydney the system cost £7,334, and the collections for the year totalled £12,886—that is, 57 per cent.—a difference of 30 per cent. between the two ports; do not these figures show that the Newcastle pilot system earns more and costs less than Sydney? Yes.
119. Can you explain that? Only by the fact that there are more vessels at Newcastle in a smaller space requiring pilot's services than at Sydney. The Sydney staff is often idle, but still I do not think we could reduce the figures you have brought forward. Sometimes I have known twelve pilots required in Sydney in the one day. I would like to point out, however, that in both cases the collection is considerably in excess of the cost.
120. *President.*] Is it not likely that the charge for pilotage will be reduced? The shipping authorities might ask for a reduction if they knew we had such a large return, but the pilot fees are being reduced considerably.
121. *Mr. Powell.*] You stated in your evidence before the Civil Service Commission that the pilots and boatmen go out in bad weather, and that they also go outside Nobby's; that being so, and the service at Newcastle being well performed at a much lower cost than the Sydney service, do you still recommend the "Ajax" for pilot work at Newcastle? Yes; there have been numerous appeals from there for a steam pilot service. The boat system is very dangerous.
122. The pilots' pay at Sydney, I see, averages £368 per annum; at Newcastle, £269—a difference of £100 per annum;—is there any reason for this difference except the regulations? No.
123. *Mr. Coghlan.*] Are there any special difficulties in regard to the pilot service of Sydney? No; the ships are sometimes very large, and of course more difficult to handle.
124. How do they compare with Newcastle? There are more difficulties to contend with in Newcastle than in Sydney. In bad weather both places are difficult.
125. *Mr. Powell.*] Taking the other ports, excepting Newcastle, the highest salary is £240 per annum;—is there any reason why the pilots at Sydney should be paid the larger salary? I think that the first-class pilots, as at Sydney and Newcastle, have a higher marketable value for their services than the bar-harbour pilots.
126. The bar-harbour man is in the second grade? Yes.
127. *President.*] The shipping that frequents the bar-harbours is very much smaller than in Sydney; but would the difficulties of navigation be greater? Perhaps they might be; enormous difficulties have to be contended with sometimes.
128. Taking the Manning River for instance, would not a great deal of skill be required to take a vessel in there? Yes; but local knowledge overcomes difficulties of that kind to a great extent.
129. *Mr. Powell.*] At the sixteen out stations at which pilots are employed there are in all 52 men, costing £3,421 for pilots, and £6,115 for boatmen; what work can be shown for this £10,000;—have you any record of the number of vessels that enter the ports? Yes; we have a return from the pilot at every bar-harbour giving such information.
130. Will you furnish us with a return of all vessels entering the various ports of the Colony other than Newcastle and Sydney, distinguishing the regular coasting steamers from ordinary vessels? Yes.
131. Steamers are employed at ten of these ports, and there are also tugs shown in some places;—are these tugs in constant employment? It is difficult to say; they work under special arrangements.
132. When vessels are brought in, do they pay the pilot? No; they pay the tug.
133. And the Government pay the tug subsidy in addition? Yes.
134. Are these tugs regulated as to the charge they make? Yes.
135. How do you know that they do not charge more than they are entitled to? I take it that we would have complaints from their employers.
136. Do you think this is a good arrangement? I think it is a logical and well devised system. The Government occasionally call for tenders for carrying out the service, and everything is left between the shipowner and the tug; we simply pay the tug the subsidy agreed upon.
137. There is a sum of £900 voted for a tug for the Clarence River, and £500 for one at Wollongong;—is this £1,400 required in addition to the subsidies paid to the tugs? Yes; but this money is not all expended. It is provided on the Estimates, but we only pay according to the tender for the service. The total is £7,387; that is the actual cost for the tug service for the year.

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138. Taking the Richmond River as an example of these out-stations generally, there is a total outlay for the pilot station there of £2,656; as there is a tug, why are the boatmen needed? They are required to man the boat for the pilot to attend to buoys and beacons, and many other things in connection with the service. The tug is sometimes at sea, or some distance up the river, and not always on the station. The reason there are six boatmen at the Richmond River is that one is in charge of the lighthouse and another is the look-out man on a hill close by.
139. Take the Tweed River; the cost there is £965, and the tug subsidy £849—a total of £1,814;—is there anything to warrant the expenditure of that sum? It is a difficult river to navigate.
140. This tug is supposed to be for the benefit of the Tweed and the Brunswick Rivers; there is no station at the Brunswick now? No; but it was a busy place when the railway was being constructed.
141. Is it possible to obtain any information with regard to the amount of work done by these subsidised tugs? Scarcely; I do not think the trade of the rivers could be managed nearly as well without the tugs.
142. Could we get any information of the number of vessels they give service to? I do not think so.
143. The Bellinger River costs £1,400 per annum;—that is a large sum? Yes; it does seem large.
144. Altogether, subsidising the tugs has cost in ten years the sum of £85,824. Now, looking at this outlay of money, and without knowing what work is done, do you consider it an economical system? No, I do not; but I think the ships are charged for this convenience, and as the Marine Board Department has always been a revenue-producing one, I do not think that the shipowners would be satisfied unless they got all these conveniences. Every ship that visits our ports pays 4d. per ton for harbour and light rates twice a year. In consideration, the Shipping Companies expect the Government to give them such a service as they now have.
145. Was not the port of Newcastle at one time subsidised? Yes; but it now pays for itself.
146. I see the subsidy at the Manning River is down to £400; it was previously £600? Yes; these subsidies gradually vanish as the trade increases.
147. At Kiama there is a pilot without any boatmen, and he is returned as pilot-in-charge of lighthouse and moorings—salary £236, quarters £30;—what does he do? He is there to look out for the warps on the wharf, and has charge of the lighthouse.
148. £266 is a large salary for the duty? It is not an illiberal one.
149. Is it known that some of the pilots, from lack of work, follow other occupations? I have heard of one man who owns some cattle, but he is the only one.
150. At one of the stations the pilot has his son as a boatman;—is that desirable? I do not know. I have never heard any complaints. Perhaps it would be better if he were employed at another station. I do not think the father is engaged in farming and grazing.
151. These men are not fully employed? No.
152. Do you think it is advisable to maintain pilot stations where there is no commerce? Yes; I think so, as the ships are taxed.
153. Do you not think the rates generally might be fixed at a much lower scale? Yes; they might.
154. Do you think some of these stations might be done away with? If we attempted to withdraw these stations, the people interested would make very strenuous objections.
155. With regard to lightkeepers—the highest paid is stationed at the light-ship in Sydney—their salaries range from £120 to £319 per annum; is that caused by the regulations? Yes.
156. Supposing there was a vacancy at Montague Island, or the Solitaries, would a man be sent there at £120 per annum? He might be sent there at £96 per annum.
157. Then the importance of the light does not count? There are harbour and ocean lights; the ocean lights are paid the most for. When we take a man on first we send him to one of the outside places at £8 per month.
158. The highest salary is £319, and the lowest £120 per annum? Yes; if you count quarters.
159. Does the £96 per annum carry quarters? The £96 I mentioned is not including quarters.
160. The highest paid lightkeeper is stationed at the light-ship? Yes.
161. Why is such a large staff required for the light-ship? They have two pile lights in addition. We pay the master £2, and the boatmen £1 per month for looking after those lights.
162. £816 per annum seems rather a large sum to pay for this light? Yes.
163. At Newcastle you have three lighthouse-keepers whose respective ages are 60, 59, and 63 years of age;—is it desirable to keep three men of such an advanced age at the same station? The first man is Johnston, the man saved from the "Dunbar." He is quite fit for his duties.
164. These men come under the Local Board at Newcastle? Yes.
165. Do you accept their recommendation? The men are actually under the control of the Marine Board, but we accept in almost every case their recommendation.
166. It appears from your return that the majority of your people attained the maximum salary on the 13th August, 1885? I may say that about thirteen of those have been recommended for retirement.
167. I suppose the increments granted subsequent to that date are for good conduct? Yes.
168. The pilot at the minimum salary, £200 per annum, has all the qualifications of the pilot at £400? Yes, except experience.
169. Has not the increment system had the effect of forcing wages above the market value? Perhaps it has; but I think that the midway wage is about the right wage for the Service.
170. Is it a fact that the wages paid by the Marine Board have regulated the wages paid to boatmen in every Department of the Service? I do not know.
171. Do you think it would be possible to get any number of active boatmen at £100 per annum? We take them on at £96 per annum.
172. According to the regulations of 1885, pilots received £200 per annum and an allowance of £50 per annum for quarters; if you take a pilot on and have not a house to put him into you give him £250 per annum? The regulations are that if a man is found a house he gets £200, and otherwise, £250 per annum.
173. This increment system is continued by the Marine Board although it has been abolished by Parliament? Necessarily so.
174. Was that system stopped by Ministerial authority? It was, and is still in abeyance.
175. Is it an understood rule that at isolated lighthouses three men should be stationed? Yes; I may mention that not long ago at one of our isolated lighthouses one of the men was killed, and a short time afterwards another blew his hand off.

176. Three men are only required in the isolated places? Yes.
177. You are still proposing to retain these old lightkeepers? We were going to follow up our previous recommendation, but the matter was delayed by the Public Service Board. Captain Hixson, R.N.
178. Do you think it is desirable to keep men over the age of 60 years at lighthouse work? Yes; except at places like Solitary and Montague Islands, I think they might be employed up to 65 years of age. 7 April, 1897.
179. You make different arrangements on the rivers for the maintenance of lights? We make an arrangement with the people in the locality to maintain these lights for a certain amount of money.
180. How are they paid? Out of the Incidental Vote of the Department.
181. How much each? Some £9, and others £7 per quarter; we make the best arrangements we can with them. We provide the lamps and shades and they supply the oil and wicks. There are eight of these lights on the Richmond, four on the Clarence, and five on the Macleay River.
182. You have recommended the assistant at the flagstaff for retirement—he is 71 years of age; also the signalman at South Head? Yes; and Francis is also over age.
183. You have a junior operator at the Heads who receives £100 per annum and £30 for quarters;—what does he do? He assists the signal master in hoisting signals and keeping a look-out, and works the telegraph instrument.
184. Who does he telegraph to? To the head office.
185. He does not telegraph to the other man at Fort Phillip? Yes; through the Exchange and head office.
186. Salaries of £50 and £25 per annum are paid to persons in charge of moorings at various places;—what benefit is gained? A little coaster goes in occasionally, and these men are pilots in charge of the moorings. They have to assist the vessels coming in. Some years ago these amounts were the same, but ten or fifteen years ago one of them was doubled without reference to the Marine Board.
187. The list of boatmen is very formidable; there are 102 men, costing £14,676 per annum; the salaries range from £229 to £96—there are twenty-three different rates of pay; I suppose that can be explained? Yes; in 1883, before any increments were granted, the boatmen were receiving £108 all round and the scamen £108 per annum.
188. There are two boatmen, 76 and 65 years of age respectively;—have you recommended them for retirement? Yes.
189. Some of these boatmen are really not boatmen? That is so; they are on the staff as boatmen, but are actually not boatmen; they are lightkeepers.
190. With regard to quarters generally, are we to understand that when an allowance is shown it means the occupation of a building owned or hired by the Government? Yes; and in the Marine Board Department the people are obliged to live at those particular places.
191. Do you think that all men employed by the Government should be required to reside within a reasonable distance from the place of their employment? Yes.

THURSDAY, 8 APRIL, 1897.

PRESENT:—

JOSEPH BARLING, Esq., J.P., PRESIDENT.
JAMES POWELL, Esq., J.P.

Captain Francis Hixson, R.N., further examined:—

192. *Witness.*] With regard to the return of the cost of the tug service, a far greater saving is effected in the present service than this list shows. It gives the figures for 1886 and 1896, but towards the end of the latter year the tenders received were considerably reduced, so that the actual rates are less than would appear from the return furnished. (*Vide 144.*) Captain Hixson, R.N.
8 April, 1897.
193. *Mr. Powell.*] I think you told us that you had been President of the Board from its inception until now? Yes.
194. You have had ample opportunities of forming an opinion of the working of the elective principle of that Board? Yes.
195. How do you think that principle has worked? Very well.
196. Is the voting strictly confined to the owners of vessels registered within the colonies? Yes.
197. No other interest of any kind is represented under the present Act? Only ships registered in the Colony are represented.
198. Do you know how many persons are entitled to vote? Something like 150. The list is published annually.
199. I find there are actually 159? Yes.
200. If you analysed the voting power you would find that the control rested with owners of shipping of an aggregate tonnage of from 100 to 250? I have not studied the system very much. These men are elected apart altogether from the Marine Board. I have a general knowledge of the affair.
201. You take the names from the return furnished by the Collector of Customs? Yes. I think it would be very improper on my part to interfere in such matters.
202. Are the owners of vessels registered outside this Colony wholly unrepresented at the Marine Board? The vessels registered outside the Colony have no representation on the Marine Board.
203. So far as you can judge, you think the elective principle assures the return of the fittest persons as Wardens at the Board? It should do so.
204. Do you think it does? There has been considerable competition in early days, and the shipping community have taken much interest in the matter. There was no contest last year.
205. Is not the tonnage registered within the Colony infinitesimal compared with the tonnage trading with the port? Yes.
206. For what period are the Wardens elected? Three years.
207. Are their seats vacant at the end of that period? Yes, for a day or two.
208. There must be an election, or a form of an election, every three years? Yes.
209. Have elections been contested of late years? Yes.
210. Could you form an idea of the number of votes recorded at the last election? Somewhere between 200 and 300 for the successful man, and for his opponent about thirty or forty votes.
211. The old members were returned by a large majority? Yes. 212.

- Captain Hixson, R.N.
7 April, 1897.
212. The number of votes for each could not have been more than the total appearing on the list? No.
213. Are these elections conducted by personal voting? Yes; unless there is no opposition.
214. Proxies are not taken? No.
215. How do the companies vote? They usually vote by their secretary or manager.
216. Is the voting by ballot? Yes.
217. The members of the Board at Sydney and Newcastle divide fees to the extent of £800 per annum? Yes; that is correct.
218. Has there been any change in the Wardens elected of late years? No; not for many years.
219. Have Captain Broomfield and Captain Maclean held their seats for twenty-two years? Yes; Captain Broomfield from the inception of the Act, I think, in 1871.
220. Captain Jenkins has held his seat for many years? Yes.
221. In the qualification for these gentlemen, it is necessary that they should be owners of not less than 250 tons of shipping? That is so.
222. Section 9 of the Act restricts the voting to owners of foreign-going and coast-trade ships? Yes.
223. Do you think the owners of ships laid up and not sea-going should be entitled to vote? No.
224. You know nothing about their being on the list? I have no control over that.
225. During the year 1896, I see by your books, the Board had fifty-six meetings;—was the business generally of a formal nature, such as the issue of certificates and dealing with ordinary correspondence—practically what might be considered the duties of a Chief Clerk or Under Secretary of a Department? Yes.
226. A great deal of the business is made up of that kind of correspondence and confirmation of certificates? Yes; according to the Act. If there are no inquiries, the business is exactly of the nature you describe.
227. It appears that the average number of inquiries for ten years was about twenty per annum at Sydney and about 6·4 at Newcastle? Yes.
228. In cases of collision, involving loss of life, on the Darling or Murray Rivers, is any action taken by the Board? We have scarcely ever taken any action in such cases.
229. If vessels get snagged or cargoes damaged? We have not gone that distance from head-quarters.
230. The owners of those vessels are registered with the Board? Yes.
231. In cases of accident the matter is not referred to you, and you do not institute inquiry? There have been several attempts to establish local Boards, but the Marine Board have always set their faces against it.
232. In dealing with the cancellation and suspension of certificates, are the investigations conducted under the provisions contained in the eighth part of the Act 17 and 18 Victoria? They are dealt with as provided for by our Act, which embraces the Act that you refer to.
233. You conduct your inquiries under the eighth part of the Imperial Act? Yes; that is, if the certificates of the person being dealt with are Imperial.
234. Has the local Marine Board at Newcastle ever made any investigations into cases of misconduct? Yes.
235. Does the local Newcastle Board hold inquiries without reference to you? The local Board has to apply to the Marine Board for authority to hold these inquiries.
236. You think the local Board are under the control of the Sydney Board? Yes.
237. Has the Marine Board at Sydney ever set aside the finding of the local Board? No; but we have modified them.
238. With or without the evidence before you? With the evidence before us.
239. You review the action of the local Board? We do.
240. You do not have the advantage of hearing the evidence? No.
241. In connection with the inquiries instituted by the Marine Board, do you find the members of the legal profession attend as advocates? Frequently.
242. Does the Board have any legal assistance? Very seldom.
243. In that case, does the legal assistant sit as a member of the Board? No; he merely has the advantage of suggesting questions to meet any point raised by the other side.
244. I suppose you are aware that in the English practice, according to the Act relating to unsafe ships and the sending of unseaworthy ships to sea, the powers are exercised by Courts of Survey? The Court you refer to has the benefit of a surveyor's report for its guidance.
245. The Courts of Survey contemplated by the Imperial Act refer all such cases as these to a Judge and one of the Courts—the District Court, or such Court as the Board may arrange with the Lord Chancellor, and two assistants of nautical skill sit with the Judge;—you have no such conditions? No.
246. Do you report any of your findings to the Board of Trade? All of them; and if we are dealing with the certificates of the neighbouring colonies we send full reports of the matter to them also.
247. Do you send the reports to the Board of Trade as a matter of courtesy? No; as required by the Imperial regulations.
248. You act for the Board of Trade? Yes; and they have the power of revising our findings.
249. The second subsection of section 88 recognises that you conduct your inquiries under the Imperial Act? Yes; but for that subsection we could not deal with Imperial certificates.
250. And you advise the Marine Boards of the other colonies of the suspension and cancellation of certificates? Yes; if we are dealing with a certificate issued by them.
251. When you suspend or cancel a certificate do you take such action before the report has been confirmed by the Governor? The Act necessitates our having the findings on a case relating to an Imperial certificate approved by the Governor, but the local certificates are different.
252. Is there any appeal against the decision of the Board relating to the suspension or cancellation of certificates? Not in the Act, but the Common Law provides an appeal to the Supreme Court.
253. With regard to the fixing of the load line, is that a voluntary act on the part of the owners? Not by the late legislation.
254. The fact remains that the fixing of the load line is, in the first place, a voluntary act on the part of the owner? Not now; it was.
255. Have you the power to fix the load line, and do you fix it? Yes.
256. Do you charge a fee for this purpose? Yes.
257. In every case? If the vessel is under survey for a passenger's certificate, we do not make a special charge; but if a special request is made we charge a fee for the surveyor's work.
- 258.

258. About those Llewellyn frauds; the secretary reported that when the Board made their annual visitation to the lighthouse they found that the salaries were in arrears, and the discovery led to a report being made to the Under Secretary for Finance and Trade? That is correct. Captain
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259. The Treasury Inspector reported that the secretary should have exercised control over the accountant, but was not allowed to do so; in your memo. you stated that the contrary was the case? That case was dealt with by the papers being put on the Table of the House, and the Premier stated that I had made an explanation which was considered sufficient.
260. Does the secretary, by virtue of his office, have control over every officer in the Department? Only in my absence.
261. Does he supervise the accountant's work? Scarcely; but there would be no objection to his looking into the books.
262. Should he not do it as his duty? I think it comes within the province of my duties.
263. That makes the secretary responsible to you for his own work only? Perhaps. The same would apply to the pilots and every officer who is responsible to me. The secretary has ample work to fill up his time.
264. In answer to questions before the Civil Service Commission, you said that the accountant has to receive certificate fees and pay them to the Treasury;—are they paid to the Treasury? Yes; certain of them.
265. You have a banking account? Yes.
266. And pay them to that account? No; we pay them direct to the Treasury in the end.
267. What becomes of the money during the time you hold it? It is paid into our banking account.
268. Is the banking account in your own name? Yes.
269. Where do you bank? At the City and Commercial Banks.
270. You have an account at the City Bank in your own name, and you draw cheques occasionally and pay them to the Treasury? Yes.
271. You examine and check the pass book? Yes.
272. You initial the pass book? Yes.
273. And you say that all the entries are properly made? Yes.
274. Do you think that you can give sufficient of your time to check the expenditure of £50,000 per annum in such a manner as to satisfy yourself that everything is correct? I do not find any inconvenience in doing it; I am quite sure the secretary has less time to do so.
275. It has been the practice of your Board to visit the lighthouses annually in company with your secretary? Yes.
276. Can you give us an idea of what amount these trips cost when you charter a special steamer? We used to pay £400 for the steamer.
277. What other expenses are there? The unofficial members of the Board were paid 15s. per day travelling allowance.
278. Your latest trip was made in the Government steamer—that only cost you the Wardens' fees? The Wardens did not draw fees.
279. Then there was no expense attending the latest trip? No expense.
280. I suppose the lighthouse-keepers and their assistants, isolated as they are, look forward to the visit of the Board, and have everything in nice order? Very much so; but there are frequently little troubles to settle.
281. They have everything ship-shape in anticipation of your visit? Certainly.
282. *President.*] With regard to the £400 paid for the charter of the steamer, does that include provisions? Yes; but not wines.
283. Do the members of the Marine Board draw their 15s. per day as well? These members were put to expense for wine, &c; and it is their time which is taken up, not the Government's.
284. *Mr. Powell.*] Have you any guarantee that the condition of efficiency you find on your annual visits is maintained during the whole year? I think our lights and stations bear an excellent character; and if there was anything wrong we should soon find complaints.
285. But you do not know anything about it apart from that? No.
286. Would it not be more effective if an officer were to visit, examine, and report? No; I do not think an inspector would be at all an advantage.
287. How many days do these trips last? Ten or twelve.
288. A good number of stations are visited? Yes.
289. *President.*] Do the non-official members of the Marine Board get their fees while they are travelling? They can scarcely be called fees. It is a payment of £2 2s. per week. This is all they get, no matter what they do.
290. *Mr. Powell.*] In 1896 there were fifty-six meetings held, and the wardens were paid £2 2s. per week each, without reference to the number of sittings? Yes.
291. Would it not be possible to classify the lighthouses in the first, second, and third classes? They are classified at the present time.
292. Is Montague Island first-class? Yes.
293. Hornsby? Second-class.
294. The light-ship? Second-class.
295. Fort Denison? Third-class.
296. Newcastle? Second-class.
297. Green Cape? First-class.
298. Broken Bay? Second-class.
299. Port Stephens? Second-class.
300. Cape St. George? Second-class.
301. Ulladulla? Third-class.
302. Nelson's Bay? Third-class.
303. You told me that there were first and second class lighthouses;—are the salaries fixed by the regulations? Yes.
304. Out of the Vote for Miscellaneous Services I notice that the sum of £60 is paid for a leading-light in the eastern channel;—is that light attended to by the lightship people? No.

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305. There is a sum of £1,000 for beacon lights at several places? We have eight pairs of lights on the Richmond River, five on the Macleay River, and four on the Clarence River. Besides that, there are a lot of leading-lights at Newcastle.

306. Do you regard the electric light at South Head as a success? Yes, quite a success.

307. Is it more economical than oil-lighting? No; it costs about 16s. 6d. per night to maintain, irrespective of salaries.

308. The engineers' pay amounts to £473 for two men;—how does this compare with men at the same class of work outside the Service? I do not think there is anyone with whom you can compare them.

309. The point we are upon is whether these men are paid more or less than they should be? The principal engineer is the man in charge of the whole establishment. He gets a salary of close upon £300 per annum. The £473 pays the salaries of the two men and provides them with quarters.

310. Can you compare these men with anybody else? This place is peculiar. The men work all hours—Sundays, holidays, &c.

311. In the return furnished by you it appears that the salaries have increased from £30,434, in 1883, to £51,187, in 1896;—is that correct? No; I think there is some mistake. That £51,187 is the gross expenditure of the Department.

312. I see now that this includes some tug subsidies and contingencies? You will find that there is not a marked increase in the salaries.

313. There is a difference of £10,000? No; I think the difference is about £7,000.

314. The pilot, harbour, and light rates are collected by the Customs? Yes.

315. The amount for 1895 was £59,000? Yes.

316. And the fees and licenses, amounting to £1,600, were collected by your own officers? Yes.

317. Would it not be better to have the whole lot collected by the Customs? No. The two things are very different. There is no trouble whatever in collecting the pilotage, harbour rates, &c., at the Customs, as the vessel clears there; but in the matter of the rates for certificates it is different. It is better for the man to come to the Secretary of the Board, pay his fee, and receive his certificate right away.

318. What check have you? We have the Treasury check.

319. From the return it appears that you have seven steam launches, at an annual cost of £3,000;—what service is rendered by these vessels? The "Carrington" is the up-harbour pilot boat; the "Premier" is the yacht used by the Government and distinguished visitors to the port; the "Nea" is the Governor's boat, and used by Ministers and other celebrities as required. The other three launches are all closely engaged in the business of the Marine Board—harbour pilots, inspectors, and various other works.

320. With reference to the boatmen, you said you tried as far as possible to keep them within the eight hours' work;—what hours constitute a day's work in the launches? There are two sets of crews. One comes on at 6 a.m. and remains till 2 p.m.; the other comes on after breakfast and remains till 6 p.m.

321. Under the changed conditions of the pilotage rates, do you think your estimate for the financial year will reach the sum named—£24,000? I went carefully into the matter. I think there will be a good deal less pilotage within the next few months, but we have absolutely given up the issue of exemption certificates except to the coast trade and South Sea Islands. This will eventually increase the rates largely.

322. Have you legal power to do that? Yes.

323. *President.*] You say that some of the launches are used for distinguished visitors and others;—is your authority alone sufficient to grant the use of a launch? As a rule the request comes from the Government, but I have the power to grant the use of the launch when I think necessary.

324. *Mr. Powell.*] You have made alterations with regard to exemptions lately? Yes.

325. I notice in a return from the Collector of Customs that the pilotage collections at Newcastle are much larger than at Sydney? That is so.

326. Taking the years 1894 and 1895, the Sydney collections for pilotage were £27,000; for Newcastle, £35,000;—is that due to strange ships visiting Newcastle? Yes.

327. The removal dues for Sydney for these years totalled £2,700, and for Newcastle £7,100;—how is that accounted for? In Newcastle there are more ships to move and more moves to be done.

328. You say that you know it is a fact there is a difference in the two ports? Yes.

329. Is it a fact that the shifting of a ship without a pilot is not a breach of the Navigation Act? It is not a breach.

330. Did not the Marine Board, prompted by a letter from Mr. Dick, M.P., take some action with regard to the breaches of the 61st clause of the Navigation Act? The Marine Board made regulations to deal with the matter and sent them to the Treasury, from where they were forwarded to the Crown Law Office, but in the meantime the Government had passed a Bill making illegal the very thing the Board were trying to stop, and the matter is now in abeyance.

331. Did you receive a report from the Newcastle Board that forty-two ships had been moved without pilots? Yes.

332. Does not that seem to show that there are an insufficient number of harbour-masters there? No; it shows that the tugs and private people take the work out of the hands of the harbour-master.

333. Then the harbour dues at Newcastle are immensely beyond Sydney, and they do more work there? Yes; I think so.

334. Do you know that charges are made for removals, although that work is not done by the harbour-master? It is not so now.

335. Has it been reported to you that the harbour pilots have been in the habit of taking ships from the wharf direct to sea? No; but it might be done in case of a trial trip.

336. When a harbour pilot is paid for removing a ship into pilot water, would he take her to sea? Not to sea; he takes her into the stream, and the master, being exempt, takes her on.

337. Has it been brought under your notice that harbour pilots have taken ships to sea? No.

338. It is alleged that the harbour pilots do this? I do not think it is a fact; I have never heard of it.

339. Is there any special reason for employing elderly men as harbour-masters? No; except that elderly men as a rule, as long as they are not too old, are the best pilots.

340. There is a harbour-master who is 66 years of age and the assistant 64 years? Yes; Pettitt, the harbour-master referred to, is the best man in the port at handling a ship.

341.

341. The harbour-master at Newcastle is also Chairman of the local Marine Board? No; not at present.
342. Who is President now? Captain Cross.
343. As harbour-master, does he take his part of the work in moving ships? No; as harbour-master of that port he directs removals by the pilots.
344. He does not do any active work himself? No; he is the head of the Department in Newcastle.
345. Can you tell us how it is that at Newcastle, where they are collecting a larger sum for harbour dues, that the whole of the work is done there with one harbour-master, while in Sydney there are three employed? The harbour-master and his two assistants in Sydney do all the work of moving the ships; the harbour-master at Newcastle directs the pilots to do the work.
346. If one man can do work that returns £7,000 per annum, how is it that it requires three men to do less than one-half of the work? One man has seven assistants to do the work, while the other has only two assistants. The system at Newcastle differs from that of Sydney. At Newcastle there is a harbour-master, an assistant harbour-master, and six pilots; they do all the in-work, out-work, and removals. In Sydney there are five pilots at the Heads, who only do the sea work and bring the vessels into port. The harbour-master and his two assistants move them from where the pilots leave them to the wharfs.
347. In 1896 you collected for harbour dues £1,865, and it cost £1,789 to do the work; so that the whole of the earnings were absorbed by the salaries paid? Very nearly.
348. In addition to that there is the salary of the harbour-master's clerk, £288 per annum? There is an actual loss on that part of the service.
349. I gather from the papers that the larger number of the men employed by the Marine Board have passed the prime of their lives in the mercantile marine service before they entered your service? That is so.
350. It can hardly be expected that men who have passed a certain age can do the work expected of them? During the last ten years we have made regulations to deal with this, and we now do not take men on over 35 years of age.
351. Is it a fact that removals are always effected with the assistance of steam-tugs at Sydney and Newcastle? Yes.
352. I see that the salaries of the harbour-masters are rather high;—are they dependent on the regulations? No.
353. The assistant harbour-master at Newcastle receives a very large salary? This man is really paid as a pilot; he is an inspector under the Marine Board, for which he receives £50; he has a Government house valued at £50, and his pay as assistant harbour-master is, therefore, only £321 per annum.
354. The harbour-master receives £516 per annum, £100 of which is an allowance for quarters? Yes.
355. What is meant by a water bailiff? An inspecting water bailiff is a man that has to look round the foreshores and see that no improprieties are being carried on with regard to reclamations; he is also inspector for other Marine Board purposes.
356. *President.*] Is it not a fact that the Cumberland Ranger looks after the harbour reclamations? Yes; but the bailiff assists in the work.
357. *Mr. Powell.*] The town water bailiff is practically an inspector? Yes.
358. There is an inspector shown at £263 per annum;—what are his hours? He has no special hours.
359. Does this man look after the deck cargo, load-line, &c., of vessels? Yes.
360. What is the scale of fees charged for certificates issued under the provisions of the 35th section of your Act? By the new Act the charges are slightly increased. The maximum charge was £4; it is now an additional £1 for every 300 tons in excess of the old rate.
361. *President.*] The qualifications for voting powers for the Wardens is based on the registration of tonnage in the colonies? Yes.
362. The tonnage which comes to the port which is not registered in the Colony has no representation on the Board? No.
363. The large mail steamers? They have no representation in the Colony.
364. How does the aggregate tonnage of vessels registered in Sydney compare with that of vessels visiting the port which are not registered here? I should say the foreign tonnage was three or four times larger than the local tonnage.
365. As a matter of fact, the comparison is 3,000,000 tons foreign to 90,000 tons local? Many of the foreign-registered vessels are shown three times; I think it would be 1,500,000 tons against the 90,000.
366. I understand, then, that the British and foreign shipping which visits the ports of New South Wales amounts to about 1,500,000 tons, and the Colonial 90,000? That is about it.
367. This large amount of shipping has no representation on the Marine Board? They are not represented in any way, unless you can say that the Government nominee represents them. There are four nominees of the Government against three of the local shipowners.
368. Is there any reason why Colonial shipping should have greater representation than the British and foreign shipping? Of course, our own shipping is our first care.
369. Would not the money spent in the port by the British and foreign-going ships be very much greater than that spent by the Colonial ships? Certainly it would.
370. Therefore, the interests of the Colony in this respect should be very much more in favour of British and foreign-going ships than in the Colonial ships? Quite so.
371. *Mr. Powell.*] Is it not a fact that the great proportion of the intercolonial trade has no representation on the Board because the vessels are not registered here? Yes.
372. *President.*] Do you think that is a wise state of affairs? I do not know how it could be remedied.
373. What particular interest has the most representation on the Board? The members are the owners of sailing ships, but the votes which put them in power are derived from all the shipping communities in the port.
374. Are there any other interests connected with the port which are not represented at all? Certainly; there is the insurance and the mercantile interest.
375. The interest which is represented is simply that of the owners of the ships registered here? Yes.
376. There are other important interests which have no representation whatever on the Board? Yes.
377. What would those interests be? All the interests connected with the vessels that visit the port, and are registered elsewhere.
378. Are there not a larger number of other interests, such as, for instance, the cargo—that is to say, the merchants—which have no representation? Yes.

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379. Although they are vitally interested in the safety and efficiency of the vessels, they have no representation? No.
380. Then there is another interest—the seamen who navigate these vessels; their lives are at stake, and it seems to me that they should be represented? Yes.
381. Is there not another interest which outweighs in number all these—the travelling public? Yes.
382. Are they represented in any way? Except by the Government nominees. no.
383. The interests that are represented are simply the owners of the vessel? Yes.
384. The other interests, which are more vital, have no representation whatever? None.
385. Would it not be quite possible for a case of this kind to arise: that it would be to the interest of shipowners to send unscaworthy vessels to sea? It might be so.
386. It would be to the interests of the owners that the ships should founder, in order to enable them to recover the insurance? Yes.
387. The Act contemplates that the only interest worth looking after by direct representation is that of the owner, whose interest might be directly antagonistic to the interests of the merchant, the seaman, and the general public? Yes.
388. Is there not a radical error in the matter? I think that, as represented by you, there is a radical error, but there is a preponderance of representation in favour of the general public. There is a Bill going through the House now, providing representation for the seamen, engineers, masters, mates, etc.
389. Are the general public represented directly in this new Bill? Yes; by the Government nominee.
390. Coming to the members of the Board themselves—what qualifications entitle them to sit? The possession of 250 tons of shipping.
391. Does that mean 250 tons of shipping actually employed in sailing between port and port? Yes.
392. It would not represent the ownership of punts and hulks in the harbour? The interpretation is that, unless vessels are in active service, the qualification does not hold.
393. It is not your province to inquire into the matter of qualification? No.
394. Can you tell me whether the intercolonial steam fleet is represented on the Board? Not otherwise than by votes.
395. As far as the Wardens are concerned? There is one—Captain Maclean.
396. You do not know what tonnage Captain Maclean represents? No; but I can tell you the vessels. He owns, in conjunction with his partner, the "Tamar," the "Western," and some others.
397. A member is qualified for election to the Board by reason of these qualifications? Yes.
398. Supposing after election he should cease to be qualified in that way, would he have to give up his seat? According to law, yes.
399. *Mr. Powell.*] I would like to know what is the exact connection of the Newcastle Board with your Board? The Newcastle Board have local powers to deal with all Marine Board matters in their port, under the superintendence of the Marine Board of New South Wales.
400. Supposing a shipping disaster occurred at Newcastle, what course would be followed? The local Board would, if they thought fit, appeal to us to direct an inquiry into a catastrophe they were going to investigate.
401. The report would be made to them? Yes.
402. Supposing a vessel be stranded at Newcastle, are they not compelled by law to report the matter to the Marine Board at Sydney? It would be reported to the Board at Newcastle, and they would report it to Sydney.
403. Your Board would have to meet to give the necessary consent? It depends. The Marine Board should meet to direct an inquiry.
404. Is it a fact that the Marine Board meets in Sydney to deal with such cases and direct an inquiry? I am given discretionary power in the matter, and afterwards report to the Board.
405. They cannot institute an inquiry until you have given them the necessary authority? They must get our direction.
406. Do they report their finding to you? Yes, and we confirm or otherwise deal with their finding.
407. They can do nothing without the authority of your Board? That is so.
408. Have the Newcastle Board any executive powers—have they the supervision of the pilots? Yes; there is power under the Act to do so. There is an inferential power.
409. With regard to the pay-sheets and all expenditure that is incurred there,—does it come before the Board for approval? Yes.
410. Everything at Newcastle is done by the local Marine Board, acting under the sanction of the Marine Board in Sydney? That is so.
411. *President.*] With regard to the Marine Board inquiries, Mr. Powell just now gave us the number which had been held during the last ten years;—how long do these inquiries last? Sometimes several days.
412. Can you give us a return for the last five years, showing the inquiries which have been held and the length of time taken? It will be furnished.
413. I gather from the statements you have made to Mr. Powell that you limit the duties of the secretary. For the sake of comparison, the Board, or yourself, may be looked upon in the light of the Ministerial Head of a Department; in that view, does Captain Lindeman take the position of an Under Secretary? Much the same.
414. The Under Secretary would be responsible for everything in the Department? It is somewhat the same.
415. I gather from the papers in the Llewellyn case that he made representations to you that he should be given authority to supervise the work of the accountant? The accountant in the office is more directly connected with me than with any other officer, and I could not tell exactly what occurred in this case; but I never prevented Captain Lindeman from going to the accountant.
416. You would not think it necessary for him to look over the accountant's work? No.
417. Would it be an additional safeguard for you if a secretary were entirely responsible for the efficient carrying on of the whole office? I would not object to it; it might be desirable; it would be a very good system.
418. Who signs the cheques? I do.
419. Countersigned by the accountant? Yes.

420. When you see the accountant's signature on the cheque, you do not look upon that as any check outside of the accountant; therefore, if he were a dishonest accountant, there would be no object in having the cheque countersigned? That is so.

421. Supposing the cheques were countersigned by the secretary, would not that be an effective check? Yes. The system at present is: when a bill is sent in to the office, the secretary signs it if it is correct.

422. If he were to sign the cheques and the pass-books would not that be an additional security to yourself? It would; but I think the amount of extra work which would devolve upon him would not be justifiable.

423. Would it not have prevented these defalcations? No; I do not think it would, as the robbery was perpetrated after the cheque had been signed.

424. Would it not be the duty of a secretary to see that for every cheque signed there was a receipt? That is attended to by the Audit Office. We only pay cheques for wages; the cheques for services are drawn by the Treasury.

425. If necessary, would it not be better to give the secretary additional assistance to enable him to carry out what appears to me to be an important duty? I do not see any objection.

426. Would you not feel perfectly secure then? I feel so now.

427. Do you ask him to show you the receipted voucher? Yes.

428. Does not the secretary sign all the vouchers? If it is a voucher for service rendered, and the secretary knows it is correct, he initials it and sends it on to the accountant; the accountant brings it to me and I deal with it.

429. Is it a fixed rule that he has to sign every expenditure voucher? Except salary vouchers.

430. Supposing an officer were away from duty, would the secretary know of it? Yes.

431. Would it not be desirable that the secretary should sign the vouchers? If there is anything not out of the ordinary, the matter goes on to the accountant, but if there is any change, the secretary initials to show that it is right.

432. When the pay-sheets are submitted to the secretary, does he initial them? No.

433. Do you think it would be more desirable to make the secretary do more responsible work than he does at present? Yes, perhaps it would.

434. Has he ever represented that to you? No.

435. Do you think it would be desirable to make the secretary responsible for everything that goes on in the office? Perhaps it would.

436. Would you offer any objection if some such regulation were proposed? No.

437. Are you satisfied with the manner in which the secretary conducts his duties? They are most satisfactory.

438. With regard to the other officers of the Department? I am proud to say that the officers of the Marine Board are a splendid body of men.

439. With regard to appointments: supposing a vacancy occurred among the pilots, what plan do you adopt? If we can, we promote in the Department; if we do not consider there are suitable men in the Department, we advertise for applicants.

440. Is that invariably done? Invariably.

441. How do you decide the matter? We go through the applications and ballot for them in the ordinary way.

442. With regard to the boatmen, how do you select them? As we think fit.

443. Have you the power of appointment? No.

444. It must be approved by the Treasury? We recommend, and the Governor approves.

445. You must recommend in the first place, and your recommendations are usually carried out? Invariably.

446. You said no one should be taken into the service who is over 35 years of age;—is that invariably adhered to? If not to the strict letter, to the spirit of the law.

447. You would not go over 40, say? No.

448. You said the regulations provided for increments;—are those increments put before Parliament? They are shown year by year on the Estimates.

449. Every year Parliament sees the effect of the regulations? Yes.

450. *Mr. Powell.*] With regard to the qualification of the elective Wardens—if a man has 250 tons of registered shipping, that is sufficient qualification? Yes.

451. With regard to the electors, every Warden must be an elector? Yes.

FRIDAY, 23 APRIL, 1897.

PRESENT:—

JOSEPH BARLING, Esq., J.P., PRESIDENT.

GEORGE ALEXANDER WILSON, Esq., J.P.

JAMES POWELL, Esq., J.P.

Captain Francis Hixson, R.N., further examined:—

452. *President.*] I should like to ask first about the powers of the Board of Trade with regard to their revision of your findings;—that only relates to English-registered ships? To all certificates recognised by them. We are a sort of branch of the Board of Trade, and we take hints from them in very many matters—in the qualifications for the holders of the different certificates, for instance. The fact is, that the English and the Colonial Acts are synonymous in matters of that sort.

453. That is, they work together? They work together. For instance, we issue in Sydney a master's certificate, foreign-going, which the Board of Trade at Home recognise—that is to say, if we pass a man here and he goes to England, they recognise our certificate and allow him to command a ship just the same as if they had examined him themselves. Matters of this sort really are identical between all the colonies and the Board of Trade.

454. Is that founded on a specific English Act? Yes.

455. That is recognised by Act of Parliament? Yes; in fact, the Imperial authorities have passed legislation inviting us to take the subject up, and, of course, we have done it.

456.

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456. Of course, there would be no need of legislative action as far as this Colony is concerned in regard to matters which come within the jurisdiction of the Home authorities? We must legislate here and accept the same authority in our Board that the Board of Trade have.

457. Would there be any need of legislative authority here for you to deal with British ships, or would you take your authority from the Imperial Act? That is rather an open question. Some people say that all Imperial Acts relating to ships have jurisdiction here, whether they are taken up by the local Legislature or not; other people say that inasmuch as there is a local Legislature here, anything that is to be binding in law must pass through our Legislature.

458. That, of course, must necessarily be so with regard to our own shipping? Yes.

459. But British shipping is under the Imperial Act, by which they recognise your authority? The Imperial Act gives us authority.

460. And they recognise the certificates you issue here? Yes; certain of them. For instance, our coast-trade certificate would not necessarily be recognised by the Board of Trade—in fact, the Board of Trade at Home do not go so far in protecting life and property as we do here. They only issue foreign-going certificates, but we issue coast-trade certificates as well.

461. You pay a sliding scale of wages? Yes.

462. Can you tell what would be the difference in the annual cost if the minimum were reverted to in every case? I could not tell you off-hand, but it would be considerable.

463. You might give it to us later on; how do the rates of wages paid compare with the outside service? They are not excessive.

464. Take the minimum rate: is the minimum rate lower than the average rate ruling in the merchant service? No; I do not think it is in ships, but it is for seafaring men on shore.

465. So that our minimum rate would be something equal to the average ruling rate in the merchant service? Yes, perhaps it would; but in the merchant service the men are supplied with food.

466. But taking that into account? Yes.

467. Our maximum wages would be considerably higher than those paid in the merchant service? When it comes to the maximum it would be considerably higher.

468. Is the principle of the sliding scale recognised in the merchant service, or have they a fixed current rate? They have a fixed current rate.

469. The principle of maximum and minimum rate does not obtain? No. I may point out that, as far as the seamen of this coast are concerned, they earn considerably more than their wages by overtime. When I say that our wages are higher, I refer to the actual wage; if overtime is considered, the men along the coast earn more than our men do.

470. Under what conditions do they get overtime? If they work beyond the eight-hours system. I think the hours are 8 and 6; if they work before 8 in the morning or after 6 at night.

471. Would that refer to men on shore only? No; to the men in the vessels when they are working cargo, or when they are working in port.

472. Of course, the eight-hour system does not obtain during sea service? Not for only shipping work. They only get overtime when they are doing something in connection with cargo.

473. They are practically doing lumpers' work? Yes.

474. And for that work they get overtime? They get overtime.

475. They may have to go on at 1 or 2 in the morning to clear the hold, and in that case they get overtime? Yes.

476. Do you give your men overtime? Only in Sydney; not at different parts of the coast.

477. I suppose you would at Newcastle? No.

478. Then, as far as Sydney men are concerned, the payment of overtime in the merchant service need not be taken into account in comparing their wages with those paid in the merchant service, because there is an equation applicable to both cases? Yes; they both get overtime.

479. You were saying that the private tugs at Newcastle took the work out of the hands of the pilots? To a certain extent. The people who own the private tugs are so familiar with the peculiarities of the harbour, that they induce the masters of vessels that they are going to move about to do away with the employment of a pilot, because they can do it themselves.

480. The masters of the tugs are practically pilots themselves, and therefore able to do the work of moving the ships about in the harbour? Yes.

481. It is necessary for every ship that has not an exemption certificate to take a pilot? Yes, it should be.

482. Would the majority of ships coming there be without exemption certificates? Yes. I have explained before that we have been in the habit of issuing exemption certificates wholesale, owing to the excessive charges, but now the conditions are in a state of transit.

483. Do the pilots have the moving of the ships in Sydney? Yes; the harbour pilots.

484. For which a definite charge is made? Yes.

485. And are they compelled to take the harbour pilots? They are supposed to do so, but there is a loophole in the law, and in some cases they evade it; but all the big ships without question are very glad to take the harbour pilot.

486. The practice, then, is somewhat different in Newcastle to what it is in Sydney? No, sir; the two cases are precisely the same. They do the same thing. If not against the actual letter it is against the spirit of the law. They do away with the services of a pilot to save the cost in both ports.

487. The practice is more rife in Newcastle than it is in Sydney? Perhaps it is—yes. Until lately the charges on ships were so excessive that they did everything they could to evade expense.

488. The pilotage fees have been reduced from 4d. to 2d.? Yes. Now there is a maximum of £20. Very large ships have previously had to pay over £100 pilotage.

489. You have practically abolished exemption certificates for those ships? Yes.

490. Therefore you hope to make more in one way than you have lost in another? Yes.

491. You think it would be best to have the "Ajax" stationed at Newcastle? Yes. In rough weather the pilotage work is attended with very great risk. More so in Newcastle than here.

492. You quite approve of the "Ajax" being commissioned for service there? I could not, as an experienced man, say that the old whaleboat system should continue.

493. That will, I presume, increase the cost of the pilot service there? Yes.

494. Will it considerably increase the cost? Yes, it will.

495. Will it increase the cost by the cost of commissioning the "Ajax" and keeping it in repair? Yes; and the wear and tear, coals, and so on.
496. That will come to £3,000 a year? Something like that.
497. So that something like a sum of £3,000 has been added to the cost of the Newcastle pilot service by the introduction of the "Ajax"? Yes.
498. And the reduction of the pilotage dues will still further increase the cost? For a short time.
499. Do you think that the abolition of the exemption certificates will have as marked an effect on the revenue in Newcastle as it will in Sydney? More so.
500. You expect the equalising process there will be as great as here? I am sure the Marine Board Department in the future will be more self-sustaining than it is at present, and it always has been self-sustaining.
501. Regarding the Government representation on the Board;—you said the Government representative represented all interests? Yes.
502. Then, of course, the Government represent the owners of ships as well as any other interest? Yes.
503. Therefore the owners of our Colonial boats have not only Government representation, but they have also a special representative of their own? Yes; but you can hardly say that. On the one hand there are representatives specially to protect the interests of the shipowner, and on the other hand there is a preponderance of members representing the general public.
504. The Government representative is just as much bound to represent the shipping interest as any other interest? Perhaps so.
505. Then the owners of ships have got a common interest in the Government representation, and a special representation of their own? Yes; quite right, if there is no division of opinion on the Board.
506. I think the tonnage was rather incorrectly stated last time? Mr. Powell said between 9,000 and 10,000 tons.
507. *Mr. Powell.*] It was 90,000 tons.
508. *President.*] The Colonial registered shipping is 90,000 tons? Yes. What Mr. Powell gave was the aggregate amount of British shipping. Some of these ships come in two or three times a year.
509. I see Mr. Powell has made it out that the Colonial tonnage is 90,000 and the foreign vessels 2,900,000 tons? Those 2,900,000 tons represent some ships which are here two or three times.
510. Perhaps you would kindly let us have an exact comparison? I think it would be very difficult. The only way would be to get the foreign shipping entered only once.
511. *Mr. Powell.*] This includes all our coastwise trade? Yes.
512. Then our coastwise trade is the largest part of it? Yes, for one entry.
513. As a matter of fact, the greater part of that shipping is made up of our intercolonial boats;—the north coast boats are in and out every day? Yes.
514. They are registered here, and form part of that? Yes.
515. But they do not in any way compare with this foreign tonnage? No.
516. When I speak of foreign, I mean everything foreign to ours? Everything foreign to New South Wales.
517. *President.*] You think it would be a fairer comparison to take the 90,000 tons and the 1,500,000 tons of shipping? Yes; that would be a fairer comparison. But as the English, or rather foreign, ships are entered every time they come into port, the Colonial ships should be treated in the same way.
518. And that interest has no more representation on the Board than the Government representation? That is so.
519. Can you tell me whether in any other part of the world there is a pilot system carried on as we carry on here? In some parts of the world—in Queensland and in South Australia, and in many other colonies—the pilots are *bonâ-fide* Government officers. In other places they merely receive the rates they get from the ships they bring in.
520. Do you know what the system is in America? I am quite sure that it is not a Government system there.
521. Is it done by private contract? Yes. There is a certain pilotage levied on every ship entering the place. A dozen pilots would purchase a steamer or a schooner, and they would use this schooner between them; and they sometimes go to sea for miles and miles for the sake of being the first to get a ship.
522. I understand ships sometimes pick up the pilot 400 miles from port in American waters? Yes.
523. Is it a fact that these pilots are licensed by the Board of Commerce in America? Yes; I believe so.
524. And when licensed they are allowed to compete? Yes.
525. Is there an Act which gives them a maximum amount for the tonnage rates? Yes.
526. Something like our wharfage dues? Yes.
527. Then they are left to compete amongst themselves for the business they can pick up? Yes.
528. Was not some system of that sort adopted here years ago? Yes.
529. How was it found to work? It was found to be a failure. In place of competing the pilots used to combine.
530. They formed a ring? Yes.
531. Supposing it were thought desirable, from American experience, to adopt some such plan here, would there be the same danger again? Yes. Where there is an excessively large shipping trade some such system might answer; but when the trade is limited there is a difficulty in creating competition. Since I have been in office we have had the competing system, and they have made out that they were competing with each other; whereas they let the man on turn take the ship, and the others enjoyed themselves at home.
532. In America they have a much larger population than here; that explains the difficulty? Yes. Our Act provides for the system, and, in fact, it has been in vogue here; but from the nature of the service it is difficult to make people compete here.
533. Are you aware that the competing system is adopted in England? Yes.
534. Does it work well there? No other system has been adopted there for ages.
535. And it works well? It works well, I believe.
536. Then our system stands out singular as regards other parts of the world? Ours and all other sparsely-populated countries. I may mention here that there is nothing approaching complaint ever made against our system since we have had the pilot steamer. I have no doubt that there are complaints about Newcastle, but the employment of the "Ajax" will correct that.

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537. Have you given a return showing the revenue received from each of the pilot stations and the expenses of each? Yes; it is among the papers. I may almost say that the revenue of the out-stations is nil.
538. So that the expense of the out-stations must be put against the revenues received in Sydney and Newcastle? Yes.
539. You think that is a fair thing? Well, the shipping are specially taxed for harbour and light rates, and they expect all the conveniences that we can give them. Although the pilot is not actually on board the vessels at these bar-harbours, as a matter of fact he does pilot the vessels, because they do not think of entering until he hoists a flag for them. He makes the system as easy as possible, and buoys the channel, and is always ready to help in case of accident or trouble.
540. Then the charges they pay in Sydney are supposed to cover the conveniences they get on the out-stations? I think that is a fair thing to assume.
541. On the Richmond River they have a number of lights? Yes, up the river.
542. Do they pay anything for that? No.
543. That is considered to be part of the general conveniences? The shipping are taxed. There is a pilotage system and a light system provided for them for the tax that they pay.
544. Therefore we must not go into the details of the harbours along the coast? I think not.
545. The payment in Sydney is supposed to cover conveniences along the coast? Yes. I think it is fair to say so. The Navigation Act was established in order to provide benefits for life and property all along the coast, and this tax was to meet the expenses that the Act brought into existence.
546. That is to say, we must take the thing as a whole? I do not think you should deal with it piecemeal.
547. Do the colonies combine in the expenses of any of our lights? That is a moot question just now. We do contribute towards the cost of the lights in the Bass Straits. Previously we used to pay a portion of the cost of the lights in Victorian territory, but we have latterly discontinued to do that, and now we only pay for the lights on our own coast and for those in Bass Straits.
548. What proportion do we pay for these? In accordance with the tonnage of vessels arriving here passing those lights.
549. Then the Victorian authorities pay the expenses of those lights? Not the Victorian—the Tasmanian. They are recouped by the Victorian and New South Wales authorities in accordance with the use made of the light.
550. That cost is taken into account in arriving at your financial statement? Yes.
551. I should like to know what is the exact legal value of your decisions with regard to cases that come before you? Well, they are of considerable value. They frequently prevent further litigation—that is to say, people sometimes agree before they go into the dispute that they will be guided by the Marine Board verdict.
552. Your decision is not final, I presume? It is, so far as the conduct of the master is concerned, but not in a money sense.
553. I suppose it has no legal status? It has no money value whatever.
554. Therefore the Vice-Admiralty Court is open to them? And it is frequently taken advantage of; but in many cases there is so much respect for the Marine Board decision that they agree to settle on that.
555. Can you tell the proportion of appeals that have taken place from your decisions in the last few years? You mean that litigation has followed up?
556. Litigation has followed up your decisions? Perhaps half—not quite half. Then there is another aspect where the Board's decision is sometimes objected to; if a master thinks we have dealt wrongly with him, he has an appeal to the Supreme Court.
557. Do you think it would be advisable to strengthen the position of the Marine Board in that respect? I do not. The tendency of the Englishman is to fight; and if he is prevented from fighting further, instead of taking the thing agreeably it would have the opposite effect.
558. But would it not do this way: give a legal effect to your decisions, leaving it open to appeal just as in all other cases—the same as the appeal from the decision of one Judge to the Full Court in connection with cases where money was at stake? Perhaps you might go as far as they do in Queensland. They have a provision in their Act that if the parties agree before the inquiry has commenced to abide by the decision of the Board they cannot go further. It is final then.
559. But still there might be a modification of that by giving the decisions of the Board a legal value, with the right of appeal to the Full Court? I think that would be advisable.
560. Do you think it would assist in bringing that about if a lawyer were on the Board—say, a District Court Judge? Perhaps; I have not thought the matter out.
561. You said there was an appeal from your decision as to certificates? Yes; in the first instance it goes to a single Judge, and then there is a further appeal to the Full Court. It is the same as in Common Law.
562. Do the Home authorities accept your verdict on certificates issued by them? Yes; but they have the right of re-issuing if they think fit.
563. At Home it is the Court of Survey? Yes.
564. There is no body exactly like yours at Home? Scarcely; but there are certain local Boards like ours under the Imperial Act.
565. But the Court of Survey is composed of two nautical assessors and a Judge? Yes.
566. What is the value of their decision? I think, on the whole, the seafaring men approve more of our decision, on the principle that they are tried by their peers; but I do not think that there has ever been any great objection to the system at Home. One advantage of our system is that there is no loss of time. A ship is wrecked to-day, and here we could hold a Court to-morrow; but at Home the proceedings are much more lengthy. There is considerable inconvenience in waiting in cases of that sort; because when a vessel is wrecked the crews lose their homes; they are in a very awkward position in a strange city, and they want matters settled quickly so that they may go elsewhere.
567. In such a case the Court of Survey would have a distinctly judicial authority and the after proceedings might be shortened by reason of this? Yes.
568. Your engineers examine the boilers and machinery of passenger steamers every six months? Yes.

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569. I suppose you have the power at intervening periods to hold a survey if you think fit? Yes.
570. Does that hold good with cargo steamers? Not in Sydney. We only give certificates as to the sound and good condition of the whole ship in cases where the vessels carry passengers, the others are only open to ordinary inspection. We do not neglect them altogether, but we do not take the same pains with those vessels as we do with vessels that hold our certificates.
571. According to the Act it is strictly confined to passenger-ships? That is what I mean.
572. But you have no jurisdiction? There are other parts of the Act which say that the Marine Board inspector may go aboard all ships and do what they think fit. The same supervision is not extended to them that is extended to vessels which hold our certificates, which say that this vessel is thoroughly sound in hull and machinery and fittings for the purpose for which she is engaged. Although we do not go to the same extent, we do supervise all other ships, though they do not carry passengers.
573. Do you think it is advisable to have a more strict supervision over non-passenger vessels? The Bill that has passed the Assembly will carry out that suggestion—that is to say, all steamers, whether they carry passengers or not, are to be surveyed in future by the Marine Board. The English system is only to insist on passenger-vessels carrying over twelve being subject to special survey; and in Melbourne, on the other hand, they make every vessel that goes to sea take a certificate, and here we make every vessel which carries passengers; so we are midway between the old country and Victoria in this respect.
574. *Mr. Wilson.*] I think you said you allowed the Sydney people overtime and did not allow the Newcastle men? Yes.
575. Why is that? The work at Newcastle is pilots' work. The only men who are allowed overtime in Sydney are the men up the harbour here who man the launches during regular hours. The men who are at Newcastle for pilot work, work day and night, Sundays, and holidays in rotation, and they are not allowed special overtime pay.
576. Why specially Sydney? Because we have only a limited number in Sydney, and if they are wanted after hours it is harder on them than on the Newcastle people, who are not kept from their homes when they are on turn even.
577. I think you said the Newcastle people work constantly? Yes, as a body; but there are so many of them that there can be a boat's crew on watch constantly there.
578. What number of men have you in Sydney and in Newcastle? We have twelve in Sydney and in Newcastle twenty-two.
579. And that is the reason why you allow overtime in Sydney? That is the reason. Often in Sydney men are sent to Broken Bay or to Botany Bay for two or three days, and an allowance has to be made to provide for them.
580. An allowance is not overtime? But the men would not be away from their homes as well as during overtime.
581. How is that. I can quite understand your giving a man an allowance when he is away from home, but that is not overtime? If a mail steamer is expected here we do not know what time she may come, so the men have to wait at the boat-shed for her, and some of the men may be sent to Botany Bay, and they are allowed this overtime in both cases.
582. And nothing of the kind arises in Newcastle? No; this state of things only prevails at the boat-shed in Sydney.
583. With reference to your allowance of £225, that is apparently for quarters and gas? Yes; I am provided with a house with gas laid on to it.
584. No other allowances? No. I may say that I am subject to calls day and night. I live there for the purpose of being available for any emergency.
585. Are the pilotage rates in Sydney and Newcastle the same? Yes.
586. *Mr. Barling* asked you if you thought it would strengthen the judicial side of the Board to appoint a lawyer to it;—is the judicial function any necessary part of the Marine Board at all? Only so far as it deals with the holders of their certificates.
587. Arising, say, from a collision or a wreck? Yes; but the Marine Board functions are confined to the conduct of the masters of the vessels. Of course the master carries with him the responsibility of the owner, and in many cases, as the Marine Board have to give a decision as to the master, the owners are content to let the matter rest as they decide it, but there is no necessity.
588. There was a Bill introduced into Parliament last year providing for the representation of engineers and seamen on the Board? Yes.
589. Suppose the judicial part of the Marine Board duties were performed by a Judge and two assessors, as in England, would there be any need for such representation? No.
590. Would not seamen and engineers, captains and owners, and everybody else, have the same confidence in such a court as the general public have in the Supreme Court, say? I do not think they would. There are constant complaints on the part of sailors that they are tried by people who do not know anything about the case.
591. But there are two men who will advise the Judge on technical points? I am confident that the seafaring people in Sydney prefer our court to such a court as you suggest.
592. Then why is there such an agitation for representation on the Board? That is to give the different classes of people who have to do with vessels representation. The seamen and the engineers want representatives, but they do not object at all to the judicial functions of the Board.
593. Would a court constituted in that way be likely to approach these things in a judicial spirit? I can scarcely express an opinion on that. It depends largely on whom the different parties send to represent them.
594. They represent divergent interests, and it is not to be expected that they would look on things in a judicial way? I am not in a position to speak with authority, but I do know that there is no objection to the present judicial powers of the Board.
595. There are two steam launches, one used by the Governor and distinguished visitors to the port, and another used by the Government;—are both these launches in pretty regular use? They are not in constant use, but they are frequently used.
596. Would one of them perform all the work? No; we often have demands for more than we can supply. The Government often order both when the Governor does not want one, and the Governor occasionally asks for both.

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597. Are you aware of any other Government Department that has a launch? Yes; the Public Works Department.
598. Then these are both required? They are both required—not by the Marine Board. They do not want them at all; the Government want them.
599. They are frequently required at the same time? Frequently.
600. *Mr. Powell.*] Do you remember your answer to questions about the "Carrington";—you told us that four boatmen returned as part of the crew of the "Captain Cook" are employed on the "Carrington"? Yes.
601. And they are employed only to bring back the pilots from inward ships to the station at Watson's Bay? Oh, no; they have to take pilots up to Sydney to take ships to sea as well.
602. And they bring back the pilots from the inward ships? Yes; and to take a pilot, for instance, to Darling Harbour to take a ship to sea.
603. But we were told the other day that your pilots did not take the vessels from Darling Harbour? If I said so, I said so in a qualified manner. It is a common thing.
604. I understood that the harbour pilots took the vessel to the harbour border? That is the proper thing, but it is a common thing for a sea pilot to be ordered in the middle of the night to take a vessel, say, to Newcastle.
605. That is, from Darling Harbour? From any part.
606. In that case the Government lose the removal dues? Yes. Of late the ships have been excessively taxed, and they do everything they can to evade the port charges in this particular respect.
607. It seems to me that you have been assisting them, because you have allowed the sea pilot to go into the harbour pilot's water and take vessels direct from the wharf to the sea, thereby taking away from the revenue the harbour pilot's fee? We do not think of the revenue; what we think of is the facility for commerce and trade of the port in every way.
608. That is very good and very right, but at the same time as we are losing the harbour pilot's fee we are incurring the expense of £515 a year to provide a boat to take the pilot to the vessel? It is scarcely fair to put it that way. The "Carrington" occasionally does as you say, but she is not kept for that purpose.
609. The sea pilot's water commences at Fort Denison? It does, but there is no law to that effect.
610. When a vessel is removed she is supposed to be put alongside the wharf by the harbour pilot and the charge made; when a sea pilot brings a vessel in, one would suppose that she would be put alongside the wharf by the harbour pilot and the charge made also? This system has grown up in consequence of vessels not only wanting to remove from the wharf to the stream, but wanting to go straight from the wharf to sea. In some cases, such as the "Barbarossa," the harbour pilot would do a portion of this work and the sea pilot take her on, but if an ordinary small vessel wants to go to sea we let the sea pilot take her away.
611. There is a loss of revenue? Yes, there is.
612. And there is a great increase of expense in working the Department, because the sea pilot really ought not to go beyond Fort Denison? Yes; but there is no law to prevent it.
613. The work of the pilot would commence at Fort Denison, and a charge ought to be made? You know very well a charge used to be made, and whether the ship wanted to go to the wharf or not the charge was made, and there was so much agitation about it the Government very wisely gave it up.
614. The concession was "no work, no pay"? Yes.
615. This is double work, no pay—you do the work and you have to send for the man? There is no doubt that the system which prevails is precisely as you say, and there is a certain loss of revenue if we could legally claim it; but, as I tell you, there is no legal authority saying that a harbour pilot must do a certain amount of work and a sea pilot other work.
616. But the pilot waters are defined? No; except in our regulations. They are not defined in the Act.
617. *President.*] They are defined in your regulations, and that has the effect of law? No, sir; this is a regulation in our own Department, for the pilots.
618. But is not it a regulation which you are empowered to make by the Act? Yes; but we cannot charge the ships under it.
619. Is it approved by the Governor-in-Council? Yes.
620. In that case it has the force of law? Oh, yes, it has; but there is nothing in the regulation about charges.
621. *Mr. Powell.*] You know that a sea pilot's line is defined? There is a regulation issued merely for the guidance of the employees of the Department, but it is not a general regulation. There is no strict law defining what the duties of a harbour pilot are, and what are the duties of a sea pilot. There is a schedule in the Act saying that a harbour pilot shall be paid so much, but that is all we have on the subject.
622. Well then there is a loss of revenue? Certainly.
623. What is the practice at Newcastle,—do the sea pilots take the vessel there;—they act in the double capacity? They often do.
624. And in that case they charge for the removal as well as the pilotage? I do not think so.
625. The harbour removal amount is much larger in Newcastle than in Sydney? Yes.
626. And having no harbour-masters there, you tell us that the pilots do the removals? Yes. You asked me whether, in the case of a vessel being taken direct from the wharf to the sea, they charge for harbour removal as well as pilotage.
627. It is not so in Sydney? We supply the wants of the trade. In many cases the vessels are moved from the wharf to the stream to complete their crew, or half a dozen things they require to do before they go to sea. But if a vessel wants to go straight to sea we do all we can to facilitate commerce, and let her go.
628. The sea pilot goes straight to the ship, and that is the reason why the "Carrington" is partly required? That is it, sir.
629. You told us that the 4d. per ton was paid every half-year; that is paid for the right to use all the lights on the coast and all the harbours? Yes, it is a harbour and light rate for general purposes.
630. Every ship pays 8d. per ton annually for the use of the lights on the whole of the coast? That is so.
631. And for any advantages that they may have in connection with harbours? Yes.
632. But that has nothing to do with the pilotage service or with removals? No. In this instance the
line

line has never been definitely drawn. The master of a ship, if he pays for a harbour and light rate, may say, you must do so and so for me, I expect it; but another man may not want anything.

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633. It is not what he expects, it is what is the law? Yes.

634. These vessels which trade to the bar harbours, such as the Richmond, pay a very small sum as harbour and light dues? It is not a heavy tax.

635. It is not worth talking about as a tax, is it? No.

636. Was the system of increments stopped in your Department by Ministerial authority? Yes.

637. And is it still in abeyance? Yes.

638. What do we understand by that;—do you mean to say that the men have what they consider to be a claim? Yes.

639. You said that the pilots rose to the top of their grade in twenty-five years? That should be twenty years.

640. And boatmen seven years? Yes.

641. The men at the Government boat-sheds appear to have had annual increments of £7, rising to the top of their grade in seven years? £5 I think, sir. There is some mistake there.

642. The coxswain rises to the top of his grade in seven years? (*Looking at list.*) Yes, you are quite right, if you mean the boatswain.

643. And the ordinary boatmen reach their maximum in —? Six years. The minimum rate is £96, and the maximum £144—that is, with quarters. This would be about ten years.

644. The maximum is £126, I think? Yes, with quarters.

645. Their reaching the maximum in six years accounts for your having so many boatmen at the high rate of pay? Yes.

646. Does it not seem extraordinary that the boatmen should reach their maximum in seven years and the pilots in twenty? Yes.

647. I suppose you are aware that the boatmen in Victoria have to serve twenty-five years to reach their maximum? I do not know it, sir; but it is very likely.

648. The victualling of the "Captain Cook" including the wages of the cook and providore amounts to £470 per annum;—does it not appear to you that that is rather a heavy sum for victualling seven people on board? It is.

649. Does it not appear extraordinary? It is heavy. The fact is, when we established this system we put the pilots on board the vessel and put them down at a salary of £350 a year, and previous to that they had been drawing between £800 to £1,000. They thought it very hard to be reduced to such a low salary, and we gave what was perhaps a liberal allowance for food.

650. Do you not think it would be better to pay all hands on the "Captain Cook" sea-going wages and feed them by contract? It would perhaps be more economical.

651. You have told us that the pilot service outside the port of Sydney is really carried on at a considerable loss; have you any idea what that loss is? It is almost the extent of their wages, but then those pilots are put there for very many purposes. They have not only to pilot in ships as they are wanted, but they are there for the protection of life and property. They have charge of the life-saving apparatus, they have to buoy and beacon the rivers, they have to put up leading marks, and to make tide signals—in fact, to guide every ship that enters the port, and do it at a considerable amount of risk at times. They do a lot of work, really, in the protection of the trade and shipping of their ports.

652. Do you not think that, at some of these places where there is very little to do, the Queensland system of appointing pilot boatmen and making the coxswain the pilot would be better? It might. You know there are rivers and rivers. If you compare the stations on the Richmond, for instance, with those in Queensland, I think you will find it necessary to have different men there. All the Queensland stations are behind the Great Barrier Reef, and the sea is nothing in comparison to that at our bar harbours. The settlers along the coast insist on having efficient pilots.

653. I think you have told us that the removal dues are a source of loss in Sydney, that they do not pay the expenses of the harbour-masters? You gave me the figures and they showed a pound or two on the wrong side. Since that return was made out we have had an increase in the harbour removal dues. The maximum charge previously was £3, now we have made the maximum charge £5, so that the service will be more self-supporting in the future.

654. There has been no reduction in the harbour and light dues under the new Act? No.

655. I have a return here of the pilotage collected for the month of March, and the whole amount seems to be £744 for Sydney; that being the case, will there not be a great loss on the pilotage for the next financial year? I would point out that March is our dullest month, and no doubt, in consequence of the reductions that have been made, the returns for the next few months will be less than latterly; but now the issue of exemption certificates is stopped there will be many more vessels that will have to take pilots and eventually there will be an increase.

656. And for the next financial year there will be a loss? Possibly, but although there is a reduction in the pilotage rates there will be no material reduction in the light rate, and as there are a lot of very large steamers coming in it will be gradually made up.

657. You deal with the Imperial certificates under the second subsection of section 88 of our Act? Yes.

658. You said, "But for that section we could not deal with the Imperial certificates"? That is so, I think.

659. That being the case, how do you propose to deal with the Imperial certificates now that the Act is repealed? A clause in the new Act keeps that going.

660. If you conduct your inquiries under the new Act, do you conduct them in the manner provided by the Act? What I say is, that the new Act keeps alive the local Act and our procedure, and therefore I think we shall make no alteration at present.

661. But do you conduct your inquiries according to the plan laid down under the Imperial Act, or do you adapt your own circumstances and the conditions of your Board to that Act? Our Act in that particular matter is really a transcript of the Imperial Act.

662. It is not, I think, to the extent of the manner? I do not mean as to the composition of the Board, but our legal finding is governed by exactly the same condition as that of the Imperial Act.

663. But then you are confined almost entirely under this Act to the cancellation and suspension of certificates? Yes, quite; we are confined to that.

664. And there are no questions of law in connection with the cancellation and suspension of certificates? No more than what might crop up with the two or three lawyers we often have at the table. 665.

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665. But in collisions and matters of that kind questions of law crop up? Either law or common sense, which is supposed to be law.

666. The English Act provides for legal assistance? I think the English system is most cumbersome and expensive, and we are more economical here in our proceedings than in any other place.

667. You spoke of the satisfaction given to nautical people generally by being tried by their peers. That may have its advantages, but do you not think it also has disadvantages, inasmuch as there can be a leaning on the part of their peers to them in dealing with matters connected with the profession? There might be, but I do not know that there is. I do not think they get off so easily before us; in fact, I have heard a large English ship-owner say, "I hope you will try the case out here, because you deal strictly and justly with the people; but if they get into an English Court it is not nearly so satisfactory." The man who said that to me was Mr. Green, one of the managers of the Orient Company.

668. Still that system seems to have been engrafted on your Act to some extent, because local Marine Boards are required to have a local Stipendiary; the Act directs you? No, not absolutely. It is if wanted.

669. [Read clause 87 of the Navigation Act.] In point of fact, when an inquiry is held at Newcastle the local Stipendiary Magistrate does adjudicate? Yes, if a certificate is to be suspended.

670. Does he sit with the Board? Yes. The fact is there are multitudinous functions performed under the Act.

671. Well, now, about those inquiries that you hold into collisions, &c. Take the year 1896, and, for example, the first case in the year,—the "Leveret-Gamecock" collision. There seem to have been seven sittings. Is the evidence taken? Yes; and not only that, all these depositions have to be copied to be sent to the Board of Trade. I will explain why there were seven sittings on that particular case. The Marine Board commence an inquiry of that sort without prejudice. Two ships are in collision. It is not for them or anybody else to say who is to blame in the matter. After what we call the preliminary inquiry the Marine Board make a report, and they say, for instance, that they believe this collision occurred because the master of the "Leveret" committed certain breaches of the steering and sailing rules. This report is then furnished to the man, and he is cited to appear before the Board to show cause why his certificate should not be cancelled or suspended for committing this breach of the Act, and then he has every opportunity of defending himself and getting out of the difficulty if he can.

672. Kindly turn up the Minute Book of the 7th January, 1896;—did the Board do any other business on that day? No.

673. Was it a special meeting for that purpose? Just exactly as I tell you.

674. Will you read the minutes, please? [Reading.] "Marine Board, 7th January, 1896. Present:—The President, Captains M'Lean, Jenkins, O'Sullivan, Moodie, and Broomfield. Commander Lindeman, Secretary. Captain Broomfield took his seat at 2 p.m. 'Leveret-Gamecock.' This case was proceeded with and again adjourned till 10 a.m. to-morrow." That means that we were through this "Leveret-Gamecock" matter all that afternoon; but besides this we have a full set of proceedings on another set of papers.

675. Then again on the 8th? Yes.

676. That was also devoted to that case? Yes.

677. Then on the 13th January? Yes.

678. You had a meeting of informal business, and the collision case was referred to? Yes.

679. How was it referred to? The Board reported that this case was caused by the wrongful act or default of the person in charge of each vessel, and they were called upon to say why their certificates should not be dealt with.

680. But there were only two sittings really on the case? Two sittings previously to that.

681. That is merely the finding of the Board? No, sir; that is the report of the Board. This case was resumed the next Monday.

682. That would be the 20th? Yes. [Reading.] "Marine Board, 20th January, 1896. Present:—The President, Captains Broomfield, M'Lean, Jenkins, O'Sullivan, Moodie, and Mr. Wildridge. Commander Lindeman, Secretary. 'Gamecock-Leveret.' The Board adjudicated in this case and suspended the person in charge of the 'Leveret,' J. H. Maiden's certificate, Harbours and Rivers, for three months; and that of Charles Larsen, the master of the 'Gamecock,' for one month."

683. That is part of the formal business of the day's meeting? Certainly.

684. So that there were only two sittings really to go into the inquiry? Two special sittings, and the others were part of the ordinary business.

685. Then take the 7th April meeting,—the "Petrel"? The master and crew of this vessel having been examined regarding the loss, the Board decided to give their decision next Monday. We went into the inquiry then, and we did not give our decision until the following Monday.

686. You gave your decision on the 13th? Yes. [Reading.] "'Petrel.' The Board adjudicated on this case, and decided that the wreck of the 'Petrel' was caused by the vessel attempting the bar and becoming stranded at the entrance of the Bellinger River, at a questionable time of the tide, when the wind failed her. Although the Board do not feel justified in depriving J. P. Smith, the master, of his certificate, they nevertheless reprimand him, and caution him against crossing a dangerous bar otherwise than at unmistakable flood tide."

687. That is part of the formal business of the day? That is all.

688. How long would the meeting last? It all depends upon circumstances. I might say that both these cases appear to be cases in which we have no lawyers, and we get through our cases much more rapidly when there are no lawyers than when there are.

689. But these cases, collisions and certificates, are the only cases you deal with—the others are only formal business? Yes.

690. The Members of the Board know nothing about them, and take them as they find them? Oh, no. They have the papers placed before them, and, of course, in issuing all these certificates there are certain necessary qualifications. For instance, a man has to show that he has served four years at sea before he can get a second mate's certificate, and those papers are put before the Board, and they initial them after examining them.

691. That is to say, you initial them for the Board? No, sir; a quorum of the Board initial them.

Commander

Commander George Sidney Lindeman, R.N., Secretary to the Marine Board of New South Wales,
sworn and examined :—

Commander
Lindeman,
R.N.

692. *President.*] How long have you been secretary? Twenty-two years.

693. What are your duties there? To carry out the provisions of the Navigation Act, under the direction of the Marine Board. 23 April, 1897.

694. Now what does that involve on your part? I gave in a written list. It is rather a long one.

695. [*Handing list to witness.*] That is the list? Yes. [*Vide Appendix 9A.*]

696. This is a list of the books kept? [*List handed to witness.*] Yes. [*Vide Appendix 18.*]

697. Referring to the papers which were laid on the table of the House with regard to the Llewellyn frauds, I see it is stated on page 4, "The secretary, who should have exercised the necessary supervision over the accountant, has not been allowed to do so";—is that correct? I have never been told to do so. I have pointed out that I have no supervision, and I have never been told to have any supervision, and I did not think it was my place to do so. I pointed out to the President on several occasions the very unsatisfactory way in which the accountant did his work. It was nothing to do with his accounts, but his general carelessness, and so on. He sent for him and reprimanded him. Then the Treasury Inspector came down and reported that everything was all right, and then the idea of fraud passed away.

698. This fraud occurred, I understand, in cheques being drawn and not actually paid to the parties in whose favour they were drawn? There were complaints from the stations that they did not receive their pay for certain months.

699. What did you do? I immediately informed the President, as I had no authority over the accountant myself.

700. You took no steps yourself to inquire? It is some time ago, but I have no doubt that I sent for the accountant and said, "Why is this?"

701. When you called for vouchers would you know that these amounts had not been paid? No, because the vouchers are already receipted before they are paid.

702. How is that done? The vouchers come down receipted, and then the money is paid according to the way in which the pilots or lightkeepers wish it paid.

703. How is it paid? Sometimes it is paid into the bank, and sometimes it is sent to them.

704. Would not you have detected it at once if the bank receipts had been checked? I imagine so.

705. There was no complication about it whatever if that had been done? I suppose that that would be the way to find out.

706. It would be a very simple way. If it had been in your hands would you have considered it necessary to examine the receipts for all cheques that were signed by you or the President? If I had been responsible for the accountant to the President I am perfectly sure that I should have taken every care.

707. If that system had been carried out you are satisfied that these frauds would not have gone on? I do not think so.

708. I suppose that you are aware that in other departments that really is done? I am not aware of what is done in other departments.

709. How long did that go on? Two or three years; I think, off and on.

710. And you felt you had not the necessary authority to inquire into that? Quite so. I felt it my duty to report to the President.

711. I see by the statement here that these frauds extended over a period of three and a half to four years, owing to lax supervision and the non-existence of the most ordinary system of departmental check; and your explanation is that you had not the power to examine the accounts, and if you had it would have been found at once? So far as I know, I should certainly have detected it before long.

712. Do you think that you have a sufficient staff to carry out those duties of supervision, supposing that they were laid upon you? I am pretty hard at it now. We certainly have not more than we want.

713. Would it occupy very much more of your time? I do not know exactly how long it would take, but I would undertake to do it.

714. Without further assistance? I fancy so. I would do my best.

715. Is it a fact that the office relies on the Treasury inspection to discover any discrepancies which may occur of this kind? I believe the President thought that the Treasury inspection was quite sufficient, with his own supervision. He was quite satisfied that there was no fraud going on.

716. How often did that inspection take place? Once a year.

717. Do you mean that practically for a whole year the accountant was not checked? Except by the President.

718. It is shown by these Parliamentary papers that this was not done, and hence the frauds; you are quite satisfied that you have again and again drawn the attention of Captain Hixson to the general unsatisfactory state of the accountant's work? Yes.

719. Does that same state of affairs exist now? I have no more control over the accounting than I have ever had.

720. Are you aware whether the receipts are now checked with the cheques drawn? I have no means of knowing.

721. You do not know, and you still think it is desirable that you should? It is not my business.

722. Have you ever seen the bank book? No.

723. Do you countersign the cheques? No.

724. Then you have no more check over that part of the business than you had before? No more.

725. And you are still of the opinion that it would be desirable that this check should exist? I am of opinion, as I said before, that everything that goes on in the Marine Board should go through the secretary, and he should be responsible to the President and Board.

726. In other words, that you should occupy the same position to the Marine Board as an Under Secretary does to his Minister? Just so.

727. That view has not been taken by Captain Hixson? Not quite, inasmuch as I have no control over the accountant.

728. I see you have given us in your duties, "Supervise the vouchers of expenses";—does that mean you initial the pay abstracts? No.

729. That should be read with the correction, "Not salary abstracts"? Yes.

730. Suppose a man is away from his duties, who is responsible to see that his pay is stopped? It would be reported to me.

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731. Would you then call for the voucher and see whether any deduction had been made? No; I should simply report it to the President, who would take the necessary action.
732. You would not follow that up, and see how it is provided for in the abstract? No.
733. Then it would be quite possible for a person to be away from his duty altogether, and by an oversight or collusion on the part of the head of the station, wherever it may be, to be paid, although he may not be doing any work? I suppose it would be possible for a man to be away, and get his pay if it is not reported by his immediate superior.
734. If it is reported? I should report it to the President and carry out his instructions.
735. And then you do nothing more? Unless he directs me.
736. You do not consider you have any further responsibility? As regards his payment.
737. In fact, your position with the Board is a rather restricted one;—have you got authority to supervise the working of the Department? I have nothing to do with salaries.
738. Is not that rather an important part of the expenditure of the office? Yes.
739. And you have no supervision over that whatever? No.
740. And a man might be away without your knowing that his absence is provided for by the excision of an amount from the salary abstract? I never knew a case in point.
741. Still such a thing may exist without your knowledge? If a man was away from the station, and it was reported to the President, no doubt he would take steps to deal with his pay if necessary.
742. But, so far as you are concerned, you would have no power to deal with it? I should probably have to write a letter asking for explanation.
743. But you do not follow that up? I should know what was done, but I should not follow it up with the accountant.
744. You do not initial the salary abstract? No.
745. Do you not think it is advisable for you to do that? It might be an additional check.
746. And this unsatisfactory state of affairs still exists? So far as I am concerned, I have no more control over the accountant now than I had then; but we have a most satisfactory accountant now.
747. You depend, then, on the character of the accountant? Of course the President has his check; but, so far as I am concerned, I have no check. The work goes on very well.
748. Now, how do you obtain your stores? From the Stores Department, and some from the Public Works Department.
749. You take advantage of the expansive clause in the Public Works Department's contract for lighthouses; but are there not cases where you have to get stores outside the ordinary contractors? Sometimes.
750. Now, I notice in this report, page 21, "I have drawn attention to the fact that Messrs. Weisel & Co. have for a considerable time supplied hay, corn, and chaff to the lighthouses at what I consider to be exorbitant rates";—have you any control over that? Only so far as giving the orders.
751. To whom do you give the order? The requisitions come at a certain time of the year, and it is always the duty of an officer in the Department to see that the forage is supplied. It is a peculiar service. It is not like an ordinary service, where a local contractor would supply it. He won't. It is not big enough. The hay, &c., is cut up in small bales, and shipped in little schooners here and there. We can never get it done by open tender. They won't tender for it.
752. Who are Weisel & Co.? They are Sydney people.
753. So that if you have to supply hay, corn, or chaff to the lighthouse at Seal Rocks you purchase it in Sydney and ship it there? Yes; and there is a lot of bother about it. A man has to see it shipped.
754. Do you concur in this report of Mr. Brodie's, that excessive rates were charged? I think the rates were slightly high on that occasion.
755. Before you order things do you make arrangements as to price? It has been the peculiar business of an officer, Mr. Lawrence, to go round and try to get it done as cheaply as possible.
756. Who is Mr. Lawrence? He is the harbour-master's clerk.
757. It is left to him to fix the prices? It is left to him to get it done at the most reasonable price. Since that report we were ordered by the Treasury to get it done by tender in the usual way. They were called, I believe, with no response, and in the end Mr. Kirkpatrick submitted a recommendation that the Marine Board should purchase their forage in the open market, and that is going on now.
758. It is still left to Mr. Lawrence to purchase in the open market at the most reasonable rate? Yes; he has always been a trustworthy officer.
759. You have no reason to suppose that he is not? He has been doing this work ever since and before I came to the Department.
760. If excessive rates have been paid it is just a mistake—want of judgment on his part? I do not know that we could have got any other firm to do it; but Weisel has reduced the prices.
761. And in every case now you exercise close supervision on the prices? I exercise more supervision over this particular thing than I did before. I do not trust to Mr. Lawrence so much as I did. We take good care that we have it as cheap as possible.
762. What would be about the value of the material and forage obtained outside contract conditions? I could not say.
763. Would it be £1,000? I should not think so. We only supply forage and material when it is wanted at stations.
764. Would it come to £500, do you think? It might. It fluctuates. Of course the pilots build their own houses. We supply the timber and material and they put up their own houses. After the lapse of time the places require repairing, and we supply the timber and other material.
765. In what places would that be? All the out-stations except the pilot at the Richmond. He had his house erected because that erected by himself was taken down by harbour improvements.
766. In such cases as that, do you always send the material from Sydney? When they can purchase timber in the district cheaply, we let them do it.
767. If it can be purchased cheaper in the local market you would not send it from Sydney, like sending coals to Newcastle? Certainly not.
768. *Mr. Powell.*] This amount of £2,194, fees collected in 1896,—I suppose those are for fees for certificates and such like? Yes.
769. Does that pass through your hands? All fees are received by me.

770. You would receive that £2,194? Practically, yes; it all passes through my office.
771. Has the accountant anything to do with this money? It simply passes through me to the accountant.
772. In the Llewellyn frauds he appropriated some of this money? I am not prepared to say that he did.
773. I think it is shown in the report? Very likely. I do not know.
774. *President.*] Do you trace the fees to their destination at the Treasury or the bank, or do you simply hand them over to the accountant? A man comes in to pass his examination, and before I deal with his papers I make him pay his fee down, and if they are correct I hand the fee over to the accountant.
775. And you do not follow it up? My responsibility ends there. I do not follow it up at all. It is taken to Mr. Lawrence, who gives the receipt, and he pays it all daily to the accountant. The accountant may be out, and we want somebody on the spot to give a receipt.
776. You do not follow it up and see that it is properly banked or sent to the Treasury? Oh, no.
777. Does anybody do that? The accountant does.
778. But the accountant gets the money? No doubt the President checks the accountant; I do not.
779. You cannot say for certain whether he does or does not? No.
780. You are perfectly satisfied with the accountant now? Yes; very much so. He was my clerk in the office for several years, and is a thoroughly reliable officer.
781. He has got your confidence? Yes.
782. But you have no oversight over his business? No; except that I see he is never out of the office except on business.
783. You speak of him as you knew him when he was with you? When he was under me. Although I have no control over his books, I have a very good idea of whether he is doing his work or not.

Commander
Lindeman,
R.N.
23 April, 1897.

Francis Rule, Accountant to the Marine Board, sworn and examined:—

784. *President.*] How long have you held your present position? Since the 11th July, 1895.
785. Have you given us a statement of your duties? I think you will find it there in the return supplied.
786. You might give us a brief account of your duties? I receive the revenue every day, and it is banked the next day. It consists of fees for steam certificates, watermen's licenses, ballast licenses, and parchment certificates, &c., &c.
787. You do not actually receive the money;—it is received by Mr. Lawrence, and then, at 4 o'clock —? Handed over to me.
788. And what do you do then? I bank it the following day.
789. You have a secure safe? Yes.
790. You bank it the next day;—does anybody check that? Only the Treasury Inspector, when he comes down.
791. There is no inspection other than that by the Treasury Inspector? No.
792. When does he come? About every twelve months, but unexpectedly.
793. So that for twelve months at a time you are not checked at all? No; but Captain Hixson visits me occasionally to see that the work is up to date.
794. No one checks you to see that you actually do pay into the bank the collections that Mr. Lawrence gives you? Other than Captain Hixson initialling the pass-book at the end of the month.
795. In addition to that, does he check? No.
796. He does not check it at all? No.
797. Then he merely looks at the pass-book? Yes, and initials it.
798. He does not compare it with any documents to see that those are the right amounts to be paid in? No, sir. Of course at the end of the month there is a statement sent to the Auditor-General.
799. That is called the attested statement, which is sent in every month? Yes.
800. But there is no other check than the Treasury check? That is a fact.
801. Can you tell me what the collections average per day? They fluctuate; they are about £1,600 per annum.
802. What about pilot fees, and so on? That goes through the Custom House. I have nothing to do with the pilotage.
803. That really represents the actual cash collections you have to deal with? Yes.
804. Every week there is a cheque paid into the Treasury, but there is no one to check that that is the right amount? Only every twelve months.
805. Captain Hixson never looks into that himself? No; he is satisfied with my explanation, and signs the cheque.
806. What responsibilities have you with regard to expenditure? I pay all salaries and wages and a certain amount of the incidentals. I pay everything that is not paid over the counter at the Treasury.
807. Who prepares the vouchers? I do—that is, the salary vouchers; the contingency vouchers are prepared by the people outside.
808. Do the out-stations return to you each month a statement of those who have been employed? Yes.
809. That is to say, although John Smith may be on your register as a pilot at the Manning, you would not enter his name on your salary-sheet until a return had been sent to you by the head pilot at the Manning that John Smith had been employed at the Manning for the whole month? That is correct.
810. And you make out your salary abstract from the salary register and the returns sent from the station? Yes.
811. You never think of entering a man's name on the sheet until you have had a certificate from the superintendent or the head man, as the case might be, that these people were actually employed during the time? No.
812. After that is done, does anybody check you? No; no one checks the salaries. Captain Hixson and Captain Lindeman would know of any change that took place in the meantime, and I would be notified.
813. Suppose that John Smith was away, does Captain Lindeman find out that his name is omitted from the pay-sheet? He does not look at the salary vouchers at all, so far as I know; he sends the vouchers on to me.
814. He merely hands you the paper, saying that John Smith is away; but he does not see that John Smith's name is not put on the voucher? No; not that I am aware of.
815. He does not check it in any way? It is entirely left to me.

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816. When the vouchers are submitted to Captain Hixson he just checks your certificate? Yes.
817. Do you certify to the vouchers? I do not initial the vouchers in any way; I just make them out.
818. You present them to Captain Hixson for signature, and they are not initialed by anybody? No.
819. And there is nothing on those salary abstracts but Captain Hixson's signature? No.
820. He does not demand anybody's signature as a guarantee to him that they are right? No.
821. Does he examine and check them? No.
822. He leaves the whole thing to you? Entirely to me.
823. You prepare the salary abstract and submit it to Captain Hixson, and he signs it, and you do what? Pass it on to the Treasury.
824. Under a proper abstract? Yes.
825. What occurs then? They are checked at the Examining Branch. If there is any change they know of it.
826. What is done then? The money is lodged in the bank to the credit of Captain Hixson.
827. What is next done? The cheques are drawn by me. Captain Hixson signs; I countersign.
828. How are they made out? Sometimes in the name of the pilot, when he has an account in the bank.
829. And then you pay into his credit? Yes, and advise him of the lodgment of the salary.
830. And those that are not dealt with in that manner? I pay those by registered letter and cheque.
831. And is it a fact that they sign the receipts before the money is paid to them? They do, sir.
832. Do you consider that the correct way? It is convenient for adjustment. There is only monthly communication at some out-stations.
833. Does not that plan completely do away with its value as a receipt? It does.
834. Does not it do away with its value as a receipt? Yes.
835. Do not you think it can be done in this way: that you can get all the people to authorise a certain bank to receive the money, and then, when you pay that in, the bank could sign on their behalf? The banks do sign my deposit receipt-book.
836. Could not they sign the vouchers? Yes. I get a receipt as it is if I lodge it in the bank.
837. It does not give a receipt for the person? Yes, for those that I lodge in the bank.
838. The receipt before hand is a mere delusion? It is.
839. When you have done that, does anybody check over these receipts? No; it is left entirely to myself, except that I produce them to Captain Hixson when I am adjusting.
840. When do you adjust—once a month? I adjust every advance in ten days.
841. And then Captain Hixson goes through the vouchers to see that the receipts are attached? He signs the adjustments.
842. Does he check them over? He might not look at every voucher. He casually looks over.
843. It is not done at every payment—only when the adjustment comes? That is all.
844. Does he then check your bank-book;—say there is a voucher for £100 for salaries, does he check your bank-book to see that that £100 is actually paid in, or does he merely see that the vouchers are signed? He merely sees that the vouchers are signed.
845. Is there any value in that as a check? Well, of course he can see that the vouchers are receipted, and that is what the Audit Office require.
846. Is that any value as a check, seeing that every man signs the receipt before the money is paid? There is really no value at all; the man signs before he receives the money.
847. There is practically no check on you except the Treasury Inspector's check? That is all.
848. And the Auditor-General's check? Yes.
849. Does the Auditor-General see that the pass-book is signed? No.
850. Nobody checks you? Only the Treasury Inspector when he comes round.
851. Does he inspect your expenditure account? He does now.
852. Does he go through the bank-book and see that every voucher has got its proper receipt? Yes.
853. He is a check on you both on expenditure and revenue, but only once a year? Yes; but at the end of each month I prepare a statement showing the total advances, the balance in the bank, the dates of adjustment, and the total expenditure under various votes, and present them to Captain Hixson, who signs them.
854. Suppose you were to put the money in your pocket instead of sending it to the persons concerned, he would not know that? No; but if a man did not get his salary he would soon complain.
855. There is no check to prevent that, except the Treasury Inspector's check once in twelve months? Yes; but if the adjustment was not completed, the Audit Office would find it out.
856. But the Audit Office only get these fictitious receipts that are worth nothing at all; the only effective check on you is the Treasury Inspector's, once a year? Yes.
857. Otherwise you are left to your own devices? I carry out the President's instructions.
858. You pay contingencies;—how is that managed? The leading-light men at the rivers are paid from contingencies.
859. But they are salaries? They are salaries, but they are paid quarterly from the contingencies. They have contracts from the Board to maintain these lights.
860. Do they supply the materials? They maintain the light; they supply the oil.
861. Does the payment include the oil, and so on? Yes; I believe it does.
862. You do not supply oil? No.
863. You do not know for certain? Some vouchers are made out for maintaining the light, and some for supplying oil and maintaining the light. We do not supply the oil.
864. Do you carefully see that no oil is sent to the men who are paid for their services and oil? That has nothing to do with me. Mr. Lawrence looks after all requisitions; I have nothing to do with that.
865. Who is he responsible to? To Captain Lindeman, who checks all requisitions.
866. How do you deal with contingencies outside the salaries? If we want a buoy, or a rope, or anything out of contract, the firm send their account in and I send them to the Treasury for payment. I check it carefully before it is passed on.
867. So that, practically, the only thing you pay yourself is salary? Yes.
868. You say you check the vouchers? I carefully check the vouchers.
869. By what system do you check them;—suppose an account is sent in for a buoy—what is the value of your check on that? I go through the order-book, and if the order is there, I know the account is all right.

870. Is the price put in the order-book? Yes, sometimes.
871. Where it is out of contract is there a price put in the order-book showing the arrangement? It might not be in all cases.
872. How do you check in that case? The price submitted is generally accepted.
873. Without any question? Yes.
874. Who initials those vouchers? Captain Lindeman.
875. Then you do not consider that you have any responsibility as to checking the prices in those contingency vouchers? Captain Lindeman initials them.
876. Then your check is little else than just the mere computation? That is all.
877. There is no other check than that? No.
878. Now, what other duties have you? There are clerical duties. Nearly all the returns that deal with figures are prepared by me.
879. Are you fully employed? Yes.
880. Have you any assistance at all? No assistance whatever.
881. You do the whole of the work yourself? All the work in connection with accounts.
882. Captain Lindeman does not check the accounts at all? He does not interfere at all.
883. He has no control whatever? No control whatever. I am responsible to Captain Hixson alone.
884. *Mr. Powell.*] These salary cheques—you send them out to the people or put them into the banks? Yes.
885. Do you ever break cheques for them? No. If they are small amounts I draw the cash myself, and then pay it myself, and that is shown.
886. But you do not pay accounts for them in Sydney, or anything of that kind? If they request me to do it, of course, I would do it.
887. Suppose a man is owing money in the town, do you pay the money for him? No.
888. You do not act as agent? No.
889. Do you go to the bank and pay this in yourself? I pay the cheques and the revenue every morning. I take them to the bank myself.
890. This Expenditure Account has only been checked lately by the Treasury Inspector? On the 2nd November Mr. Green went through my accounts.
891. Prior to that, was there any inspection? No, sir; only Captain Hixson's occasional visits to see that the books were up to date.

F. Rule,
23 April, 1897.

TUESDAY, 27 APRIL, 1897.

PRESENT:—

JOSEPH BARRLING, Esq., J.P., PRESIDENT.
GEORGE ALEXANDER WILSON, Esq., J.P.
JAMES POWELL, Esq., J.P.

James Edie, Government Shipping Master, Sydney, sworn and examined:—

892. *Mr. Powell.*] You have been in command of ocean-going steamers between Sydney and Melbourne and New Zealand for a considerable time? Yes.
893. Are you acquainted generally with the rates of wages paid on board ship? Yes.
894. The Commission is not desirous of knowing the highest or the lowest, but what would be a fair thing at the present time on board steamships trading between this and the other Colonies or on the coast—take the master for a commencement? The masters vary considerably; for instance, I think such companies as Howard Smith & Co., the Union Company, or the A.U.S.N. Company start beginners at £20 a month, and they go up to £30, which is about the maximum now. In the Union Company there are a number of older masters who have very much higher pay, and there may be one or two in Howard Smith and the A.U.S.N. Companies. Those are exceptional cases.
895. *President.*] Commanding such vessels as —? “*Monowai*,” “*Mararoa*,” and the new boat coming out—the “*Moana*.”
896. *Mr. Powell.*] First-class passenger steamers? Yes.
897. *Mr. Wilson.*] Old hands like Captain Carcy, for instance? Yes. But the ruling rate would be from £20 to £30.
898. *Mr. Powell.*] What would the masters of the vessels trading to the bar rivers—the Richmond, the Clarence, the Macleay—be paid? I think about £25 a month.
899. Now, take a class of vessels somewhat numerous along the coast;—how are they paid on steam-colliers? I think the masters of those vessels get about £20; but then they have the providing of the vessels, and that means something for them.
900. The masters would range from £20 to £30, and that £30 would represent the command of a first-class passenger boat? Yes.
901. *President.*] The rates mentioned by you would mean that they were found? Yes; they are all found.
902. *Mr. Wilson.*] Have they any allowances besides this? In a passenger ship they allow them £3 to £5 a month for entertaining.
903. *Mr. Powell.*] What would be the rates paid to the first officers? For first officers of cargo boats the Adelaide Company give £1 a month more than the others. Take a number of boats—the first officer of the “*Colac*” gets £15; the “*Era*,” £14; the “*Timaru*,” one of the colliers running to Newcastle, £10; the “*Wendouree*,” a collier, £15; and there is a collier that runs on the coast—the “*Captain Cook*”—the chief officer of which gets £10.
904. In the passenger steamers? The “*Elingamite*,” £15; “*South Australia*,” £15; “*Leura*,” £15; “*Ranelagh*,” £15; “*Tekapo*,” £15; “*Tyrian*,” £15; “*Wollowra*,” an Adelaide Company's boat, £16; the “*Barcoo*,” £15; “*Burrawong*,” £15; “*Coraki*,” £15; “*Arawatta*,” £15; the Sydney to Newcastle trading boats, £15. £15, with the exception of the Adelaide Company, who pay £16.
905. *President.*] Do they ever get overtime? It would not do for officers to get overtime, as they have to keep the men's overtime. That matter has often been discussed.

James Edie,
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906. *Mr. Powell.*] What is the pay of a second officer? The Adelaide Company pay £12; the cargo boats—the “Colac” £12, and the “Era” £11; the “Timaru” has none. The “Wendouree,” £11; “Beeswing,” £11; the “Captain Cook” has none. In the first-class passenger steamers—“Elingamite,” £12; “Leura,” £12; “South Australia,” £12; “Ranelagh,” £12; “Tekapo,” £12; “Tyrian,” £12; “Wollowra,” an Adelaide boat, £13; “Barcoo,” £12; “Burrawong,” £12; “Coraki,” £12; “Arawatta,” £12; “Allowrie,” £12 (an Illawarra boat); and the “Sydney,” £12.

907. Have the wages been reduced at all lately? No. That is about a standard rate of wage I think.

908. How long would it cover—two or three years? Yes.

909. Take the engineers;—I suppose they differ very much? Lately they have come back on the horse-power arrangement. They have an understanding with the Ship-owners’ Association.

910. Their wages do not come under your notice? Oh yes, they appear on the articles; but the figures I have may not be the standard, because some of the articles were possibly drawn up before this alteration was made. They have it on a horse-power rate. £25 is the maximum.

911. What is your experience of the rate paid to engineers—give us the minimum and the maximum;—are they paid pretty level all through—is there any difference as to the kind of boat? It is a horse-power rate.

912. It does not matter whether it is a first-class steamer or a cargo boat; it is the horse-power that regulates the pay? Yes; they calculate the horse-power the same as the Board of Trade. The articles show “Colac,” £21; “Era,” £22; the “Timaru,” the collier, £18; “Wendouree,” £22; “Beeswing,” £19; “Captain Cook,” a small coast boat, £18 10s. Then the passenger ships—“Elingamite,” £24; “Allowrie,” £24; “South Australian,” £20; “Ranelagh,” £21; “Tekapo,” £21 10s.; “Tyrian,” £22; “Wollowra,” £25; “Barcoo,” £25; “Burrawong,” £20; “Coraki,” £20; “Arawatta,” an A.U.S.N. boat, £25; “Allowrie,” £20; and the “Sydney,” £21 10s.—that is a Newcastle steamer.

913. I think we may say from £20 to £25. £25 is the maximum? Yes.

914. Well, now, what are the wages of the second engineers? “Colac,” £16; “Era,” £17; “Timaru,” £11; “Wendouree,” £17; “Beeswing,” £15 (but I fancy the “Beeswing’s” articles were before the agreement with the Ship-owners’ Association); “Elingamite,” £18; “Allowrie,” £18; “South Australian,” £15 10s.; “Ranelagh,” £16; “Tekapo,” £16; “Tyrian,” £17; “Wollowra,” £18; “Barcoo,” £18; “Burrawong,” £16 (a North Coast boat); “Coraki,” £16; “Arawatta,” £18; “Allowrie,” £15; and the “Sydney,” a Newcastle boat, £16.

915. Well, then, it ranged from £15 to £22? I do not know that any of them go as high as £22.

916. £18 is the maximum? Yes; and the maximum for a third engineer is £15; and the maximum for all other engineers is £12.

917. About firemen? Donkeymen, as a rule, have £9 a month.

918. He is a kind of leading fireman? He is a responsible man, who has to get up steam on the donkey to work the cargo.

919. What are they paid as a rule? £9 a month. There is only one under that—the “Beeswing,” £8. I think that is the old rate, and it is £9 now.

920. And the other firemen? £8 a month.

921. What about the sailors? In the coastal steamers, with the exception of the New Zealand steamers, sailors’ wages are £6 a month. In the New Zealand steamers there is an understanding making it £6 10s. for trimmers and sailors, and £8 10s. for firemen. The wages ruling in New Zealand boats are 10s. higher than in Australia.

922. We can take £6 for the wages of sailors on the Australian coast generally? Yes, for sailors and trimmers; but they make considerable overtime.

923. Of course all these men are found in everything? Yes.

924. Can you give us an idea of the cost of victualling—say such a ship as the “Captain Cook”—with the master, mate, second mate, engineer, and second engineer, and two pilots—seven men in all? That makes it more expensive than if they were all hands. Those seven men would require a cook. He ought to be able to do it all without an assistant. He ought to be cook and steward as well for seven.

925. What do you think would be a fair sum to allow for the victualling of seven men in the positions mentioned? The cook would require at least £8 or £9 a month. That is about the lowest rate in the cargo steamers.

926. There are six seamen, four firemen, and the seven men mentioned, with a cook and providore in one—that is, eighteen in all;—suppose all were found, what would be a fair sum? Take them right through, about 2s. 6d. per head per day, and that would be for the providore to pay the cook himself.

927. Suppose the cook was on board and outside the contractor’s expense? The way it is usually done is that a tender is asked for a man to providore the boat per head—so many in the crew, so many officers—and he finds cook, stewards, and attendance, and whatever may be required. He will tender per head per day.

928. *President.*] Would not 2s. 6d. a day be high? He finds the labour.

929. But would not that be rather high, year in and year out? That is a top rate. You might get it done for 2s. or 2s. 2d. I know some boats that are provided for as low as 1s. 8d.; but I think that is on the low side.

930. So you think that 2s. would be about an average? Yes. If tenders were called it would be something like that. When meat was very much dearer than it is now it used to be 2s. for the seamen and 2s. 6d. for officers.

931. *Mr. Wilson.*] Does that mean a fixed ration? No; there is no fixed ration. It has got to be victualled in a proper manner.

932. *Mr. Powell.*] This 2s. and 2s. 6d. contemplates the finding of the cook and providore? That is the entire cost, and they are not included in the victualling. Say you have fifteen men, you call for tenders to victual fifteen men and to provide cook and providore, steward, and whatever may be required.

933. That would include all charges for labour and such like? Yes.

934. Would he provide material, such as crockery, and such like? No; but there would be an inventory taken of what he took over, and there would be an understanding that he would make good all breakages and losses.

935. Now, referring to the “Captain Cook”;—do you think it would be a fair thing to pay all the people on board a rate of wage something like those paid on sea-going vessels, and find them in provisions on board.

board the ship by contract;—would that answer with a vessel like the “Captain Cook”? For such a vessel I think it would be better to have a little higher than the ordinary shipping rate, because there is no chance of the men being anything more than they are there, and you want reliable men. Many of the coastal seamen here are as good a class of men as you will find anywhere. Go anywhere and you cannot beat them; but they would not take the likes of that, because they make more money owing to overtime.

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936. You think the rate of wage should be higher because of the perquisites the other men are likely to get? Ycs.

937. Do you think the principle is a sound one of paying sea-going wages—perhaps the maximum—and victualling the ship, and not making any allowance for victualling to the men? I think it is very much better.

938. And wages should be on the principle of sea-going wages at, at any rate, the higher rates ruling? Yes. I do not know how they manage otherwise; they must go ashore for their meals. If the vessel is sent away for a week or so, who is to provide for the men?

939. Of course, we assume that she is at the Heads all the time; if she went away it would be a special matter.

940. *President.*] I should like to know on what basis the arrangement for overtime is made? They usually stipulate in the articles that the working hours in port shall be any eight hours from 6 a.m. to 6 p.m., with hours for meals, and they usually work overtime, when they are required, at the rate of 1s. per hour.

941. That would apply to the seamen only, the engineers would not be required? The firemen are not paid overtime for anything during the watch, but if required to work overtime during their watch off they get 1s. per hour.

942. They are hardly likely to be called? There are times when they are all bound to assist in the general duties of the ship.

943. When they are at sea the ordinary sea watches are kept and the overtime would simply apply to when they are in port? To when they are working cargo as a rule.

944. Are you aware of the wages that are ruling in the “Captain Cook” at the present time? No; we have nothing to do with that. We do not know anything of their working.

945. But your opinion is that the sailors of the “Captain Cook” should be paid the maximum rate of wages because they have not the same opportunities of working overtime? Yes; you want an inducement to get reliable men. For such a vessel you want men who mean to stay; men who are satisfied with the ship.

946. Would not the loss of overtime be compensated for by the certainty of the employment? The other service is just as certain.

947. Would not the seamen of the “Captain Cook” have an additional incentive through being in the way of becoming pilots? The other men have the prospect of becoming officers.

948. Is there anything in the pilot service which strikes you as desirable to make alterations in? I know very little about it. In Melbourne the pilots have their own vessel, and they are on their own hook, as it were, with everything. The Government regulate the charges, but they take it in turns. They own three vessels at the Heads. These are their own property; they belong to the Association of Pilots, and they work the whole affair themselves. There is a Pilot Board there, and they subscribe to a Retiring Fund, which is somewhat similar to the Superannuation Fund here. The Government has nothing to do with them except licensing them.

949. Are you aware whether it is open;—can as many as like go in and compete? No; the Pilot Board regulates that, according to requirements.

950. Supposing they wanted to keep a dozen pilots at the Heads, how would they select them;—how would they arrange for the persons who were eligible for the work? By advertisement in the paper they would call for applications, which would then be considered by the Pilot Board.

951. The pilots have to provide their own vessel? Yes.

952. Do you think that system works as well as ours? I have never heard anything against it. I think it works very well. They have two or three schooners, and one has to be always cruising about outside. They cruise about between Barwon Heads, Split Point, and Cape Schanck, and when one has been out for the term of her cruise, or sooner, if her supply of pilots is exhausted, she is relieved by another. Those vessels are valued at a certain sum, and anyone joining the pilot service has to subscribe his share of that money to the Pilot Fund.

953. It is managed amongst themselves? Yes.

954. Do you think that that system is an improvement on ours, or ours an improvement on that? I can hardly say, the difference of the ports is so very great. Pretty well every ship that goes in to Melbourne, with the exception of intercolonial traders, must employ a pilot.

955. There is no competition here practically;—there is so little work to be done, that for the pilot service to be kept up at all, it must be carried on in this way in Sydney? I do not think the pilots could afford to work it as it is worked in Melbourne.

956. You are aware that the exemption certificates are about to be done away with, with the exception of intercolonial steamers? That is the granting of more; but does that affect the existing ones?

957. But supposing that were done away with, then the same conditions would obtain here as in Melbourne? It would take a long time to work existing certificates out.

958. So under the present conditions you think that our present system is the only one that could be adopted? Yes, to keep an efficient staff. You may get a long spell of northerly wind, and there may be a number of ships down the coast, and a southerly wind comes and you may get a number of ships up which would expect pilots. If you worked as at Melbourne the system would only support a small staff, and you would not have enough for such an emergency as above.

959. Would that apply to Newcastle? Newcastle is a place where a man should get a pilot. It is a dangerous lee shore as a rule.

960. The Melbourne system would be more likely to be successful in Newcastle than in Sydney? Oh, yes, the Melbourne system would apply better to Newcastle than to Sydney, because there are very few of them, with the exception of the intercolonial ships, that care to take Newcastle without a pilot.

961. Do you know whether there is any complaint amongst sailors that their interests are not properly represented on the Marine Board? It is a growing complaint throughout the colonies. The sailors maintain

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maintain that they have a right to be represented. They say they are not represented. An argument used against them is: "What representation can a sailor require; he holds no certificate, he cannot be dealt with if he does wrong." But still his life is at stake all the same. The engineers are now represented, Mr. Wildridge being one. I see also that they have made it so in New Zealand now by Act of Parliament when steamship inquiries are held, and I think it is a very proper thing. The steam-boat trade predominates now, and a lot of old sailing-ship masters would be just about as far adrift as anybody could be in an inquiry into steam matters, and I think it is only right that there should be an engineer on the Board. I cannot see why a sailor should not have a say as well; he goes to sea in the ship, and he ought to have a say about the condition of the ship he is to risk his life in.

962. Might it not be contended that the Government representative represented the sailors? It might be. But they are usually retired ship-masters. The sailors could appoint one of their own men. There are many men before the mast who hold certificates, and many who do not who are well qualified to sit upon a Board of Inquiry. I see no harm at all in the seamen being represented. I think all classes who go to the sea in ships should be represented. Of course stewards would not be qualified to sit on a Board, as they have no practical knowledge of seamanship.

963. *Mr. Powell.*] Do you not think that a Court composed of a District Court Judge, a legally-trained man, assisted by two nautical assessors chosen for the particular case, would give greater satisfaction than a Board of elected men representing different interests. To put it in a familiar manner, suppose the inquiry is to be presided over by a District Court Judge, and it is a question of engineering, he would associate with him such men as Mr. Wildridge or Mr. Cruickshank, or if it was a matter of collision, they might perhaps call yourself to assist the Judge. The Judge would deal with the law and be assisted by competent persons on technical points. Would not such a Court as that give more satisfaction than a court of masters, seamen, engineers, persons who have direct interests which they would each endeavour to forward? The system in Great Britain, I think, is a Stipendiary Magistrate and two nautical assessors; but I think in England they have paid assessors. They go from place to place inquiring into accidents which take place. They have Marine Boards as well. In Melbourne I think they occasionally appoint a magistrate and a couple of assessors. Say it is a case of collision of steamboats, it is very little use getting a couple of men whose experience has been entirely in sailing-ships to sit on that case, because they would be foreign to it altogether. And take it the other way about. There are men, now-a-days, with certificates for steamboats only. There are some young officers growing up on steamboats who know little about sailing-ships.

964. If experts were called to deal with cases in which they had experience it would give more satisfaction to all concerned? Yes; and again, sir, you take a man on an ocean-going steamboat, he brings her within pilot waters, and then the pilot steps aboard and does the whole of the manœuvring of the ship. If it was a case that happened in the working of ships, in and out about wharfs, you should have men who are used to doing that work and capable of judging. If it was a case on the ocean it would be provided for by the rule of the road, and if it is a sailing-ship by all means appoint sailing-ship men.

965. Would you select the men who were most likely to give valuable assistance to the Judge? Yes; and if possible let them be men who knew neither party.

966. *Mr. Wilson.*] You would have to assume, in fact, that the assessors would be properly selected? Yes. That has been the mode of working in New Zealand for many years. In case of collision or shipwreck a couple of assessors are selected, usually from the ships in the port at the time.

967. Frequently the harbour-master used to be appointed? Yes; he would sit on it as Government representative.

968. In England the Marine Boards in no case try cases of collisions and such like? No; the Board of Trade regulates them.

969. They hand them over to a Stipendiary Magistrate? Yes.

970. Assisted by nautical assessors? Yes.

971. The Marine Board do not interfere in the matter except to hand it over? No. I think there is one Captain Raffles, who goes from place to place with the Board of Assessors.

972. If we had a man of the stamp of Captain Raffles, do you think it would be more satisfactory to leave these matters to him rather than to a Board, where there are so many conflicting interests represented? But then they have the Marine Board all the same.

973. If we had a man of the type of Captain Raffles in this Colony to deal with these cases, assisted by nautical assessors, do you not think that such a court would gain more confidence than one composed of persons representing a number of interests, such as underwriters, sailors, engineers, whose interests might be conflicting? There is just a possibility of their all working for their own party where interests are represented; but in the other cases the other system has worked well in other places.

974. *President.*] Do you think if a District Court Judge were appointed, who from his very position would be a highly competent man, and then let him select his assessors, that that would gain the confidence of the community? It appears to do so in the United Kingdom.

975. And you think it would do so here? It appears to work very well in other parts where inquiries are held. You would have the Judge there to hold the inquiry in a legal form, and the others to advise on technicalities.

976. And you think such a Court would secure the confidence of the seamen and the public? I think so. But still the Marine Board would have the controlling of vessels, and the saying what condition they are in when they go to sea. There should be a class representation; I think it is only right.

977. Do you not think if the Government were to appoint a highly competent officer in charge of the Marine Board, that his decisions, he being strictly responsible to the Government, and the Government to Parliament, would also secure the confidence of the people? What I have in my mind is to separate the judicial from the administrative functions of the Board. Let the judicial functions be carried out by such a Court as we have suggested, and the administrative by the appointment of a highly qualified officer, who would be responsible directly to the Government for the management of the Department, and for the granting of certificates, and so on. In Melbourne there is Mr. Wilson, who is the engineer. He reports on harbours and lighthouses, and is under the Government, not under the Marine Board. Mr. McLan is the engineer surveyor for Marine Board. Then the Marine Board have their regulations, and the Secretary to the Marine Board does the work of instructing for inquiries, and the granting of certificates after examinations have been held. In New Zealand the whole of that Department is under the Customs.

Customs. The Government have an officer, a seaman. Captain Johnson was for many years in that position. Now it is held by Captain Allmann. He is Government adviser to the Department in matters of buoys, lighthouses, harbours, &c. They have no Marine Boards in New Zealand. James Edie.
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978. Does that work well? As far as I know.

979. That is direct responsibility to the Government? Yes. The Customs Department has the control of that. It used to be a separate Department, but it was done away with, and put in there.

980. The Secretary of Customs is the principal officer who directs all the operations under the Act? Yes.

981. And do you think that some such system would be satisfactory here? It is hard to say. The country is so different. I am only pointing out the different ways in which it is worked. In Melbourne there is a Harbour Trust. Pretty well every port in New Zealand of any size has a Harbour Trust, and the Government hand over to the Harbour Trust all the pilot dues, and the entire control of their own pilot staff in each port. For instance, Newcastle might be formed into a Harbour Trust.

982. That has been proposed? The entire control of each particular harbour would be under its Trust. The lighthouses are outside that. They are under the general Government control.

983. Still you would see no objection to such a system as that here, having either the Customs or a separate Department dealing with the administration of those functions which now come under the Marine Board apart from their judicial functions? In Melbourne it is separate. Mr. Wilson is not under the Customs. The Melbourne Harbour Trust only extends to Hobson's Bay. The lightships and buoys come under Mr. Wilson, who is the Ports and Harbours officer. The Government, I understand, retain the control of any port whose revenues are so small as not to support a Trust.

984. *Mr. Wilson.*] Is the Melbourne system better or worse than the Sydney system;—the pilot vessels in Melbourne are sailing vessels? Yes.

985. You have had a lot of experience in Melbourne? Yes.

986. Are you aware that there has been an agitation in Melbourne to have steam-vessels? Yes.

987. Are you aware that the vested interests of the pilots have to some extent stopped that? Yes, I have heard so. Their schooners represent a lot of money, and if put on the market would entail a serious loss to them.

988. So that while the public are agitating for steam-vessels, the pilots are against it, because they would have to find those vessels? Yes, I believe that to be the case.

989. So that those vested interests are obstructive? Yes, no doubt, to the introduction of steamers. I have heard that occasionally the pilots' boats have been caught inside.

990. From your experience in Melbourne, has it not happened within the last fifteen years that in rough weather the schooners have not been able to go out, and if they have gone out they have not been able to give assistance? They have got away to leeward.

991. They could not put a man on board an in-coming vessel? No.

992. And if they had had steam-vessels they would have been able to do it? Full-powered vessels, yes.

993. The pilots in Melbourne have really to pay to join, it is a close proprietary? The money they have to pay in is for the purchase of their share in the schooners, and for, say, ten pounds they pay in, the market value of the share would be considerably less.

994. A man coming in has to pay the value of his share to a man going out? Yes; I believe so. Just about 1888 there was considerable agitation in Melbourne about the pilot service, and the merchants in Melbourne insisted on their being more efficient, and they got a third vessel so that they could have two outside.

995. Do you not think that these facts that you have now admitted condemn the Melbourne system? As far as the vessels are concerned.

996. Steamers are preferable to sailers—and the same applies to Newcastle? Newcastle requires a steam-vessel—and a good one at that, one that can go out in all weathers.

997. These facts really condemn the Melbourne system? I prefer the steam vessels: yes.

998. You were contrasting the New Zealand system with the Sydney system. The New Zealand trade is split up among four considerable ports;—it is very much cut up? Yes; there are five, The Bluff, Lyttelton, Wellington, Auckland, Dunedin.

999. Therefore it does not follow that the New Zealand system, which is designed for a trade that is split up, would be suitable for a highly concentrated trade such as that in Sydney? Oh, no. In Lyttelton they have a tug to tow the pilot boat out. The pilot can go out in the tug and tranship outside. The Bluff has a tug, and at Auckland they can get out at any time. Newcastle is a place that necessitates very careful handling. Vessels should be able to get a pilot well to windward, as the wind they run in with forms a lee shore.

William Douglas Cruickshank, Chief Engineer Surveyor to the Marine Board and Examiner in
Engineering, sworn and examined:—

1000. How long have you held your position? Twenty-three years next month.

1001. *Mr. Powell.*] You have two assistants? Yes.

1002. As assistant engineer surveyors? Yes.

1003. Will you be good enough to describe what the duties of yourself and assistants are? I have here a short statement which I will hand in [*Vide Appendix 20*]. According to law all steamers have to be surveyed twice in twelve months at least, sometimes three times, and sometimes four times. Those are passenger steamers, and the numbers I give here refer to passenger steamers.

1004. *President.*] You examine all specifications for steamers;—does everything come before you whenever a new steamer is being built? That is so.

1005. You have to examine before the engines can be built at Mort's, and calculate the strains? I have to pass it and initial the drawings, so that there will be no trouble afterwards.

1006. Supposing a new boiler is required, is that submitted to you? Yes, all the plans.

1007. And you calculate everything in connection with it? The drawings have to be submitted to the office, and tracings of the drawings of all new boilers and machinery are kept there, recorded, and filed.

1008. As the work proceeds do you attend the different ship-yards and see that it is carried out in accordance with specification? Yes, and certificates are issued.

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1009. Then you examine at every stage from the initiation to the completion? Yes, and that applies to imported machinery. We have arrangements made with the Board of Trade, and imported machinery must produce certificates from the Board that it is constructed in accordance with their regulations, otherwise we do the same with it as we do with machinery manufactured in the Colony. The machinery has to be tested and supervised when put in the vessels, and certificates issued. When they produce certificates from the Board of Trade it saves us a lot of work.
1010. Is the machinery marked in any way? It is stamped. It is cut in, and the Board of Trade surveyor's initials and the date, but they have to produce a certificate from the Board of Trade as well.
1011. You do nothing in connection with the Government steamers, I presume? Oh, yes; we have all the small steamers under our control, with the exception of the Public Works Department's.
1012. You have nothing whatever to do with that? Nothing whatever.
1013. I suppose you can give us the number of vessels you have to deal with? We survey 500 or 600 vessels every year, and we have the supervision of the buoys and moorings in the harbour, besides the machinery in the Public Instruction Department at the Technical College, and the Government ferries.
1014. You have a rather big order in your work? We have plenty to do.
1015. *Mr. Wilson.*] What is Mr. Marshall's salary? £300 a year, and the salaries of the chief engineers in large vessels go up to £30 a month, and they are found.
1016. You are referring to such steamers as those of the P. & O. Co.? Yes; they are large steamers. We have to survey a number of those steamers, and lately I have had five of them. The chief engineers of those vessels are very highly paid—much higher than the engineer who has often to examine them. In the old days we had only the main engines to survey; now we have the auxiliaries, and there is more trouble about them than there is about the large engines. I may state that in New South Wales no one is allowed to survey machinery, under a penalty of £100, unless he has passed the high-class examination, and has the necessary certificates. I would like to say that I have earned the confidence of the shipping people, and no decision of mine has ever been questioned. In Victoria, there was the Sangster Board Inquiry into the manner of surveying vessels there, and it cost many thousands of pounds, lasting four or five months. I am pleased to be able to say that I have never had the slightest trouble with anybody during the time I have held the position. [*The witness then read an extract from a letter from Mr. Major, Board of Trade Surveyor at Cardiff, England, giving the programme of the Board of Trade, showing the treatment of their engineers, and their division into classes, with the pay attached to each class, Vide Appendix 21.*]
1017. *Mr. Powell.*] Do you conduct the examination for certificates? Yes; I conduct them all.
1018. What is their nature? There are five grades of examination.
1019. Are they named in the Act? In the Shipping Act. But we have grades which meet our local requirements so far as the harbour and river service is concerned. The Board of Trade regulations have three grades.
1020. You conduct the whole of the examinations, and upon your recommendation the Marine Board issue the competency certificates? They issue the certificates.
1021. The Board, as a Board, have nothing whatever to do with the examination of candidates, and know nothing about it? Nothing.
1022. Do you report in any way to the Board about these matters? Yes; I conduct a large correspondence, technical and otherwise, but the reporting is generally giving a description of any breakdown, collision, or any mishap to machinery.
1023. I suppose Mr. Wildridge is a competent man to deal with anything of that kind? As a member of the Board, yes.
1024. Prior to his appointment, there was no person skilled in steam as a representative on the Board? No.
1025. How many candidates present themselves in a year, as a rule? It varies—70, 80, or 90; sometimes more, sometimes less.
1026. Out of that number, how many would pass? There are generally from 20 to 25 per cent. fail.
1027. Do they come up again? Yes, sometimes. According to the law, if they have failed in arithmetic they are entitled to come up any time, but if they have failed in the vocal examination they must be put back three or six months, according to the opinion of the examiner.
1028. Have your assistants anything to do with the examinations? No.
1029. There must be some clerical work? Yes.
1030. Who attends to that? I do. We have to attend to it ourselves. We have a messenger upstairs whom we utilise as much as possible. We keep a complete set of books showing all work done every day, and we send in each month a condensed report of the work done, initialled by each surveyor.
1031. Is this a report made out by yourself? Yes.
1032. The average per month would be about fifty? Yes; about fifty steamers. There is a lot of work that cannot be put in that report.
1033. This report is made up from your diaries? No; it is made out from notebooks which each man keeps. We have a complete set of books which each man keeps.
1034. *President.*] What proportion of your time would the clerical work occupy about? There is a considerable amount of my time taken up in calculations.
1035. That cannot be deputed. It would seem, at the first blush of the thing, that it would be much cheaper to have someone to do your clerical work at a small salary, rather than occupy your time in purely clerical labours? I have always been anxious to get, not an expensive man, but a clerk who would do the clerical work, write letters, &c. As for the figuring, I do most of that at home.
1036. *Mr. Wilson.*] Have you ever asked for a clerk? Oh, yes. Our people are very economical in that line. When any examinations are taking place and I have to go anywhere, I have to lock them in until I come back.
1037. *Mr. Powell.*] Lock the candidates in? Yes, I have to lock them in; of course, I am not very long away.
1038. *Mr. Wilson.*] Do you not think that to have to conduct these examinations is a very serious responsibility—should you not have a small Board? No, I do not think so. I want someone there so that if I am called out there may be some one left in the office. There is no one in the office to-day. I have put the candidates off to-day.
1039. *Mr. Powell.*] I suppose that steamers are becoming more and more numerous among the vessels visiting

visiting the port, and the sailers are gradually taking second place? The steamers are not only increasing in numbers, but also in size and complication of parts. W. D. Cruickshank.

1040. And do we understand that in this work you off coat and go in for it, or do other people do the dirty work—how is it managed? Whoever has to do any particular ship has always plenty of dirty work. 27 April, 1897.

1041. Do you do that dirty work? Certainly; you have to go into all sorts of dirty holes. If you wish any evidence on that, any of the steam-boat people or the engineers would be able to give proof that we go into the dirty holes.

1042. *President.*] We only want to understand exactly what your work is? We have a large amount of work from Melbourne now on account of the Sangster Inquiry; a large number of the ships are coming here to be surveyed.

1043. Do you know anything about the working of any of the other branches of the Marine Board business? I do not think I do.

1044. *Mr. Powell.*] The different branches do not interfere with each other at all? No.

1045. You simply report, and the Board issues certificates on your reports, but they do not interfere with the working of your branch? No; a notice comes to me, and after the work is done an official declaration is sent to the secretary that it is done, and on that declaration the certificate is issued. In this Colony we issue six months' certificates. All the other colonies and the Board of Trade at Home issue twelve months' certificates, but there is no power in our Act which enables it to be done by us. We are very much behind in this respect.

1046. You are compelled to have examinations every six months, and sometimes three months? Yes; of course we have the power to make an examination as often as we like.

1047. Is it necessary to have twelve months' certificates? It is necessary for large steamers. It is necessary to have frequent examinations of small steamers, because there is no skilled labour in them; but in the large ships there is always skilled labour.

1048. Have you heard any complaints? The shipping people have complained several times.

1049. You regard that as a defect in the Act? I think so.

1050. With some provisions to meet special cases, you think an annual examination would be sufficient, generally speaking? Yes; it is considered sufficient by the Board of Trade, and in Victoria and Queensland and the other colonies. We are the only colony that issues six months' certificates.

1051. *President.*] With regard to the examinations, you set all the questions? I set every question myself.

1052. Do you compute the results yourself, not checked by anybody? Yes.

1053. Do you compute the results yourself—and the whole thing is in your hands? Yes.

1054. Do you not think it would conduce to your own comfort if you had some assistance? I think so.

1055. That is to say, someone who would set questions with you, compare notes, and compare results? If I had some young fellow who could read formula and understood figures, it would be a great assistance to me.

1056. How many candidates are there? Seventy or eighty a year.

1057. Is it all left to you? Yes.

1058. Are your certificates ever questioned? No.

1059. Does anybody ever interfere with you? No.

1060. Do the Marine Board interfere with you in any way? No, sir; they trust me implicitly.

1061. No one ever tries to influence you in connection with your work? Not in the slightest, never.

1062. You are left absolutely free? Absolutely free.

1063. Is there any suggestion that you can make to the Commission which would, in your opinion, improve the working of your Department? My opinion is not that, of course, of an expert in navigation; but all along I have thought that two nautical assessors and a Judge would be much more satisfactory.

1064. You come in contact, of course, with a great many engineers and nautical men of all grades, and what you say in that respect is borne out by the conversations you have had with nautical people generally? Yes.

1065. Do you think they would be more satisfied with such an arrangement as that than with representation on the Board? I think it would be more satisfactory.

1066. You think they would be perfectly satisfied? The logic of the thing is that, according to the Act, a man must be a shipowner in order to be a representative, and in many cases a number of our wardens cannot sit because they are personally interested; and it is the opinion of those who are capable of judging, that representatives ought not to be ship-owners, because they are personally interested.

1067. Are you aware that agitations have been got up to obtain representation on the Board for engineers and seamen—and do you think they would be satisfied if, instead of representation, they had an independent Court such as you described? No; the sailors would not be satisfied, but all the others would. The firemen and seamen want to be represented on the Marine Board as a body that deals with certificated men; but they have no certificates, and they would, therefore, be sitting in judgment on officers of ships who have qualified in the service; but any arrangement made that would leave them out would not satisfy them.

1068. In the case of the arrangement proposed, no one would be represented except the general public directly? So far as the engineers are concerned, the nautical assessors would have power to call expert evidence if they wanted it.

John Henderson Bedford, Examiner in Navigation, Seamanship, and Pilotage to the Marine Board, sworn and examined:—

1069. *Mr. Powell.*] What duties do you perform? I have to examine all the candidates for colour-blindness, for navigation, seamanship, and pilotage for all harbours on the coast. I examine masters of foreign-going vessels in lights, coast-trade masters in light; also examine for exemptions from pilotage. J. H. Bedford.

1070. How many examinations do you think you had last year? Two hundred and seventy-seven altogether of all grades. 27 April, 1897.

1071. That is the whole number of examinations conducted for the whole year? Yes. Some of the candidates may come up two or three times, but they pass every time, and have to go through the same examination as if they had not been up before. 1072.

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1072. Out of that number how many passed? I could not tell exactly. Last year eighteen failed, but not passed; thirty-two failed, but since passed; eighteen failed altogether; but thirty-two, after failing, came up again and passed. This is in the different grades.

1073. When the men pass do you or the Marine Board issue the certificates? The man applies to the Secretary, and he is sent up to be examined in colours before any money is accepted from him. Then his money is taken, and the secretary signs his application form, and he comes up to me, and if he passes I fill up a form and the secretary gives him his certificate.

1074. The certificate is issued on your report? Yes.

1075. Do you sign the certificates yourself? No; I sign the form authorising the secretary to give the certificate.

1076. Do you find the applications for certificates are falling off? No; there are forty exemption certificates issued up to to-day. That is more than for the same period last year. During the period in which thirty-six were issued this year, thirty-four were issued last year. They are increasing.

1077. You have served in different offices, and have been harbour-master and inspector? Yes.

1078. Joint offices? Yes. I got £50 a year extra for being Inspector, and then I got my present position.

1079. When you say "joint offices," what do you mean—the harbour-master has to move ships, doesn't he? He moves the ships, and then at the same time, if there is any inspection to be done on board, inspecting ships coming from sea or going to sea, or any other duties that are performed by inspectors now, I had to do this.

1080. You mean to inspect deck cargo? Yes, and to see that vessels going on excursions did not carry more than their proper number, that they did not take too much cargo, or carry too much to interfere with the comfort of passengers on deck.

1081. How long have you held the office of examiner? Since 1886.

1082. *Mr. Wilson.*] You say the exemptions are increasing? Not at a great rate.

1083. It is only for a short time, so of course you cannot say? No.

1084. Have you any new instructions regarding exemptions? No.

1085. Does the Marine Board direct you in matters of that kind? No. If a man comes up to be examined for Sydney I test his qualifications for bringing the ship into the harbour. The "unlimited" certificate is for mail-boats, and certificates are issued from 50 to 100 or 300 tons, and after that the candidate must get one for unlimited tons.

1086. There is nothing to show that they will not go on increasing? No.

1087. Are you the sole examiner? Yes; I do the whole of it.

1088. Do you think it is desirable for you to do the whole of it from the public point of view and the point of view of the examinees? I can see no objection to it.

1089. Except that an examiner is like any other mortal and may make a mistake? I know that, sir.

1090. There is nobody to check you? No; it is the same in England.

1091. You do not know that they are not checked? I know exactly what they do in the outports in England. For instance, at Plymouth there are candidates to be examined. They send to London for the Plymouth papers, and a sheet is sent with all the answers to the different problems. After the papers are examined and passed they go up to London and are checked there.

1092. But no one checks yours? No. Anyone can inquire for the papers; I keep them all.

1093. You examine two or three hundred men a year;—is it not quite possible for you to make a mistake? Oh, yes.

1094. You have no second examination? No; but, according to the regulations, any member of the Marine Board may come and sit.

1095. Do they do it? No. At any time the papers can be produced, and it can be shown where the candidate has done them improperly.

1096. A man may fail through a mistake you have made—even if he does not raise the question he may still suffer an injustice? I am very careful that he shall not suffer from a mistake I have made. I compute all my own problems. It is almost impossible to make a mistake in that. I work back from the result to what I began with, and it must come out the same if it is right.

1097. What portion of your time is occupied? The candidates come in at 10 and remain until 4. They do not leave. The regulations are that officers commence at 9 and leave at 4:30, with an interval of three-quarters of an hour. I found it did not suit, and I spoke to the Board, who allowed me to begin at 9:30 and leave at 4, with no interval at all.

1098. Do you observe those hours every working day? No; the men getting exemption certificates can come up at any time, and I find it a very great convenience to be there between 1 and 2, because there are many men who come to me between those hours.

1099. Every working day you are on duty from 9:30 to 4 without an interval? Yes.

1100. And you are not checked? If I commence with a certain latitude, longitude, and time, and compute all the elements for that, and then work that back again, if it does not come out as I commenced it must be wrong; so that I would not give it to candidates unless I was quite sure it was correct; and these problems are computed weeks and weeks before the candidates get them, and I am certain that they are correct. About three weeks ago the Government Printer made a mistake in printing S.E.E. for S.S.E., so that it meant nothing. On looking through one of the candidate's papers I found him wrong, and gave it to him to correct, and he came and asked me what this S.E.E. meant, and I found they were all like that. The candidate takes the papers, works them, and brings them back to me, and if there is a mistake he is allowed to get the paper to correct it.

1101. *President.*] I suppose you hold all the higher certificates yourself? I hold all the highest a master in the merchant service can hold. The examinations commence on Tuesday. They are examined for colour-blindness on Monday. There are a master and a mate being examined now. If they go on and do not fail before, it will take them till Friday to finish. If a man comes up in the meantime for exemption I can attend to him, or to a coast trader or harbours and rivers man.

1102. Could it not be so arranged as to have a recognised time? Only for foreign-going men. There is a certain time arranged for that.

1103. How often do you have those examinations? Every week; and in fact every day in the week a person may come up for examination for a coast-trade certificate or for a harbours and rivers certificate, and on Tuesdays for foreign-going.

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1104. Does anybody assist you? No.
1105. Do you set your own questions? Yes.
1106. And you judge the results yourself? Yes; I see from my own worked examples whether the candidate is right or wrong. I have a book with all the examples worked.
1107. What is the nature of an examination for an exemption certificate? If a man comes up for Sydney I examine him, beginning at the Heads right up to Cockatoo Island, as to the depths of water in the different channels and in the different parts of the harbour, the leading marks for coming in and going out, and to see that he has such a general knowledge of the harbour as will enable him to bring a ship in or take her out of the port.
1108. Can anybody come up for certificates? A man has to be three times in and out as a mate of a coast-trade vessel, and now there is a new regulation that a man must bring a register to prove that he is going to take command of a ship, and until this I have known a third mate to come up.
1109. It has been represented to us that the exemptions will very largely decrease, and will be confined practically to our own intercolonial boats in consequence of the altered rules? That will be the effect of it. No foreign man can get exemptions now. He can get the certificate now, but it is of no use to him, except he is actually engaged in the coastal trade.
1110. You told Mr. Wilson just now that the exemptions were increasing? There have been more issued up to date this year than up to the same date last year—that is, three or four more: not a very large number. More candidates have come up. A man may come five or six times; he will get exempt for Sydney, and then go away and come back and get exempt for Newcastle and for the Tweed River, and his name will be down three times.
1111. He has to get exempt for every port? Yes.
1112. How long do these exemption certificates last? A man's lifetime, unless cancelled.
1113. Do foreign-going certificates that have been issued in the past hold good now under the new regulations? Those who had them are allowed to use them now because the certificate is "for any vessel that he may be master of."
1114. Then it will be some time before the new regulations will have any great effect on the amount of pilotage? Yes; there are so many people who are exempt in the Orient and P. and O., and German and Lund steamers; the masters and the mates are exempt.
1115. So the effect on the revenue will be very small? I do not think it will make any difference for years unless the Government say that those certificates shall not be used except when engaged in coastal trading.
1116. Would they have the power under the Act to say that now? I do not know. When the certificates were issued it was mentioned particularly that they were only to be used when engaged in coastal trade, so that if I went to New Caledonia or China I had to take a pilot, but if I went to Newcastle in the coastal trade I was allowed to use a coastal certificate.
1117. You have nothing else to do but examine? No.
1118. I suppose you have great experience in sea-going matters? Yes.
1119. Many years a captain yourself? Yes.
1120. Can you suggest to the Commission any way by which the conduct of the Marine Board can be improved in any direction? We all have our opinions—perhaps it might interfere with what has been said by the Heads of the Department.
1121. We are asking you individually;—we want to know if you can see any way in which the operations of the Marine Board can be improved? In all parts of the world where pilot vessels are engaged there are no captains in charge of the pilot vessels; the last pilot going on board takes charge of the ship. It is so in Melbourne. He is the captain for the time, and if he is put on board a ship the mate brings the boat back to port and the next pilot takes charge. That is done on sailers and might be tried on steamers.
1122. What would be the benefit of that? There would be one person saved—the saving of his salary.
1123. There are always three or four persons on board a pilot ship? Half the pilots are aboard.
1124. So you would suggest that the whole staff be made effective captains? Yes.
1125. And the man last on board? Would take charge of the ship, take her out and bring her in, and do anything required. If he can pilot a large steamer in and out of the port, surely he ought to be competent to take a small one.
1126. Have you been in any parts of the world where steamers have been employed? No; all sailers.
1127. Do you think there would be any difference in the case of steamers? I cannot see it. You don't require much seamanship to handle a steamer, but you require a lot of seamanship to handle even a small ketch. Some masters could not take charge of a ketch. There are certificates issued now for steamships only.
1128. Is there anything else? I have been in all the ports on the coast, both in sailing-ships and steamers. At the pilot stations the pilot required four men to go out on the bar and take soundings. There were no tugboats then.
1129. Now that there are tugboats, and the pilot can use them, does he require the same number of hands? He has the use of the tug to go out and take soundings, or for any other purpose. He does not use his whaleboat now, and would be foolish if he did.
1130. How many tugs are there? At nearly all the harbours on the coast.
1131. Do you think it is a good thing to have tugs at nearly all the bar harbours on the coast? A good thing for the ship-owners.
1132. But a large expense to the Government? Yes.
1133. Is that plan adopted anywhere else? The Government does not find them; it is left to private enterprise.
1134. Is there any reason why it should be done here? I do not see any reason why it should.
1135. So that the shipping community have facilities here which they have in no other part of the world? The Government find tugboats nowhere, neither in America or India, nor in any other place. The Government find a tugboat at the Mauritius, which you have to pay for.
1136. But here they pay nothing? They pay, but they do not pay so much as they would have to pay private people. In the Mauritius they must take the tug to berth their ships, so that it is not optional, as it is at the bar harbours. These coastal vessels will never take the tug nor a pilot, if they can help it.

- J. H. Bedford.
27 April, 1897.
1137. Suppose the subsidy was withdrawn from these steamtugs, do you think there would be sufficient private enterprise to keep them up? I do not.
1138. The subsidy is the only thing that keeps them going? Yes.
1139. What they get from the ships employing them now would not be sufficient to induce them to remain on? No.
1140. Are the subsidies excessive? I do not know what they are.
1141. You say there are facilities given here to ship-owners which are not given in any other part of the world, and that at the expense of the Government? The only part of the world I know of where a Government tug is used is the Mauritius, but there every ship must use it, and it pays for itself.
1142. Suppose a regulation were made that every boat going into the harbour must use the tug? Then the ship-owners would complain.
1143. How often do they use it? Only when actually compelled to do so; whenever they cannot help it.
1144. The Government pays a subsidy on the off-chance of the tug being wanted? ————
1145. Don't you think it would be a fair thing, if the Government pays a subsidy, for them to compel shipping to use the tug, so that they would get revenue in return? Not compel them to use them, but pay something as a harbour rate towards the subsidy. There is a harbour and light rate that they pay along the coast, charged, I presume, to pay for the pilots and other assistants, but they pay no rate extra for the tugs.
1146. They had to pay the same pilot rates before the tugs were granted? Yes. If they want tug-boats they should pay to keep them there. It is a tax on the general public to keep up tugs for the benefit of ship-owners.
1147. *Mr. Powell.*] You said the ship-owners got the benefit of this? Yes.
1148. Has it not had the effect of reducing the rates of insurance? I do not know. I could not tell.
1149. *President.*] Is there anything else you wish to say? Our Sydney certificates are considered second to none in the world. We have men out of the Orient boats, from large sailing ships, and from all the vessels coming to the port to get their certificates from here, and there are more candidates coming up here for examination than in all the other colonies put together. Both the examiners in Brisbane and Melbourne passed the examination in Sydney, and I have read a letter from the New Zealand Treasurer in which he told a candidate for the position of examiner in Wellington that without he had had a Sydney certificate he would not get the position, and the harbour-master and deputy harbour-master in Launceston came up here to get their certificates, as they were recommended by their own Board to get Sydney certificates.
1150. Do they pay any fee for examination? Yes; a master pays £2 10s., and a mate £1 10s.
1151. Are the expenses of your Department covered by the fees? Yes, I think so.
1152. So that your salary is not an expense to the Government at all? I do not think it is.
1153. *Mr. Wilson.*] What is your salary? £380, and I was getting £400, and at the time of the 10 per cent. deduction £20 was taken off. In Wellington the man who holds the same position as I do here is getting £400.

Lyon Henry Walford, tide surveyor, Customs Department, sworn and examined:—

- L.H. Walford.
27 April, 1897.
1154. *Mr. Powell.*] You visited and reported upon the condition of the "Argo"? Yes.
1155. Will you tell the Commission in what condition you found that vessel? The decks are blown out of her from end to end, and I think nearly every deck beam is broken.
1156. Is she stripped? The lower masts and top-masts are in her.
1157. So far as you can judge at present, is she fit for sea-going? No, and I should not think it would ever pay to put her into sea-going order again.
1158. Do you think she will ever go to sea again? No.
1159. How long has she been laid up there? About four years.
1160. Did you also visit the steamer "Tinonee"? I did.
1161. What condition did you find that boat in? They are using her as a hulk for any spare gear at the dock.
1162. Is she gutted? There are no spars or anything in her.
1163. Is she used as a kind of floating jetty? Yes, when they are cleaning vessels they lay them alongside her.
1164. She is not in sea-going condition? No.
1165. How long has she been laid up? I could not say how long; she has been there for some years—about four years, I think.

William Hare, clerk in the Registration of Shipping Department of the Customs Office, sworn and examined:—

- W. Hare.
27 April, 1897.
1166. *Mr. Powell.*] Take that list, please [*handing list to witness*]. Does that list represent the names of persons entitled to vote at the election of wardens for the present year? Yes. [*Vide Appendix 22.*]
1167. Do you prepare a similar list annually, as directed by the Navigation Act? Yes.
1168. Does that list represent the registered owners of vessels on the registers kept at Sydney and Newcastle? Yes.
1169. Are there any other registry ports in New South Wales? No.
1170. Take the list. How many sailing vessels were registered in New South Wales on the 27th January, 1897? 472.
1171. What is the tonnage of the whole number? The registered tonnage, 51,493 tons.
1172. What is the average? 109 tons.
1173. How many steam-vessels were registered for the same period? 493 steamers, with a tonnage of 61,175, the average being 124 tons. The total of them all is 965 vessels and 112,668 tons.
1174. How many of the sailing and steam vessels are registered under 80 tons? 303 sailing, and 300 steam, or 603 in all.
1175. How many lighters have you registered? Thirty-six; that is, at Sydney and Newcastle.
1176. How many pleasure yachts? Thirty-nine, all registered in Sydney.

1177.

1177. Persons are granted votes for those small vessels if there are a sufficient quantity of tons to make how much? 100 tons one vote, and 250 tons to entitle a person to become a warden on the Board. W. Harc.
27 April, 1897.
1178. Have you a return there showing the tonnage of vessels and the votes under each tonnage? I have a return here showing—72 entitled to 1 vote; 29, 2 votes; 22, 3 votes; 14, 4 votes; 11, 5 votes; 5, 6 votes; 1, 7 votes; 1, 8 votes; 1, 9 votes; 3, 10 votes. [*Vide Appendix 23.*]
1179. So that the bulk of the votes are with the small vessels? Yes.
1180. Are there several vessels registered which have not been trading to and from New South Wales for several years? I have no means of knowing. I cannot say.
1181. When you prepare the annual list do you keep in view the qualification of the electors in any way? I have the qualifications in front of me at the time.
1182. Vessels called "hulks" are vessels out of condition and vessels laid up;—do you knowingly return those? If I know of a vessel that has become unseaworthy I generally represent it to the owners and ask them to give a return, and if they have sufficient tonnage they are included in the list.
1183. Do you know there are a number of vessels in the harbour at the present time that are no longer seaworthy? It has not been brought under my notice. I can only deal with the registers, because they have to be produced at the Revision Court.
1184. The Collector of Customs has the power to reject any vessel? Yes.
1185. And the owners have the right to appeal to the Revision Court? Yes.
1186. I suppose you are aware that there are three elective members on the Board? Yes.
1187. What qualifications do the present elective wardens hold as voters;—for example, what qualifications does Captain Broomfield hold? The qualification there [*indicating list*] is 792 tons.
1188. How is that made up? He is joint owner in a pearling fleet of 200 tons, of which he is credited with 100 tons.
1189. How many vessels? I have not got it here.
1190. They are all small boats? All about 14 tons, I think. Then he owns half a vessel—492 tons. He is owner of a vessel registered as the steamer "Tinonec."
1191. Do you know that those vessels are out of condition and laid up? I am told that the "Argo" is laid up and the "Tinonec" also.
1192. Is the "Argo" owned in conjunction with Captain Jenkins? It is owned in conjunction, but not jointly; there are two shareholders.
1193. They each own half the vessel? Yes.
1194. And that half vessel owned by Captain Jenkins has been his sole qualification? Yes.
1195. And what are Captain McLean's qualifications? 22/64ths in the "Tamar," 21/64ths in the "Timaru," and 22/64ths in the "Western," making a total of 283 tons.
1196. And those vessels are running? Those three vessels are now running as colliers on the coast of New South Wales.
1197. Is it a fact that no owner can have more than ten votes? Yes.
1198. However large his interest may be? Yes.
1199. And that ten votes would represent what? 3,500 tons.
1200. The Revision Court sits once in every year? Yes, in the month of February.
1201. What time do the sittings occupy? From 12 to 1.
1202. And two Justices of the Peace are appointed? Yes.
1203. To conduct the Court? Yes.
1204. Are appeals frequent in your experience? I have never known of one during the time I have been in charge.
1205. How long is that? For six years, I think. I have never had one inquiry in regard to the Revision Court, and only one inquiry with regard to the voting list.
1206. And there seems to be no very great interest taken in the proceedings of the Court? No interest whatever taken in it.

WEDNESDAY, 28 APRIL, 1897.

[*At Sydney Heads, on board the Light-ship "Bramble."*]

PRESENT :—

GEORGE ALEXANDER WILSON, Esq., J.P.
JAMES POWELL, Esq., J.P.

Joseph Leddra, Superintendent of the Light-ship "Bramble," sworn and examined :—

1207. *Mr. Powell.*] How long have you held your position? Going on for twelve years.
1208. And you have an assistant light-keeper? Yes; first and second, and three others.
1209. Will you give their names? Joseph Leddra, James Hursey, and Watt.
1210. What is Leddra? He is mate, Hursey is an assistant, Watt is an assistant, and the other man attends the cook and galley and keeps watch; that is Temple. There are five altogether, including myself.
1211. What are the salaries? The mate gets £9 12s., and I do not know the salaries of the others.
1212. What are their duties? I have to attend to everything concerning the ship and look after the two pile lights, and in case of accident we have to render assistance to boats on the harbour; I have to keep account of the stores and everything that comes on board the ship, and likewise apply for them. Here is a requisition that we have to make out.
1213. That is your annual requisition? No; for six months. There is plenty of work here, I can assure you, sir. We have to overhaul the moorings of the ship every twelve months, keep the ship clean and painted, and the boats painted, and keep watch day and night.
1214. You use seal oil? Mixed with kerosene.
1215. You furnish this return to the Marine Board? Yes; that goes in to the Marine Board every six months, showing the time of lighting and the time of extinguishing, and here is a return showing the watches kept and the oil consumed.
1216. The three men divide the watches? Three hours each. A man is three hours off and three hours on, and they go away every morning at 5 to put out the lights, and return about 8.

J. Leddra.

28 April, 1897.

- J. Leedra. 1217. Where are the pile lights? There is one up in Rose Bay and one in Watson's Bay.
 28 April, 1897. 1218. Do they go from here? Every morning and evening, to light them and put them out, whether it is rough or fine. If the wind is foul in rough weather, the "Carrington" comes across and tows the boat up. The men are on shore now painting a boat.
 1219. What shore leave do they get? Forty-eight hours a month.
 1220. Do they get any additional pay for attending to the pile lights? £1 a month.
 1221. Who gets it? £1 each to the men, three of them, and I get £2 a month.
 1222. And beyond attending to the light and the pile lights, there are no other duties except keeping the ship clean? No other duties except keeping the ship clean and attending to everything.
 1223. What is your salary? £21 7s. altogether, including the money for the pile light.
 1224. Are there any allowances besides? No.
 1225. Your quarters are rated at £50? Yes; salary £225, quarters £50, and allowance for attending to the light £24.
 1226. And the mate has £127, and £12 for attending to the lights? Yes.
 1227. And the next man, the assistant Watt, has £118 and £12 for attending to the pile lights? Yes; he came here off the "Captain Cook."
 1228. Hursey has £96, and £12 for attending to the lights? Yes.
 1229. Do they all live on board? Yes; they keep watch night and day.
 1230. Are rations allowed you? No.
 1231. Not to yourself? No.
 1232. What age are you? I am 69.
 1233. Is the mate your son? Yes; he has been here for nearly twelve years now. He was down at the Solitary Islands.
 1234. Do you think you could work this vessel at a cheaper rate than it is now costing? I could not do with anyone less, because we must have a boat's crew. We get as little as possible. What we get here are only trifling things.
 1235. Do you consider this more important than the Solitary Island light? It is more important, having regard to the vessels running in. There is a reef there [*pointing*], and there have been several vessels run on it since I have been here, and yachts are always running on it. When boats are capsized or sink we have to go and assist them.
 1236. The pile lights are the only two lights that you have in charge that are away from the ship? Yes.
 1237. Who looks after the leading lights? The men on the signal station.
 1238. You are on duty here at all times, Sundays and holidays? The whole time, day and night. I have not been ashore once this month.
 1239. Are the stores kept on the ship? Yes.
 1240. Does anyone come down at any time to check them? No; they are all checked up at the store. I receive them from the "Carrington," and check them myself when I receive them.
 1241. *Mr. Wilson.*] Are these men's services often called for in cases of accident or anything of that kind? Whenever a gale of wind is blowing we are on the lookout. We often have to go out in a gale of wind. There are generally accidents when they are racing.
 1242. And are these men always ready? Yes; there are two boats. Four hands are only a boat's crew, and we could not do with less; and it is very heavy work overhauling these moorings—they are 1½ in. chain.
 1243. I suppose you are aware that the expense of working this ship in 1883 was very much less than it is now? The wages were only £96. I do not know what the difference can be, unless it is the alterations in the salaries made in Mr. Dibbs' time.
 1244. What class do these men belong to? Seamen. Hursey is not a seaman, but he pulls the boat well. The ship has been here seventeen years, and is beginning to want. We have had new tanks and new boats, and that is running into expense. The ship was built in Newcastle for this service. The vessel that was here before was the old "Bramble," but this is much larger. The ship wants coppering now. The "Carrington" supplies us with water, but we catch a lot ourselves.

WEDNESDAY, 28 APRIL, 1897.

[On board the Pilot Steamer, "Captain Cook."]

PRESENT:—

GEORGE ALEXANDER WILSON, Esq., J.P.
 JAMES POWELL, Esq., J.P.

Joseph Creer, Master-in-charge of the Pilot Service, sworn and examined:—

- J. Creer. 1245. *Mr. Powell.*] Will you tell us something about your duties on board this vessel? We have always two pilots on board, ready at a moment's notice. The ship is always ready for any service. We have a first and second officer on board, first and second engineers, and always two pilots, four firemen, and six seamen. One fireman at £143, 1 at £125, 1 at £123, and 1 at £120.
 28 April, 1897. 1246. One of the seamen is paid £123? Yes; that is for long service.
 1247. Are the five at £96 recently taken on? Yes.
 1248. Will they get increases? No; that is stopped.
 1249. It was understood when they were appointed? Yes.
 1250. The boatmen who appear on your list here are not employed on board this vessel? They are on board the "Carrington."
 1251. What service does she do? She conveys pilots backwards and forwards. If a ship arrives with a pilot she attends and brings the pilot back, and if a ship is going to sea she takes the pilot to the ship, and if there is any hitch with the "Captain Cook" we do the work with her outside. Two of the men on board her are for day-work, and two for night-work.
 1252. The highest wage is £155 and the lowest £96; I suppose that is explained in the same way? Yes.
 1253. I have a return here showing that there are about 600 vessels inward and outward during the year? Yes; about that.
 1254.

1254. How many pilots are there? Five.
1255. The highest in one month is seventy-three ships, taking the services of pilots, and the lowest thirty-two? If you compare January, 1896, with January, 1897, there is a slight increase, and it will increase.
1256. How do you account for that? They have stopped the exemption certificates, and they are not granted now except to coastal steamers.
1257. Would that make a difference? It must make a difference.
1258. But surely the time has not arrived yet when the pinch is felt? You can see there is a difference.
1259. There are 572 vessels for five pilots. It does not represent a ship a day for each man? It is not the time for each man that is taken up. It is the attendance that is required. The pilot may be required several times for any one of those vessels. Last Thursday night we had not a pilot on board the ship here. They were all engaged except one, who was on leave of absence.
1260. Do you take pilots off at sea? If it is a sailing ship it is out at sea; if it is a steamer, they generally like to get the pilot clear as soon as they are in the fairway.
1261. In the logs you furnish you do not give the time that is occupied in taking pilots off? I have it in the log-book.
1262. There must be a great deal of time when all hands are unoccupied? Oh! no; they are always employed.
1263. How? Various jobs about the ship, keeping it in order. There must be always a watch day and night. The most important thing on the ship is the lookout.
1264. How do you manage about the victualling? The officers and engineers are allowed 18s. per week. There are seven—£6 6s. in all.
1265. And then you have a cook and providore? Yes; the cook acts as providore, and he has to find the steward, as there is no steward allowed for the vessel.
1266. No time is shown in the log that you furnish to the Marine Board? No; not in that.
1267. Taking the log for the month of March, and taking your own time for the inward vessels, it represents a service, between leaving the moorings and the return, of about thirty-eight hours a month? We are pretty fast about the work; it does not take long to do it. This is a fast vessel.
1268. Is that a fair average month's work? There are times when we are several hours out.
1269. Is this return a fair representation? It must be.
1270. The cook and providore is paid £143 per annum? Yes; he cooks for all hands throughout the ship. The men find themselves, and he cooks for them.
1271. What does he do as providore? Receives the money and finds the stores for the cabin. We pay him every month at the rate of £6 6s. a week, and he spends the whole of that. Sometimes he is a little in debt, and other times he may have a little surplus, but it takes about that to keep the ship going. He keeps account of the money in a book, and it is checked.
1272. If there is a balance, what happens? I do not suppose he has got any balance. The first time I heard of a balance was £6 this last month, but then he was in debt £4 the month before.
1273. Can we see the bills or the accounts, see how they are made up, and what they are? [*Book produced with accounts from storekeepers.*]
1274. Have you any idea of the cost of maintaining this vessel outside the cost of salaries and wages? I have forgotten. There are no expenses further than docking. She is docked every six months, and is there for about ten days. When she is in dock I do the work with the launches. I get one from town in addition to the "Carrington." It used to cost £10 a day.
1275. Are those launches found fit for the work? We are obliged to be very careful. I always go out in them myself. I never expect a pilot to go out without me, daytime excepted. Then we have got to tow the boat behind.
1276. The expense of salaries in the "Captain Cook" is about £2,700 a year? About that.
1277. Comparing that with vessels in the merchant service, of which you have had considerable experience, do you not think that expense is very high? I cannot say that.
1278. The rate of wages you are paying now is very much in excess of those paid on the coast? I cannot say what the wages are at present on board sailing vessels, but I fancy it is £7 a month, and then they are found.
1279. What is the average pay of a master? Some £25 to £30.
1280. And mates? I would not be positive about that. I have been twenty-three years in this service.
1281. Do you know what they pay now? No.
1282. Do you think that this vessel can be worked at a lower cost without impairing its efficiency? As far as the number of people on board are concerned, I should say no. Regarding anything else, I would not like to say.
1283. You would not like to say that the wages are too high? No; our men have very risky work indeed. There are many times that I feel very uncomfortable on dirty nights at sea, when our boat is away with the pilot. We have been very fortunate. We have never met with an accident yet.
1284. Are there any other duties that you are called upon to perform, with the exception of those relating to pilotage? If a vessel is in distress anywhere we are despatched immediately.
1285. That is, anywhere within reasonable distance outside the Heads? I have been sent as far as Gabo—half way to Melbourne.
1286. Anywhere else? To Lord Howe Island, on special service.
1287. In that case another vessel took your place? Yes; it was managed in our absence.
1288. *Mr. Wilson.*] You say the wages are not too high? I should think not, sir. It creates a bad feeling among the men forward, although I have not heard any complaint yet, for one man to have so much more than the others, but he has very long service.
1289. The fireman at £143, do you consider that a high wage? Well, it is the wage that was allowed. I really cannot say whether it is too much or not.
1290. There is one at £120 and one at £143;—is the man at £120 a satisfactory man? A very good man.
1291. Is he as good as the man at £143? Quite as good.
1292. Then have you no opinion about the man at £143 now? I really could not say.
1293. Seaman, £143;—what is your opinion of that wage? He has long service. It has been allowed.
1294. Is it a fair wage for a seaman? I really cannot say that it is too high. I wish they were all getting it.
- 1295.

- J. Creer. 1295. You think those at £96 are paid too little? They are glad to get into the service.
 1296. Do you think those at £96 are paid sufficient? They are satisfied to come for that rate of wages.
 28 April, 1897: 1297. Then why do you wish they were all getting £143? It would be more satisfactory to the men, I suppose.
 1298. There are boatmen getting £155;—is that a proper wage for a boatman? £143 is the highest we have got for a boatman.
 1299. The return I have is wrong then;—have any of these boatmen any allowances? No.
 1300. Have they anything to do with the lifeboat? One of the look-out men, Harry de Frisier, is coxswain. He gets £143, and then he comes in for the allowance as lifeboat coxswain.
 1301. In answering this question you have to consider the general wages outside, and the circumstances of the taxpayers of the country. I express no opinion myself. Do you think it is a fair thing to the country to pay a boatman £143 a year? I do not think it is out of the way.
 1302. There is a boatman here at £96;—is he a good man? Yes, he is a good man; he has just joined the service.
 1303. There is a difference of £47 between him and the other. If he is a good man why does he not get £143? He has just joined, and was perfectly ignorant of the work, and has been taught by the other men.
 1304. He is capable now? Yes.
 1305. How long has he been here? Not many months.
 1306. You think that £143 in these days is not an unfair wage for a boatman? I do not say it is a fair wage for a boatman.
 1307. There is a look-out man at £161. Is that a fair wage;—do you consider that these wages are fair? I do.
 1308. You consider a fireman at £143 is not too high? I do not think it is.
 1309. What is your opinion of the salary of the first mate at £175? It is very fair wages.
 1310. And the second mate at £150? Yes, that is also fair.
 1311. The first engineer, at £272? That is fair.
 1312. And the second engineer, £200? That is fair.
 1313. In fact, you see nothing in this salary list to lead you to think that any of these rates are excessive? I do not think so.
 1314. You said that the salaries of masters outside were £25 to £30 per month;—what vessels would those be? Vessels trading to Melbourne and on the coast here.
 1315. Would you consider that the duties of your post here are more arduous than the duties of a master trading to Melbourne, Queensland, and New Zealand? A great deal more responsible at times, as we get into such critical positions with this vessel in case of vessels in difficulties that it has been very responsible work in getting her out of it.
 1316. In what way? The ship has been in a very dangerous position.
 1317. The master of a ship trading to Melbourne, Adelaide, and Brisbane is constantly getting his ship in dangerous places through constantly taking her in and out of port? That is not going up against ships at night time. Vessels run close to shore, and we have to run great risk to get them out and ourselves.
 1318. You think your post is more responsible even than the post of a master trading between the ports of Queensland, New South Wales, and Victoria? I certainly do. Many of them would not have been so fortunate as I have been.
 1319. These men would be in charge of passenger steamers? Yes.
 1320. What are the wages of the cook? £143.
 1321. Do you consider that a fair wage? Well, he has got to find a steward.
 1322. But he does not? He pays a steward out of that money.
 1323. He is the steward? He has a good able boy.
 1324. And the cook makes his own arrangement with this boy and pays him out of that £143? Yes.
 1325. He is found? He is found out of the providore's money, and the cook too.
 1326. Do I understand that, in addition to salary, the Government provide the seven officers of this ship with 18s. per week, and then you make arrangements with the providore to find the ship? Yes.
 1327. The men are not found? No.
 1328. The firemen, seamen, boatmen, and look-out men are not found? No.
 1329. You have no suggestion whatever to offer to reduce the expenditure? I cannot see it.
 1330. You cannot see that in any single case any of your officers or men is overpaid? I cannot.
 1331. And you cannot see your way to reduce the numbers without impairing the efficiency of the service? No.
 1332. You would neither reduce the numbers nor advise the reduction of the wages? No.
 1333. Is there any difficulty in getting boatmen at £96 a year? Of course we can them at £96.
 1334. And you have got them at £96? I daresay there are plenty more to be got too.
 1335. In the face of that, do you still contend that £143 is a fair wage? Well, he has been on so long, do you see.
 1336. That is not the point. It is not your own money, nor our money. You admit that you can get as many boatmen as you want at £96, and do you still contend that you should pay another man £47 more than you can get them for;—it is practically half as much again? I would not like to part with one of the sailors we have got here.
 1337. You admit that you can get as many as you want at £96, and yet you state that £143 is a fair wage? Yes; I do not think it is a bit too much.
 1338. You were talking about the risky nature of your work;—is it more risky than the work of others who are at sea? Very much. You ought to have been here the other day when we were boarding that mail-steamer. There is great danger of the boat getting capsized. We have been very fortunate that we have never had an accident, but still I never know what may happen.
 1339. But men have all sorts of contingencies to meet at sea? Not boating, the same as we have.
 1340. But they have other risks which you have not got; they are at sea in all weathers? We have to face all weathers.
 1341. You contend that these men's occupation is more risky than that of the ordinary seaman going to sea? I do consider it a great deal more risky, and it takes the men a long time to get used to it.
 1342. An ordinary qualified seaman? Yes, into the management of the boat. 1343.

1343. *Mr. Powell.*] Just a word about the leading lights;—take this man de Frisier: his salary is £143, and he has £12 a year in addition for attending to the leading lights? Yes.
1344. And he has another £6 as second coxswain of the lifeboat? Yes.
1345. That is a kind of retaining fee for him? Yes.
1346. Do they practise at all? Every three months.
1347. Four times a year? Yes.
1348. What do the crew get? 10s. for each practice.
1349. Can you say when the lifeboat went out last? About a month ago.
1350. Is she frequently called upon to go out? Only once in three months.
1351. I mean for necessity? It is very rare indeed. We have always done the work with the pilot steamer. We have been fortunate enough to do it with the pilot steamer when the lifeboat could not get near it.
1352. The boat is not required? She would be called upon to do it if the steamer got into difficulty, but we have been fortunate enough to keep out of it.
1353. They practise every three months? Yes.
1354. What is the cost? 10s. each man for thirteen men.
1355. Where do you get them all from? Pick up whoever we can get hold of—fishermen.
1356. Men at Watson's Bay, I suppose? Yes.
1357. Has your crew any interest in it? We have to follow them out with the pilot steamer every time they go out.
1358. And thirteen men every quarter are paid 10s. each to man this boat and take her out? Yes.
1359. Who goes in charge of her? Harry de Frisier.
1360. That is the coxswain? Yes. He gets 10s., the same as the rest of the men. He is allowed so much a year.
1361. If he only goes out four times in the year, it would be 30s. a time? Yes.
1362. The men get 10s. and the coxswain 30s.? Yes.
1363. But you have not known them go out for any requirement—to assist a wreck? They have never been the means of saving life.
1364. Are there any other payments made to any persons on account of the lifeboat? Yes; I get £1 every time the lifeboat goes out.
1365. You do not go out in her? I am in charge of her. I follow in the steamer.
1366. Does anybody else get anything? No.
1367. The lifeboat is always stationed down here? Yes.
1368. Have you, in your experience, known that boat to go out in any matter of exigency requiring her services other than to exercise;—have you ever known her to go to a ship in distress? Yes.
1369. How long ago? It was the time the "Centurion" was wrecked.
1370. When was that? In 1887.
1371. Then she has not been out for nine years for any purpose except for exercise? We saved the people from the wreck on that occasion. There was a ship between the Heads in a critical position, and I gave the coxswain of the lifeboat instructions to remain by that vessel until she was out of danger. The men were so exposed that they were quite paralysed when the other ship got into danger, and we had to go to the assistance of the other vessel and save the lives of those on board.
1372. Do you think it necessary to keep the life boat stationed here and incur this expense? It is quite necessary to have a lifeboat on the station, and we never know the moment she might be wanted. The pilot steamer might be away.
1373. If the steamer were not away, you would be better pleased to have the services of the steamer? Oh, no; I would like to have them both. The boat might be successful when we might fail or get into some mess that we could not get out of.
1374. *Mr. Wilson.*] You are in charge of the lifeboat;—what does that mean? I am responsible for the life-boat being in proper order. I saw her last a few days ago. If the boat were not in proper order I should be hauled over the coals about it.
1375. If it is for keeping the boat in order, why should you be paid at per trip when the boat goes out? I believe that is paid at all lifeboat stations.
1376. Where is the lifeboat? Down at the cove in a shed.
1377. *Mr. Powell.*] These men attending to the leading lights appear to be paid for work done in Government time? Their duty is from sunset to sunrise, and one of them takes it in turn night after night to attend to those lights. It is a long distance. They have to start early in the morning to put the light out and early at night to light it.
1378. Why this extra pay? It is extra work. They have only had to do the extra work since the lights have been erected.
1379. How long would they be on duty? One has to watch from sunset to midnight, and the other from midnight to daylight—until sunrise.
1380. Had not they that time of duty before these lights were established? Yes; but they did not have this extra pay for attending to the lights.
1381. They had the same hours of duty then as now, and they are attending to these lights in the ordinary routine of duty, and are not working more hours now than they were working then? The man that would come on at 12 at night would have to go over there the first thing in the evening to attend to the light.
1382. They work from daylight to dark and from dark to daylight? Yes.
1383. Those were the hours established before the lights were erected? Yes.
1384. They do not work any longer hours now than they did then? It makes longer hours, because the man who has got to turn out at 12 would not have had to go over there.
1385. How does it make longer hours? The man who might be resting until midnight has to go and attend to the light. One man will start away at sundown to attend to a light. He has a long walk over there on a very ugly road, and has to come back and get to his duty at 12 o'clock.
1386. Does it make longer hours or not? I do not know that it makes longer hours.
1387. Why pay extra then? They have to keep that light in order.
1388. But they are paid a salary for certain hours. It is not for them to say whether they will take a short walk during that time? —

J. Creer.
28 April, 1897.

Herbert Orton, cook and providore, "Captain Cook," sworn and examined:—

- H. Orton.
28 April, 1897.
1389. *Mr. Powell.*] Your salary is £143 a year? That is what I sign for, but I do not receive that. From that I have to provide an assistant to help me, because the job is too much for one man.
1390. Have you represented that to the master? I have seen Captain Creer about it.
1391. There is more work than you can do? Yes.
1392. And therefore you hire some person to help you? Yes.
1393. Do you get the money? Yes.
1394. What are your duties? To cook for the sailors and firemen; there are ten in all, but there are only three on board at a time. Also to cook for two engineers, two officers, captain, and two pilots. There are seventeen persons to cook for in all.
1395. Do the firemen and seamen provide their own food? Yes.
1396. They provide the whole of it—condiments and things of that kind? They find everything.
1397. Do they bring them to you, or do you buy for them? They buy their own, and bring it to me, and give to me whatever they require.
1398. Have they a mess of their own? Yes.
1399. And that is kept entirely separate from the other? Yes.
1400. Do you purchase the provisions for the seven officers? Yes. I go ashore for the purpose sometimes. I generally give an order to the launchmen, and they bring it to me.
1401. You deal with the people here? Yes.
1402. Do you pay as you go? No; I have monthly accounts.
1403. Does Captain Creer pay you the money? Yes; he gets it from the office and pays it to me as soon as he gets it.
1404. What was the last sum he paid you;—how much did you receive in March? £31 2s. 8d., I think it was.
1405. And you expended £24 odd, leaving a balance of £6 10s;—what has become of that? That is in my cabin.
1406. Who examines your accounts? The chief officer. He is responsible, and anyone else who chooses may inspect them. The chief officer has charge of them for a week after they are paid.
1407. Do those accounts represent the whole of the supplies? Yes, for each month.
1408. What does this item, in November, 1896, mean: "Captain and second officer, £2"? That was the time when we were in dock. When we go in dock they expect the money allowed them to live on board, and they want the money returned to them.
1409. That allowance is only made to the captain and second officer? No, sir. See the following month.
1410. I do. There is "Steward, £2 10s." What does that mean? The providoring was handed over to me in August, 1896, and it was arranged that I was to pay the steward out of the providoring. So the first two months they agreed to the £4 being taken out of it; but next month the bills were higher, so there was only a small amount left, and the next month I was told I was to pay it myself.
1411. In September, 1896, there was £3 14s. surplus brought on from the previous month? Yes.
1412. Was that to pay the shortage in the September month? There was £3 14s. 8d. over from August. During September I spent that money on odds and ends. I think the items are down there.
1413. Does Captain Creer always claim that money when the ship is in dock? When the vessel goes to dock.
1414. How long have you been doing this work? Since August.
1415. The engineers are fed on board, at the dock? Yes, and the chief officer.
1416. What about the pilots? They get the refund too.
1417. I do not see anything for wines and spirits or beer? Nothing like that on board, sir; it is against rules.
1418. There is nothing in the accounts for that? No.
1419. *Mr. Wilson.*] This £2 was returned because they were not victualled? Yes.
1420. *Mr. Powell.*] The pilots did not get it then? Yes, the next month.
1421. How many of them? Five of them got 10s. each.
1422. Is this a matter regulated by the Marine Board, or is it arranged on board the ship? Arranged by Captain Creer.
1423. Do you consider that the amount that is allowed is a fair thing? It is a fair charge. One month makes up for another. There is really no surplus.
1424. What do you pay your assistant? £3 a month.
1425. That leaves you £107 net for your own labour? Yes.
1426. And what you can make out of the providoring, if you can make anything? I have to return any surplus; that must be divided amongst those who find the money.
1427. It is distributed amongst the officers? It is to be when there is, but there has not been one yet.
1428. But suppose you go on having a small surplus, the money would be distributed amongst the officers? Yes.
1429. Have you ever done so? Only for the time when we were in dock.
1430. You have never had any real surplus except this month? No.
1431. Have you any experience in providoring? Yes.
1432. Have you ever providored any ship? No. I have been with the shore providore of Howard Smith.
1433. Do you know the contract rates? Yes.
1434. What would be a fair contract rate, taking the seven officers on board the ship, to find the food, cook, steward, and service? £30 a month.
1435. You are doing it at a cheaper rate here? The steward is not paid out of it.
1436. £30 a month would include all expenses? Yes.

James Fotheringham, chief officer of the "Captain Cook," sworn and examined:—

- J. Fotheringham.
28 April, 1897.
1437. *Mr. Powell.*] How long have you been chief officer? Since the January before last—sixteen months.
1438. Had you any position on board the ship prior to that? Second officer.
1439. How long did you hold that position? I have been eight years in the service.
1440. What is the salary you receive? £175 per annum.
- 1441.

1441. Are there any allowances? None except the food.
1442. What are your duties as chief officer? To superintend the work of the ship under the captain's orders when he is here; and when he is not here I take charge, and take the vessel out and in the same as he does, night and day.
1443. Is there anything in the ship's books to show when he is not here? Nothing.
1444. There is nothing to show when you are in charge and he is not? No.
1445. What are your hours? All the time, with the exception of twenty-four hours' leave every week. There is a man in charge all night on the bridge, and I am liable to be called any minute.
1446. Do you not take turns with the second officer? We do not keep watch that way.
1447. What does the second officer do, then? He carries out any orders given him. He is also liable to be called at any hour; in fact, all hands are called when we proceed to sea.
1448. There is only one man on watch all night? Yes, on the bridge.
1449. If nothing comes in, then, you are not disturbed? Until it is morning. Sometimes we are not disturbed all night, and other times we are out all night; but that would be exceptional.
1450. Your log for March shows very little? There has been very little come in lately, owing to the exemptions.
1451. But we understood from Captain Creer that there was an increase? Lately there has been an increase. They have stopped the exemptions being issued, and new masters have been put in some of the vessels.
1452. The look-out man calls you when you are required? At night-time; I am on deck all day.
1453. Does the captain remain on board ship all night, then? Sometimes.
1454. What does sometimes mean;—was he on board last night? No.
1455. Or the night before? No.
1456. About the providore's accounts: I see here £2 paid to the second officer;—what is that for? When the "Captain Cook" is in dock the second officer stops on the station, and has to find himself. He is on duty all the time on the launch, and the chief officer is on duty at the dock, and is fed there by the cook.
1457. *Mr. Wilson.*] Have you had any experience at sea? Yes, all my life.
1458. You said the captain was not on board last night, nor the previous night; can you give any idea, if you have no actual record of his absences from the ship—how often? I could not remember.
1459. Is he on board four nights in the week, on an average? He may be; I cannot remember.
1460. Are his absences frequent from the ship at night? Yes. I would sooner that you asked somebody else.
1461. We call on you to tell us anything about the ship that you think the Government ought to know, and the Board will protect you. As a rule, does Captain Creer remain on board at night? No; the night that I am on leave he is on board.
1462. That is an arrangement by which you relieve each other? Yes. There used to be a captain and a mate on board before my time, and they used to relieve each other, for a man cannot be on board all the time. Then the captain prior to Captain Creer thought there ought to be three officers, so as to get more relief—that is what it generally is on steamboats; and the captain worked then so that the officers should have so much leave, and he could go on leave whenever he chose. Now we have twenty-four hours' leave every week, and of course the captain suits himself and comes on board when he wishes. I do not say that he is away from the station, but he is not on board the ship.
1463. We do not expect officers to be constantly on duty; but is it your opinion that in a service like this the master should be on duty at night and take his leave in the day;—is it not at night that casualties and troubles are more likely to arise in a service like this? Yes; that is the most dangerous time.
1464. I want your opinion as to whether the man who is in supreme authority here, and draws the big salary, ought to be here at night, and if he requires leave, should he not take it in the day;—is it not important that he should be on duty at night? Yes. I think, myself, that there ought to be two; that is my opinion, as a responsible officer.
1465. There are three of you? Yes.
1466. Your opinion is that there should be always on board at night either the captain and the first officer, or the captain and the second officer? I consider one responsible man sufficient for a small ship like this, supposing he has got a leading man forward amongst the men. At night time I am always on the bridge by myself, and I find no difficulty in managing the ship.
1467. If the Marine Board were to make an arrangement that the master and first officer were to take this night duty alternately, you think that would be a proper arrangement to make? I do.
1468. You do not think it necessary that the master should remain on board at night? Not every night.
1469. Is there anything else to say to the Commission that they ought to know? Of course I am talking now for myself. I do not consider that I get sufficient leave, seeing that I am on duty night and day. I get twenty-four hours a week. I never get a Saturday afternoon, nor a Sunday, nor any holidays. I have been eight years in the service, and have been twice to church with my family, and then I have had each time to ask for special permission.
1470. With three officers is there any difficulty in arranging it? There ought not to be.
1471. Either the master or you should be on board at night? One is always.
1472. Is there anything else? I do not consider that I get sufficient pay, considering the responsibility I have. There are several mates on this coast who are better paid than I am, and none of them have the same responsibility, as they are never in charge of the ship themselves. I have a master's certificate and a first-class pilot's license, and am liable to be put on board a ship to pilot her in, but would get nothing extra for it.
1473. *Mr. Powell.*] You were employed on board a Hunter River boat? I came out on the "Newcastle" when she was new.
1474. I hope you are not keeping anything back from the Commission that we ought to know? No.
1475. Does it not strike you as extraordinary that you have three highly-paid officers in charge of six seamen? Yes.
1476. Do you think such a thing as that would be allowed to exist in any private employ? No; but of course things are a little different.

- J. Fotheringham.
28 April, 1897.
1477. Do you think that this vessel is worked expensively compared with privately-owned vessels? Yes, in some ways, because under the Marine Board Regulations increases were paid. But at the present time there is only one hand in the fore-castle who gets the high rate. The mate before me got £200. I really only got a rise of 8s. a month from second officer to first.
1478. As it stands now the Government are paying £741 in salaries to three men to look after six men with salaries of £603, and there is the addition of the 18s. a week each to the officers;—do you overhaul these accounts of the providore's? I go over them and see that the figures are correct. I have nothing to do with supplying the food.
1479. Are these articles usually supplied to vessels on the coast? Every vessel that I have been in has always been found.
1480. And found as liberally as you are found here? Just about the same as far as the food is concerned.
1481. Would it not be better to have this work done by contract? Perhaps it would. I do not know anything about it.
1482. Are you supposed to hold yourself responsible for these accounts? No; I have nothing to do with that.
1483. Who is responsible? Every month we each sign for our 18s. a week. I only feel responsible for my 18s. That is handed to the cook, who orders the food and pays the bills. He lets me see the bills every month for the satisfaction of any one.
1484. You never use the money? I never handle the money.
1485. And I suppose you would find fault if the supplies were not up to the mark? Yes, we would growl.

Andrew William Jack, Senior Pilot, "Captain Cook," sworn and examined:—

- A. W. Jack.
28 April, 1897.
1486. *Mr. Powell.*] How long have you been in the service as a pilot? Twenty-six years and eight months.
1487. At what rate of pay did you enter the service? When I entered the service we were in competition, but we were allowed £350 a year.
1488. How many pilots were there at that time? Six.
1489. But then each pilot paid for his own boat? Yes; we had our own boat and boat's crew.
1490. Did you pay for that out of the £350? Yes.
1491. And you received £350 a year? Sometimes more. We were allowed 2d. per ton. Sometimes it exceeded that, and then we had a vote for the remainder of the money.
1492. You came in after the new arrangement of 4d. per ton in and 4d. per ton out? Yes.
1493. And the pilots took half the receipts? Yes.
1494. Do you think that £350 was a fair average? I think we made a little more in the second year.
1495. How much more do you think? I suppose we got about £600 for one year.
1496. Each pilot? I think so; I am not certain.
1497. How long did that continue? One or two years.
1498. Your salary now is £398? Yes.
1499. And you get 18s. a week? That is for the two pilots on board the steamer.
1500. You have no charges against that now? The 4 per cent. superannuation.
1501. I notice one of the pilots gets £250;—how is that? He is the last made pilot.
1502. You are at the maximum rate? There are four of us who receive the same.
1503. All at the maximum allowed by the Marine Board? Yes.
1504. Is there work enough at the Heads for five pilots? Yes, I think so.
1505. You know how many vessels enter? We are always supposed to be here night and day prepared for work.
1506. But if there are only about 600 arrivals and departures in the year and five pilots to do the work, your being here does not alter the question in the least;—how many of you are required to do the work that has to be done? We have managed to do it. It is not for me to say how many are required. We are always at work, always ready to be called upon. We cannot leave the station.
1507. Look at it from the commercial point of view? My flag is put up here. I am supposed to be on shore waiting, and as soon as the flag goes up I come here.
1508. Divide 600 by 5, and the result is 120, and 120 vessels in 365 days per pilot would suggest that there are more pilots than there is work for? It sometimes happens that there are perhaps three or four ships going out and two coming in. It happens sometimes with a southerly wind that there are three or four ships coming in and at the same time there may be a couple going out. I do not mean to say that we are over-worked.
1509. Do you think that the service can be performed with a less number of pilots than you have now? I really do not think it could, efficiently. We are sometimes sent for to a ship to come out at 6 o'clock at night and stay till next morning, and perhaps she does not go out at all.
1510. But you are entitled to the charge for detention? We do not get it. Since the Marine Board Act we do not ask for it.
1511. The regulations provide for it? You might ask for it, but you would not get it. I have gone to a vessel at 8 o'clock at night and left it at 6 in the morning, and got a telegram at 10 to return at once to take her to sea.
1512. Do you ever go above Fort Denison to take charge of vessels to bring them to sea? Yes.
1513. Do you go to the wharf? Very often.
1514. Why do you do that;—the harbour pilot should bring the ship to the sea pilot's waters? Since the Marine Board came into existence that has been done away with. We bring all the Newcastle ships away from the wharf—vessels going in tow to Newcastle.
1515. And for a great number of other ships? We go right up to the wharf.
1516. The delay that you mentioned before is caused simply by the Act not being complied with, for it seems to provide that the harbour pilot shall take the vessel from the anchorage to the sea pilot? It is the tug-boat that causes the delay.
1517. They have no right to summon you until the tug is there; the Act assumes that the harbour pilot will take the vessel into the sea pilot's waters at Fort Denison, and the sea pilot will then take her to sea; you

- you are engaged in doing additional duties, weakening the staff at this end? These masters have the privilege of either taking or leaving the harbour pilot. A. W. Jack.
1518. Undoubtedly they have, and the more reason why you should not supply the place of the harbour pilot? If we did not attend, then there would be a complaint at the Marine Board the next day. We have written to the Marine Board about it, because, it gives us a greater amount of risk, and we have to work with a drunken crew. 28 April, 1897.
1519. The regulations provide that when the master of an outward bound ship finds that he does not require the services of a pilot on the day appointed he shall notify the same to the pilot, and no payment shall be made for such first attendance; but if, after renewed application for a pilot, the master shall find that he is not prepared to go to sea, he shall pay 10s. for each day, and no pilot shall be bound to take such ship to sea until such payment shall have been made; so the thing is entirely in your own hands? Yes; but who is going to collect it?
1520. You are going to collect it or not take the ship to sea? We used to work more in that way when we were working in our own boats; but that is a long time ago. You put that before the ship-master, he won't give it you.
1521. Do you go up and take out such a vessel as the "Barbarossa"? Yes, we always take them from the wharf. All steamers going to sea we take from the wharf direct.
1522. *Mr. Wilson.*] Suppose you have a certain wind and certain vessels coming from a certain direction, and other vessels going out, all the five pilots are engaged at one time;—does that happen? Yes, sometimes.
1523. Frequently? I will not say frequently. Occasionally you get three ships coming in and others going out. It has happened often in my experience as a pilot, even with this steamer.

Edward Brodrick, Chief Engineer, "Captain Cook," sworn and examined:—

1524. *Mr. Powell.*] You have a second engineer? Yes. E. Brodrick.
1525. Will you please describe what are your duties? I am responsible for everything relating to the machinery. 28 April, 1897.
1526. Do you live on board? Yes, and ashore too. I have a residence on shore.
1527. What leave do you have? I get away twenty-four hours a week. The actual duty is divided into two. I have twelve hours on and twelve hours off.
1528. How do you take it;—is it night duty and day duty? Yes; but when I am away for twenty-four hours the second engineer has to do the twenty-four hours, and I do the same for him.
1529. By arrangement between yourselves you can have twenty-four hours off whenever you like? Yes.
1530. You have one day in the week positively; in addition to that you may so divide the work that you only have three days' work a week each? No; we are on duty twelve hours out of the twenty-four all the year round. If I am on duty twelve hours in the day I have twelve hours off at night, and *vice versa*.
1531. You do not take all the nights off and the second engineer all the days off? No; we change about.
1532. You have four firemen;—the rates of pay seem rather high—£143, £125, £123, and £120;—do these men get rations or keep? No; they find themselves.
1533. And you? We are found.
1534. One of these men gets £143? That is the maximum arranged by the Marine Board. He has been the longest in the service. He was a sailor, and was made a fireman.
1535. Have you compared these wages with those paid on steamers outside;—are they not high? Some of them outside get £9 a month, and on the Manly Beach steamers they get £10 a month, and they have been promised another £1 a month when the company has got over its difficulties.
1536. *Mr. Wilson.*] But is not that explained by the fact that they work very long hours, constantly at it, under very high pressure? Yes, that is true.
1537. *Mr. Powell.*] This boat is in harbour the greatest part of her time? Yes.
1538. The time that you are engaged at sea is very small? Yes; but of course you understand that we have to be in readiness at any moment; for instance, if the signal went now I should have to rush in on top of the boiler. We have to be ready every minute of every day.
1539. You have control of everything relating to the machinery and the control of the firemen? Yes.
1540. Outside firemen get £9 a month and are found? Yes.
1541. This man gets £143 and is not found? Yes.
1542. So he gets £9 a month, or £108 a year, and the £35 represents his keep? Yes.
1543. In a steamer outside would there be two engineers on a ship this size? Yes; at sea machinery is being constantly watched. It is very hard at sea even for two engineers, because they have to do two hours on and two hours off. With regard to my own salary, the maximum was set down at £280, but with the reductions it is brought down to £261. There was the 10 per cent. reduction and the 4 per cent. superannuation.
1544. That is an investment? That is true. In the old boat I had the same salary, and here, with all this large amount of more modern machinery, I am getting only the same salary.

James Nuth, Leading Fireman, "Captain Cook," sworn and examined:—

1545. *Mr. Powell.*] What pay do you receive? £125 a year. J. Nuth.
1546. Do you get any allowances? No. 28 April, 1897.
1547. Any rations? No.
1548. What leave do you get? Two days off and six days on. We are on continuous duty sixteen hours a day, and the third day we are on board we are on twenty hours right off, so as to change the watches.
1549. How many are engaged on board now? There are three on board and one on leave.
1550. Why is there such a difference between your pay and that of the lowest, £120? We start here at £120, and receive increments of £5 a year. I have had one increment. The last fireman who came has had no increment. They commence at £120, but Alick Morgan and John Harrington receive the same as they had on deck.
1551. How long is it since you received your increase? 1893.

- J. Nuth.
23 April, 1897.
1552. Were the increases stopp'd in 1893? That was the last we had. They were never stopp'd; I believe they were held in abeyance.
1553. I suppose the firemen almost always keep the fires going? Day and night. We must keep one man on the fires all the time, and then we have the electric light to drive at night.
1554. Who attends to the electric light? The engineer is always on, but the fireman attends to it. One of us is always in the engine room.
1555. There is one engineer always on board at night? Day and night, twelve hours each.
1556. *Mr. Wilson.*] Are your wages the highest paid to a fireman here? At present, sir.
1557. Have you anything to say about your position on board, either on behalf of yourself, or on behalf of the firemen? We all consider we have a right to an allowance for providoring as well as those who are drawing £400 a year.
1558. Of course that would have to be considered in your wages? The others get their wages the same and this extra.
1559. Do you contend that you should be found the same as they are? Not so much, but we should have an allowance.
1560. In addition to the present salary? Yes.
1561. Is that on the ground that if one class of men are found the other should be as well? No. We are only drawing coastal wages.
1562. What are the wages of firemen outside? £9 a month.
1563. You get £125, and they get £96: that leaves £29 a year that you are allowed already beyond what firemen outside get, and they are constantly working up their fires? Yes.
1564. You are not constantly working up your fires? Their wages have been brought down. Some time ago they were £9 a month.
1565. Even at £9 a month you would be receiving £17 a year more than they, so that you are really receiving in your wages a consideration for your keep? But not a full consideration.
1566. Supposing the wages were all reduced to the sea-going wages, and you were all paid £9 a month and providored on board the ship, would you be satisfied with that? We would be satisfied, but as a rule the Government give a little more than they do in the commercial service.
1567. Do you think if you were paid sea-going wages on board the vessel, at £9 a month, or whatever they may be, would you be content if you were found;—would the men be content? I think so. I should be getting more then, because it costs me £2 per month.
1568. Would it not work disadvantageously in the case of married men? Yes; but we are kept aboard here for six days.
1569. You could not land? No.
1570. There is no opportunity of a man's wife sending provisions on board for him? We are away for hours at a time, day and night.
1571. *Mr. Powell.*] You live in messes now? Yes; the sailors and the firemen make one mess.
1572. So you live more economically in that way? Yes.
1573. *Mr. Wilson.*] Another objection is that now you can buy what you like, but if you are found you have got to take seamen's tucker, I suppose? It is not extra good. Some of it is better than others.
1574. If you get a good contractor it is very good, I think? Under the present circumstances, if we got the wages and the money allowed in addition to wages, we would sooner keep ourselves. If we got what we considered a sufficient allowance we would rather get the money.
1575. Do you think that you have been expressing the wishes of the others as well as yourself in what you have said? Yes, as regards the allowances.

George Avelar, Seaman, "Captain Cook," sworn, and examined:—

- G. Avelar.
28 April, 1897.
1576. *Mr. Powell.*] What wages are you getting? £11 18s. 4d. a month.
1577. As leading seaman? Yes.
1578. What is there in your duties that makes the discrepancy between the money you receive and the salaries of the others? I have been here longer than the others.
1579. But do you do the same work? Yes.
1580. There is no difference between your work and their work? No.
1581. Only you have been longer at it? Yes.
1582. And you receive £143 a year? Yes.
1583. Is not that rather high, considering what the wages are on the coast? Well, I don't know, sir. You must go by the work we do here. We are always on duty here, night and day, holidays and Sundays.
1584. You are always here when there is work to do? Yes. There are many times we go here without sleep for sixteen or twenty hours.
1585. Why is that? We are working outside. We have to be here all the time for vessels coming in and going out.
1586. You are about the decks and not below? We are about the decks all the time. When the ship moves from the buoy we have always got to be up.
1587. I suppose you are satisfied with your position? Oh, yes, sir.
1588. Do you get rations? No. We have to pay for rations.
1589. You form a mess amongst yourselves? Yes.

John Moncrieff, Seaman, "Captain Cook," sworn, and examined:—

- J. Moncrieff.
28 April, 1897.
1590. *Mr. Powell.*] What is your pay? £8 a month.
1591. And your duties are those generally of able seaman? Yes.
1592. Are you satisfied with your position? There is a vast difference in the wages. There are some getting more than I do.
1593. Your wages are the same as those on vessels on the coast? Just now they are.
1594. Where is the difference between your position and theirs? We find ourselves and they are found
1595.

1595. *Mr. Wilson.*] The wages are not £8 and found? Not now, they are £6 and found now outside. J. Moncrieff.
1596. *Mr. Powell.*] Do you still think you ought to get more than you are getting? We are on duty here all the year round, Saturday and Sunday and every other time. We are always on duty here while we are on board. 28 April, 1897.
1597. So are sailors generally;—what leave do you get? Two days in twelve.
1598. Compared with the wages on board intercolonial vessels you do not seem to be badly paid; they are getting £6 and found and you are getting £8;—what do you reckon your keep worth? £2 a month.
1599. There is the difference; is there any other matter that you would like to speak of? We have to find our own clothes here. They expect to see us wear good clothes here, not rags like we would on a vessel working cargo.
1600. You want to be put in the same position as boatmen; they get uniform? Yes.
1601. Do the boatmen in the employ of the Marine Board get uniform? Yes.
1602. Is that found for them? Yes.
1603. The uniform you refer to is the usual serge that seamen wear? Yes.
1604. What would a private company do on a passenger steamer? I have never been in any where we have been compelled to wear uniform. The boat duty here wears out our clothes quickly and we are expected to wear good clothes.
1605. Does the Government compel you to wear uniform? No.

E. Stratton, Seaman, "Captain Cook," sworn, and examined:—

1606. *Mr. Wilson.*] What have you got to say about your position? When I first joined the "Captain Cook" it was at Cockatoo Dock, and I thought the wages were £9 a month. The chief officer told me if I joined her I would get the £9 increase the same as the others. I have been expecting a rise. I cannot work for £8 a month and find myself. I have lost 10s. by coming here. E. Stratton. 28 April, 1897.
1607. You knew the wages before you joined? Yes.
1608. You were told you would get an increase? I thought so, sir. He told me I would very likely get an increase like anybody else. I joined in March last year.
1609. The rises were stopped before then? I did not know it. We are on duty here day and night, with the exception of our leave.
1610. Is it not the case that if a seaman is needed he is called at any time, day or night? On the coast you can go where you like at night; there is watch and watch, but we have not got watch and watch. There is another thing: on the coast a suit of working clothes would last me twelve months, but I wear out in one six months here as much as I would in eighteen months in one of those boats.
1611. How is that? Sitting in boats rowing, the seat of your pants is always going. We have to go and fetch milk and food and papers and telegrams. Sometimes I have got wet through to the skin getting telegrams in wet weather; the clothes get full of salt water, and get rotten.
1612. You had £7 a month and were found? In the Illawarra boat—the "Bega."
1613. Now you receive £8 a month and are not found;—what do you reckon it would cost to keep you going on board the ship? £2 a month. Of course we cannot afford to keep ourselves here properly. I am married, and it is like keeping two homes. If I were in a coastal boat I would have only one home to keep. We only want a fair thing.

[Vide also Appendix 26.]

FRIDAY, 30 APRIL, 1897.

At the Board Room of the Local Marine Board Office, Newcastle.

PRESENT:—

GEORGE ALEXANDER WILSON, Esq., J.P.
JAMES POWELL, Esq., J.P.

Herbert Robert Cross, Chairman of the Local Marine Board, Newcastle, sworn, and examined:—

1614. *Mr. Wilson.*] How long have you been a member of the Board? I have been a member of the Board since its inception in 1873, and have been chairman from 1888. H. R. Cross. 30 April, 1897.
1615. *Mr. Powell.*] Have you been continuously a member of the Board since 1873? Yes.
1616. How many members comprise the Board? Four besides myself—Mr. McLean, Mr. Logan, Mr. Reid, and Mr. Gardner.
1617. Do you know if the Act directs how many members are required to constitute a Local Board? The Act does not say.
1618. Then there may be two, three, four, or more? Yes.
1619. Are the members of the Board nominated by the Government? Yes.
1620. The chairman as one of the Board is also nominated by the Government? Yes.
1621. It is purely a nominee Board? Yes.
1622. No special interest of any kind is represented by the Newcastle Board? No.
1623. In the choosing of the persons to sit on the Board, is regard taken to the interests they represent? When I was made a member of the Board, being a seafaring man, I considered myself a representative of that interest—that is to say, of the marine interest.
1624. You think the marine interests should be prominently represented? Yes, very prominently; and the public think so too.
1625. As a matter of fact, Mr. McLean, Mr. Logan, Mr. Reid, and Mr. Gardner do not represent the shipping interest? Mr. McLean can be called a representative of the shipping interest, since he has a commercial business at this port and ships are consigned to him. Mr. Gardner can be called a representative of the marine interest, as he has been to sea and is a bit of a sailor; but he cannot manage ships and has never handled them, having left the sea when very young.
1626. Shipowners at Newcastle can vote at Sydney at the election of members for the Sydney Board? Yes.

1627.

- H. R. Cross. 1627. The shipowners of Newcastle have no voice in the appointment of the local Board? No; they may recommend, propose, or express an opinion, but no voting power is given to them under the Act.
- 30 April, 1887. 1628. They cannot record their votes to elect members at Sydney without going to Sydney—they cannot vote here? I cannot say how they record their votes.
1629. You cannot say practically that the shipowning and general interests of Newcastle are not represented by the local Board, except so far as you yourselves endeavour to represent them? Yes.
1630. Can you tell us generally what are the powers of the local Board? The Board has no power, being subordinate to the Marine Board of Sydney. Anything we may do is subject to the control of the Sydney Board.
1631. Then any of the acts of the local Board are subject to be vetoed by the Marine Board of Sydney? Yes; according to the Act.
1632. Is it not a fact that the local Board is not permitted to issue certificates of any kind, such as watermen's licenses? Yes, the granting of certificates, from boatmen up, must be confirmed by the Marine Board of New South Wales in Sydney.
1633. That is to say, watermen cannot get a license until the papers have been referred from you with a recommendation? Yes.
1634. You send a recommendation and you send a fee of 10s.? Yes, the fee is sent down by the secretary, giving the man's name and stating that the Board here think him a fit and proper person to have a certificate.
1635. And the license is signed by the President and members of the Board in Sydney? Yes.
1636. Can you tell us anything of the working of the service, here? In the first place, if there is a vacancy for a pilot, the candidates are required to pass an examination and to show themselves in other ways to be fit and proper persons for the position. The applications are submitted to the local Board, who consider them, and make a recommendation to the Sydney Board. The Newcastle Board practically make all appointments, because in every case where we have chosen a man, the Sydney Board have confirmed our action. This they ought to do, seeing that we, being residents here, know the people and are personally acquainted with their abilities.
1637. What control have you over the men engaged in the pilot service? The whole control and working of the pilot system here is in the hands of the harbour-master, and he is answerable for it. Should there be any wrongdoing or dereliction of duty on their part, he reports the matter to the Board, who then take action.
1638. What fees are paid to the members of the Board? One guinea each, per week, is paid to the members, and they set apart one day in the week for ordinary business.
1639. What fee do you receive as chairman? The chairman is allowed two guineas for each week in the year. Our formal meetings are held every Wednesday, but in the case of an investigation we have to sit so long as the investigation lasts, for which the Board receives no extra fee. The last investigation we held was into the collision of the steamers "Federal" and "Alice." This was a very important inquiry and occupied seven days, and it was 10 o'clock every night, except the last day, before we rose. No extra fees were allowed to the Board for that investigation. We have had several cases where the Board have sat day after day. On an average there are about six, or more, inquiries of this nature in the year.
1640. I find there are seven pilots employed in Newcastle, three at £353, one at £218, one at £209, and two at £200 a year;—are the duties of these men of the same nature and character? Yes; and the same responsibility in every case.
1641. Do you know any reason for this great difference in the salaries? Formerly the pilots received a yearly increment. At a certain date, however, the increments for some reason were stopped. Just before this additional pilots were appointed, who gave up very good positions fully believing that they would obtain an increment every year and thus their salaries would go on increasing until they reached favourable proportions. But, as I have said, the increments were stopped, with the result that those who have more recently joined the service are receiving lower salaries than the older hands who received several yearly increments. The junior pilots made several appeals to the Newcastle Board, which were forwarded on. It is certainly an anomaly and certainly an injustice. They are exceedingly good men, and they do the same work and have the same responsibilities as the older pilots.
1642. Comparing the position of the pilots at Newcastle with those in Sydney;—do you think the duties more onerous in Newcastle than in Sydney? Yes, very much more so, I should say doubly or more. We have a bar here that is very dangerous to cross; besides, in the harbour there is a continual shifting of vessels backwards and forwards, from morning till night. Some of the intercolonial boats, of course, do not require the services of pilots, but all sea-going vessels do. In Sydney Harbour pilots are appointed to remove vessels, and sea pilots do not go out of pilot water—say, to Fort Denison, where the harbour pilots take them up. At Newcastle, when a ship comes in, the sea pilot takes charge of her outside, brings her in, and moors her under the direction of the harbour-master. The same pilot attends to the ship in all her movements about the harbour, and takes her to sea again. The same man generally does the work all through. Removal fees are charged for that work.
1643. Removal fees at Newcastle are very much, and in fact double those in Sydney;—you cannot give any idea why that is? No.
1644. Twenty-five boatmen are employed at Newcastle in the pilot service, and the salaries vary from £136 to £194 per annum;—do you not think these larger salaries appear very high? No, not for the work they do.
1645. From a statement I have before me, it appears that besides his ordinary salary the coxswain of the life boat receives £50 a year for that duty, and £12 besides, I presume, for quarters;—is that not high? He has great responsibility on the lifeboat.
1646. Out of the twenty-five boatmen I notice twenty-two receive £12 per annum for life boat service;—does it require twenty-two to man the life boat? It requires thirteen or fourteen.
1647. How is it these extra men are retained? Some years ago, when it was very difficult to get the boat properly manned, and those who were willing to man it lived at a distance from the shore, we recommended that boatmen belonging to the service should live together, and they should not be appointed unless willing to form the lifeboat crew. Every one of the boatmen is bound to go on the life boat when required, and they all live handy on the hill.
1648. Are they trained? Yes; they go out periodically—about twice a quarter. I cannot say positively how

how often; the harbour-master could say. [*The regulations under which the lifeboat is managed were referred to. They direct that the men shall go out in the lifeboat for practice once a quarter.*] H. R. Cross.

30 April, 1897.

1649. You think it is necessary they should go out once a quarter? Yes.

1650. So that the whole of the boatmen get £3 each every time the boat goes out? Yes. I would here like to refer to a matter which I wish to bring before the notice of the Commission. A good many years ago—I think it was after the wreck of the "Cawarra"—the Government appointed certain persons to form a Lifeboat Committee. I was one of those. Our duties were altogether apart from those appertaining to the local Marine Board. Time went on; some of them dropped out, some of them died, and I am now the only one left. Our appointment was gazetted. Some years ago the duties merged into those of the local Marine Board, and the Board have taken over the management of the boat and placed it under the charge of Captain Newton, the harbour-master. This was done some years ago; but as three new members have been appointed to the Board, I thought it my duty to explain the matter to the Board at the last meeting, and to ascertain who really is responsible for the management of the boat and the expenditure of the funds voted for its maintenance.

1651. The taking over of the management of the boat was a voluntary act on the part of the Marine Board? Yes; somehow the charge of the boat silently merged into that body. I do not know how it was done. I thought it was necessary to tell the newly-appointed members how we have been managing—that we have been looking after the lifeboat here, and whether they were willing that we should continue to do so. They are quite willing to continue the charge of the boat; but they would like to have some authority for carrying out the duty, it being a business—so to speak—apart from the Marine Board. The secretary was, I think, instructed to write to that purpose to the Marine Board in Sydney.

1652. The boatmen have been receiving £12 a year for some years for lifeboat duty? Yes.

1653. When did the boat go out last? On Sunday or Monday—the day of the wreck.

1654. What condition was she in then? Not in perfect condition.

1655. She was unable to render any assistance? The best lifeboat in the world could not have rendered any assistance on that occasion, as the wreck was high on the beach; in fact, the crew walked on shore.

1656. Can you say yourself, as an old sailor, that the boat in her present condition is one you would like to trust your life in? Certainly not; I would not ask a man to go out in her.

1657. Not even for practice? No; unless in smooth water.

1658. Are the Government buying the new boat? Yes; the Government are finding the money. She is expected here every day.

1659. Where is the boat kept? In a shed near by.

1660. In addition to the £12 a year paid to the boatmen, are fees of any kind paid to any person or persons in connection with the lifeboat? Not that I am aware of.

1661. Does the harbour-master get anything? Not that I am aware of.

1662. Only the coxswain and boatmen? Yes.

1663. Have you anything to do with the regulating of the salaries paid to the officers at this port? No; I have nothing to do with the pay of the officers, nor with the regulating of it. The salaries are fixed in Sydney. We have no control over them. We might recommend; in fact, we forwarded on a complaint of those lesser paid pilots with a recommendation that it be considered, but nothing came of it. We can go as far as recommending, but the fixing of the salaries is done by the Act.

1664. The harbour-master at Sydney receives £371 a year without any allowance, and the harbour-master at Newcastle receives £416 a year as salary, and he has an allowance of £100 a year—I presume for house-rent? Yes.

1665. Comparing the two, does it not appear to you that the harbour-master at Newcastle is paid a very high sum in comparison with the Sydney harbour-master? His duties are considerably more onerous than those of the harbour-master in Sydney. The harbour-master in Sydney is simply subordinate to the Marine Board there, while the harbour-master at Newcastle has a very weighty amount of work to do, and is under a very great responsibility. This harbour is not to be compared to the Sydney Harbour in any way. The work of the pilots, boatmen, and everyone connected with the port is considerably more onerous than the work carried out by the same people in Sydney. Here they work night and day, and they all live on the hill close handy, and ready to turn out at a moment's notice. The harbour-master lives as closely as possible to the water's edge, and is liable to be called night and day—in fact, he is up regularly at daylight, and it is always very late before he retires to bed, and not until he has visited the hill. Captain Newton certainly does not spare himself.

1666. Do you require to obtain the authority of the Marine Board in Sydney before you can hold an inquiry? Yes.

1667. And you conduct investigations as a local Board under sections 87 to 90 of the Act—Cancellation of certificates, &c.? Yes.

1668. In investigating matters referred to in sections 87 to 90, are you assisted by a magistrate? We hold first a preliminary inquiry; out of that inquiry may come a charge of (say) incapacity against an officer. Then only is it necessary to have the presence of a Stipendiary Magistrate or Police Magistrate. The presence of a magistrate is not required until a charge has been made. Take, for instance, the last wreck. Next week we will hold an inquiry simply into the causes of the wreck. If at that inquiry it is shown (say) that the negligence of the captain was the cause of the disaster, he shall be called upon to show cause why his certificate should not be cancelled, and then will it be necessary for a magistrate to be present. We never have a Stipendiary Magistrate until we have called upon a person to show cause why his certificate should not be cancelled.

1669. From your long experience at Newcastle—and you have seen the port in all weathers—are you an advocate for the introduction of a steam pilot-boat for service at Newcastle? Yes; we have been strongly advocating that for some time. A steam pilot-boat is more necessary at Newcastle than in Sydney. If the bar be bad, and a ship cannot come in, the pilot can be of no use with only a miserable whaleboat.

1670. In the last wreck could a steam pilot-boat have rendered any assistance? Yes; in this way: We will assume the pilot steamer happened to be out, which in all probability would have been the case. She would have put a pilot on board at a safe distance from shore, and there is not the slightest doubt that the pilot, knowing the state of the bar, would have told the captain to stand off. There is not a doubt that if a steam pilot-boat had been well out, the "Adderley" would have been saved. As it was, it was too late to tell the captain to stand off after he had taken a tug.

1671.

- H. R. Cross.
30 April, 1897.
1671. *Mr. Wilson.*] Even if the pilot could not have gone on board he could have spoken the vessel to stand off? Yes; the chances are she would have escaped under those circumstances.
1672. *Mr. Powell.*] Has there been any difficulty here lately about signals? There has been no hitch at all; but Mr. Logan thought, perhaps wisely, that we might make some little alteration and assimilate it more closely to the method of signalling in Sydney. At any rate, it is such an alteration that will not involve much expense, and it is not of much consequence whether it is adopted or not. I do not think it necessary myself, and every one seems to be satisfied with the present arrangement.
1673. I notice that the sum of £6,678 is provided on the Estimates for the "Ajax." £4,000 of this is for alterations, and the balance is for salaries, &c. The sum voted for the master is £250 a year as against £416 for the master of the "Captain Cook," the pilot boat at Sydney;—is there any reason for this difference? That salary of £250 was made up by our Board and recommended to the Sydney Board; but I do not think that we had any information at the time of the rates at which the corresponding people in Sydney are paid.
1674. From your commercial knowledge in connection with ships and shipping, does that salary of £416 for the master of the "Captain Cook," with 18s. a week allowance, seem high? I think he is very well paid.
1675. Would you consider the master of the "Ajax" at £250 a year and 18s. a week allowance well paid? Yes; we could get very good men for that.
1676. *Mr. Wilson.*] You told Mr. Powell that the local ship-owners were not directly represented in the constitution of the local Marine Board;—do you think that is a right thing? I do not see why there should be a difference between here and Sydney. It is a matter of opinion. The public are inclined to believe that the constitution of the Board here should be on the same line as the Sydney Board—that is to say, the several interests should be represented.
1677. In your opinion, it would be very proper that ship-owners should be represented? Yes, decidedly so.
1678. You say that in your opinion the local Board has little or no power;—is that, in view of the importance of this port, a proper state of affairs? No; I think we should have self-government. It is rather irksome sometimes to be in such a subordinate position, and having to refer everything to the Sydney Board.
1679. Is it, in your opinion, considering the importance of this port, necessary that you should have more self-government? I think so. I think it would give greater satisfaction if the Board were independent.
1680. Do you think there is very much feeling on the subject here? My opinion is expressed by the commercial people here.
1681. You say you have to refer the smallest matters, even the signing of a certificate, to Sydney? Yes, we are subordinate to Sydney in every way; but I must say that everything we have recommended has been confirmed.
1682. You have not even the power to sign a waterman's license? No.
1683. Does this arrangement, by which the pilots work under the direction of the harbour-master, work well for the port? Yes; I do not see how it could be improved upon. The harbour-master is the responsible head, and he has to direct everyone. The work is altogether different here to Sydney. It is more onerous—more risky.
1684. Do you, as Chairman, take a more active part in the management than the ordinary members? Yes. I attend at the office every day, and, if necessary, call meetings. I put in a little time at the office every day.
1685. You say that the duties of the pilots at Newcastle are more dangerous than in Sydney? Yes.
1686. You consider these lower salaries are quite inadequate? Yes; I do not see why there should be any difference. The duties are the same, the risks are the same, and the time is the same. Certainly those men who expected an increment when they joined are very much disappointed. I do not say that you should take off the larger salaries to increase the lower salaries, but that the lower salaries should be raised to the amounts now paid to the older pilots.
1687. You think there is too much disparity altogether? Yes; the lower-wages men have been too badly treated. They are good men, and no port could show better.
1688. The boatmen come in at £96 and go up to £194;—you do not think these larger salaries excessive? No, not for the work done.
1689. Then does it not follow that the £96 at which the boatmen enter is very low? If you would see the harbour-master, he would explain that better than I.
1690. If the man at £194 is only fairly paid, the man at £96 is very much under-paid? I think he is under-paid; but the harbour-master will explain that better than I can.
1691. As regards the steam pilot-vessel, is there any very strong feeling on the matter here—are the public agreed upon the point? Yes; there is a very strong feeling on the part of the public with regard to the necessity of a steam service. They held an indignation meeting the other day, after the "Adderley" wreck. The Chamber of Commerce has also taken the matter up.
1692. I suppose you know the work of the "Captain Cook"? Yes.
1693. Would the steam pilot-vessel here have more to do? Yes.
1694. The "Captain Cook" has a master receiving £464 16s. a year with allowances; a first officer, £175 and £43 16s. for rations; and a second officer;—what officers would you propose for the "Ajax"? A. master, first mate, second mate, an engineer, second engineer, and deck hands, &c.
1695. It has been stated to the Board that in some parts an arrangement like this obtains: Instead of having a master, the last pilot to come on board takes command of the ship;—do you think that is a workable arrangement? No, not here. Several vessels might require pilots at the one time. They come down here sometimes all of a heap, and exhaust the pilots.
1696. Who would then take charge? I think the ship should be under the charge of a proper staff of officers apart from the pilots, who have quite enough to do. I do not think it would be a practicable arrangement.
1697. Yet it works well at other ports? That may be, but I do not think it would work here.
1698. The mate must be a qualified man? Yes; all the men in the service here, even those in the lower grades in some cases, have masters' certificates.
1699. The mate, having a master's certificate, must be competent to take charge of a ship? Yes; but he must have local knowledge before he can handle a pilot-boat at this port.

1700. Have you anything you would like to say with reference to the claims of the port? There is an urgent necessity for further dredging, and a very urgent necessity for greater ballast accommodation. Several vessels have lately arrived, and have been waiting some time to get rid of their ballast, and are possibly running the chance of losing their turn to load. H. R. Cross,
30 April, 1897.
1701. Who besides yourself would be able to give us information on that matter? Mr. Walsh, the district engineer, has the control of the dredging; but the harbour-master is continually sounding the varying depths of the harbour, and knows exactly where the dredges ought to be and what accommodation is required for the ships.
1702. Mr. Walsh has really the placing of the dredges in the harbour? Yes; they come under the jurisdiction of the Harbours and Rivers Department. It is the strong opinion of the public who have to do with shipping that further dredging should be done, and increased ballast accommodation provided. The necessity for increasing the accommodation for the discharge of ballast is very urgent.
1703. *Mr. Powell.*] It is more ballast-berths you want? Yes.
1704. Who regulates that? The harbour-master.
1705. What course should be taken to improve matters in the way you suggest? To create more berths you would, in the first place, have to dredge to make sufficient water along the dyke. The dredging and the increasing of the ballast accommodation should go hand in hand. It is no use making ballast-berths if there is not sufficient water for the ships to lie in. This is an urgent matter, and the delay in unloading ballast gives rise to much inconvenience.
1706. *Mr. Wilson.*] Despatch is reasonably quick here as a rule? Yes.
1707. The loading facilities are very good? Yes; about 50,000 or 60,000 tons a week is loaded. I should like again to particularly point out the anomalies in the pilots' salaries.

Duncan John McLean sworn and examined:—

1708. *Mr. Wilson.*] What business are you engaged in at this port? I am manager of the firm of *D. J. McLean,*
J. Ireland & Co. 30 April, 1897.
1709. *Mr. Powell.*] You are a member of the local Marine Board? Yes.
1710. How long have you been a member? Two months.
1711. You have been a member long enough to form some opinion as to the nature of the business of the Board? Yes.
1712. Is it a fact that the powers of the Board are of a very limited character? Yes.
1713. Would it be going too far to say that, as a Board, you have no power whatever? I am perfectly safe in saying that, so far as my knowledge is concerned, the merest trifle has to be referred to Sydney.
1714. You cannot issue certificates of any kind? No.
1715. You refer the matter to the Sydney Board and forward them the fees, and they furnish the certificate? Yes.
1716. Do you think that the local Board as it is now constituted is satisfactory to the public of Newcastle? I do not.
1717. You are aware that you have power to vote for the election of members to the Marine Board in Sydney—that, as ship-owners in Newcastle, you have that power to vote for three elective members on the Board? The new members have not yet been acquainted as to their powers. We gradually find these things out ourselves.
1718. As a ship-owner you would have the right to vote for three elective men in Sydney? Yes; I understand that.
1719. That would involve your going to Sydney? Yes.
1720. *Mr. Wilson.*] The business and shipping people at Newcastle have no direct representation on the local Board? No.
1721. The local Board are nominated by the Government? Yes.
1722. So that the shipping and commercial interests have no direct representation on the local Board? No.
1723. Do you think that is a proper state of things for a port like Newcastle? Personally, I think there should be a representation not only of the shipping, but of the commercial interests. The seafaring interest should also be represented.
1724. Do you think it desirable that this Board, for a port like Newcastle, should practically have no power? I feel that I do not care to belong to a Board that has not power to deal with matters in connection with the port.
1725. You are of opinion that the Board should have power to deal with matters without referring them to Sydney? Undoubtedly so.
1726. You are connected with the largest business house in Newcastle? Yes.
1727. Do you consider, as a business man, as a citizen, that the time has come for some more local government in the matter of the Marine Board? I do, undoubtedly.
1728. Is that opinion general? Yes; it is very strongly held by the business people here. I have heard (before I was appointed a member) that the outside public know nothing of what the Board are doing. I consider that they should know what is transacted by the Board.
1729. I understand then, that, considering the importance of the port, you are of opinion that the local Board has not sufficient power, and that there should be some more local control? If we had sufficient local control we could do a great deal of good.
1730. You think local control would be better for the Board, and, therefore, better for the community? Yes.
1731. You have sittings once a week? Yes.
1732. And special sittings when required? Yes.
1733. Have you looked into the question of pilots' salaries here? Only casually.
1734. As a new member of the Board you do not know very much; but you have noticed a great discrepancy? Yes; from inquiries I have made, I learn that the junior pilots are doing exactly the same work as the senior pilots.
1735. You know the port well;—do you consider there is any particular risk about it as compared with Sydney? I consider the risk is fourfold as compared with Sydney.
1736. Do you consider the duties of the pilots at Newcastle more arduous than at Sydney? Yes.

D. J. McLean. 1737. Why? Here they are out on the open sea at once, and the weather is so treacherous, even right close to Nobby's; and then again there are the currents. There is no shelter, and no facilities for getting into the port as at Sydney.

30 April, 1897.

1738. I understand that at the present time the piloting is done by means of whale-boats? Yes.

1739. Do you think that method is up to date? No; it is a most primitive method.

1740. Do you think the time has come for a steam pilot-vessel? Yes; undoubtedly.

1741. Is opinion very strong on that point here? Yes, very strong. I was President of the Chamber of Commerce three years ago, and was one to urge upon the Government the necessity for a steamboat.

1742. Have you looked into the question of boatmen's salaries here? I do not know a great deal about that; but I would like to say that I consider the salaries paid both at Newcastle and in Sydney are not at all commensurate with the risk incurred.

1743. You consider that the salaries paid both in Sydney and at Newcastle are too low? Yes.

1744. Are you aware that the boatmen's salaries go up to £194 a year? No; I thought the highest salary was about £145 a year.

1745. The salaries range from £96 a year to £194 a year;—if £96 a year is a fair salary, £194 must be too high, and if £194 is fair, £96 must be too low? £96 a year is too low.

1746. What do you say would be a fair salary for work such as these men have to do, and who are liable to be called out night and day? I think they should receive at the least £130 a year.

1747. Have you any matter relating to the good of the port that you would like to bring forward? I would like to say that I consider it absolutely necessary we should have the very best men available as pilots, and it is currently reported that some of these junior pilots left better positions to join the pilot service here in consequence of a promise made that their salaries would be increased by an increment.

1748. Is there any question as to the competency of the present pilots? No. I have always heard the shipping-masters who come here speak of the pilots in the very highest terms.

1749. These men state, then, that they were promised a yearly increment? Yes; they joined the service clearly on that understanding. I recollect that about eighteen months or two years ago they were allowed to interview the Premier personally. I think, so far as the boatmen are concerned, that there should be some more modern system of getting up to the far end of the Dyke. At present they have to pull up in boats. With a small steamer they would get through much more work. It is extremely hard work at times beating up against the current. My impression is that when it is necessary for the boatmen to go up to the Dyke any Government launch available should tow them up. With reference to the harbour-master, I merely wish to state that I am about very early in the morning, and I frequently see Captain Newton on the wharf before 6 o'clock, and I know it is very late at night before he returns—in fact, he practically lives on the wharf.

1750. *Mr. Powell.*] As to the boatmen,—you say £130 a year would be a fair salary? Yes.

1751. Would you deduct value of quarters from that? Yes.

1752. They should pay for their quarters out of that? Yes.

1753. Do you know anything about the life-boat? Only as a citizen. I have heard that the life-boat for some considerable time has been considered absolutely dangerous.

1754. With the experience you have gained at this port, do you think it desirable to continue the local Board as it is? No, I do not think so. I consider that the importance of Newcastle demands that we should have a local Board with full powers.

1755. If you had not to refer matters to Sydney, the work that would be entailed here could be done by the harbour-master and his clerk? Yes; the Board would only require a secretary.

Frank Gardner sworn and examined:—

F. Gardner. 1756. *Mr. Wilson.*] What business are you engaged in at this port? I am a shipping and general agent.

1757. *Mr. Powell.*] You are a member of the local Marine Board? Yes.

30 April, 1897. 1758. How long have you been a member? Only a few months. A short time ago there were three vacancies on the Board, and I was appointed to one of them.

1759. You have formed some opinion as to the working of the Board since you have had a seat? Yes.

1760. Is it a fact that you find yourselves without any powers? Yes.

1761. All you can do as a Board is to recommend to the Sydney Board? Yes.

1762. Is it a fact that you are even unable to issue certificates, such as watermen's certificates and matters of that kind? Yes; we can only recommend.

1763. You collect the fees here, and they are sent to Sydney by the secretary, and the Sydney Board sign and return the form to the local Board? Yes.

1764. Do you think the local Board as now constituted gives satisfaction to the public of Newcastle? I think so.

1765. Can such a Board that has no powers give satisfaction? I do not think that the general public are aware that our power is so limited.

1766. *Mr. Wilson.*] The public, you mean, do not know that the Board is almost powerless? Yes; that is what I mean.

1767. *Mr. Powell.*] If they were so aware would they be satisfied? I do not think they would.

1768. *Mr. Wilson.*] Do you think it is a satisfactory state of things that this Board should be powerless? Certainly not.

1769. You have had considerable experience at this port? Yes; I have been here thirty-four years, and I know a great deal of the place and its requirements.

1770. Is it your opinion that if you had a little more local government here in the matter of the Board you could further the interests of the port, and give more satisfaction to the public? I think so.

1771. Does the Sydney Board frequently veto your recommendations? To my knowledge everything has been approved of.

1772. So it is pretty well a formula? Yes.

1773. You recommend and they approve? Yes. In small matters it seems to me unnecessary delay that we should have to refer them to Sydney. I think this Board should deal with such matters at once, and thus obviate delay.

1774.

1774. Have you given any attention to the salaries of the pilots and boatmen? Yes.
1775. You are aware that some of the pilots are receiving a salary as high as £353 a year, while others are getting but £200 a year? Yes. This is a matter that should be rectified. The salaries ought to be to some extent equalised—the lower salaries should be raised. This also applies to the boatmen. I cannot see any justification for this difference in salaries.
1776. Is it your opinion that the present system should be superseded by a steam pilot system? Yes. I think if a steam pilot service had been in vogue, that vessel (the "Adderley") now lying on the beach would not have been lost. The vessel got too near, and then was doomed. I consider the substitution of a steam pilot service a very urgent matter.
1777. Have you any suggestions to make? When the steam service is adopted we might, I think, do away with some of the boatmen; so many boatmen would not be required. A small steam launch, if used instead of the boats, would utilise a lot of the labour now expended, and would be an economical arrangement. A small steam launch with two men on it could act as a tender to the pilot vessel, and could put men on board, &c.
1778. What constitutes a boat's crew? Four men, as a rule.
1779. Do you think that under the present system twenty-five men are wanted? Yes; the constant removals require fully that number.
1780. *Mr. Powell.*] Three men could work a small launch? Yes; I think two could. I have a suggestion to make regarding the signal station, but the advent of a steam pilot-vessel would do away with it to a certain extent. If a signal station were erected on Shepherd's Hill it would be of very great advantage to the port. At present the signal station is on Nobby's. By placing the signal station on Shepherd's Hill ships could be signalled half an hour earlier. As it is now, in easterly weather a ship is in danger before she can read the signals. This proposal, of course, would not require to be carried out if we are going to have a steam pilot service, as then the vessels would be warned to stand off by the pilot boat.
1781. What is your opinion regarding the life-boat? It is not fit for use, and it has been so for twelve months.
1782. Is she taken out for practice? Yes, quarterly.
1783. Are all the boatmen exercised upon her? Yes.
1784. And they are liable to be called upon at any time to man her? Yes.
1785. Do you consider it desirable to continue the local Board in its present condition, with its limited powers? No, not under the circumstances.

Henry Newton, Harbour-master of the Port of Newcastle, sworn and examined:—

1786. *Mr. Wilson.*] How long have you held your present position? I was appointed in December, 1894. H. Newton.
1787. *Mr. Powell.*] For a certain time you held the position of chairman of the local Marine Board? I was not chairman. I was a member of the Board. 30 April, 1897.
1788. You had a good opportunity of seeing the working and the business of the Board? Yes.
1789. Is it a fact that the Board's powers are very limited? Yes; from my experience as a member of the Board I consider our powers were very limited.
1790. You were not allowed to issue certificates of any kind? No; we could only recommend them.
1791. Whatever powers you might have exercised were really subordinate to the Marine Board of Sydney? Yes.
1792. Are the pilots under your supervision? Yes.
1793. You have seven pilots employed at Newcastle—three at £353, one at £218, one at £209, and two at £200 a year;—are the duties all of the same nature? Yes.
1794. What reason is there for the great difference in the amount of pay? Under the Marine Board Regulations the employees were classified. The pilots came in on £200 a year, with a £10 increment, until a maximum salary of £400 had been reached. The boatmen came in at £96 a year, and received increments until the maximum salary of £126 was reached. And why some of the pilots are on the lower salary is because the increments have been stopped. They ceased some five years ago.
1795. Then these men on £200 entered at that salary, and have received no increment? Only one or two of the junior pilots have received an increment.
1796. As to the boatmen, you have altogether, I see, twenty-five men employed as boatmen at Newcastle, with salaries varying from £136 to £194 per annum;—does it not appear to you that these salaries are rather high? There are two men who receive £154 each. They are my crew on the launch. One is master of the launch, and the other is engineer. They both hold certificates. According to the Marine Board Regulations they must hold certificates.
1797. They are boatmen and something more? Yes.
1798. I notice that M'Kinnon has a salary of £126 a year as boatman, besides which he is allowed £50 as coxswain of the life-boat, and an additional £12 also for the life-boat? Of course, the coxswain of the life-boat is responsible really for the working of the boat. All the men are under his charge. During bad weather he is told off to keep a look-out, and he is authorised to fire the guns whenever the life-boat is required. It is for these duties he receives the extra £50 a year. He does not receive an additional £12 for the life-boat.
1799. How often is the life-boat taken out for practice? About once a month.
1800. Do you know that from your own knowledge? Yes; the boat is practically under my supervision.
1801. Are fees paid to any other person or persons for the life-boat service? None whatever.
1802. I notice that the pay of the assistant harbour-master at Newcastle is £421 per annum, while the pay of the assistant harbour-masters at Sydney is £231 for one and £326 for the other;—is there anything to account for this difference in salaries? Here the assistant harbour-master has a great deal more responsibility than the assistant masters in Sydney. The assistant harbour-master in Sydney is simply a mud pilot—*i.e.*, a harbour pilot—which is separate altogether from a sea pilot. My assistant, if it be necessary, will jump into a boat and go outside. He has had to do this on several occasions when we have been short of pilots. He can act as a harbour pilot or as a sea pilot. All the pilots act in that manner. I go out myself.

- H. Newton.
30 April, 1897.
1803. We have been told that the pilot who brings a ship in attends to all the removals of that particular ship;—what reason is there for that? It is better for the one man to attend to all the removals of the ship he brings in if possible for him to do so. Of course he may be outside when the ship he brought in requires attending to. But we try to let the one pilot shift all the ships he brings in.
1804. He derives no advantage from it? This method gives rise to a healthy rivalry as to who gets through the most work.
1805. The present secretary is not an inspector of the Marine Board? No.
1806. Taking his duties simply as secretary to the local Board (if that be the only duty he performs) does not the salary allotted to him seem rather high? Yes, if not an inspector; but he assists in the clerical work of my Department, such as making out requisitions and pilots' returns. It is necessary to have an officer in the office at all times. I cannot be in the office continually. From 9 o'clock until 4 o'clock I am afloat, taking soundings, &c., and it is necessary for an officer to be in the office to issue the harbour-master's certificate to ships clearing out.
1807. As to your messenger? He is in receipt of £184 a year, and his quarters are valued at £30 a year. He has also £24 a year allowed him for attending to the lights on the hill. He lights them and extinguishes them, and takes care of them—cleans them, and he takes a casual look at them from his house during the night. They are lighted with gas.
1808. What do you want a carpenter for? He attends to our boats, of which there are about twenty. He also builds boats. He is a practical boat-builder. He built two boats last year, besides repairing others.
1809. Taking into consideration the number of boatmen you have, do you not think that the service would be far better and more economically served if you had plain launches? No; when we move a ship here we usually have strong tides to contend with, and the work to be done in getting a ship ready for removal could not be done with a steam launch; it must be done by boat. In 1886 we had a large influx of shipping, and I applied for an extra pilot. I refrained from applying for a boat's crew for him, because I thought the influx would perhaps not be permanent, and there would be a difficulty in getting rid of them. I have endeavoured ever since to do without that boat's crew. I have gone so far as to have boats constructed by the carpenter, first of all to man with three men instead of four, and now I have him building boats to be manned with two men. I could not carry out the work by having four men in each boat.
1810. What do the boats cost? The usual rate is £1 a foot, and our boats are from 23 to 30 feet in length.
1811. Comparing the salaries paid to pilots in Sydney, viz., £250 to £398 per annum, with those paid at Newcastle, viz., £200 to £353 per annum, do you know any reason why there should be so great a difference in the pay? I could not say. I think if I had my choice I should go to Sydney for less pay. The Newcastle pilot has got his work cut out, and he should receive just as much pay as a Sydney pilot. His work is far more onerous.
1812. Do you consider £200 a fair pay for a pilot at Newcastle? No.
1813. But you have two on that salary? Yes; we have them because they joined with the understanding that they were going to get an increment of £10 a year. We have men here who left £280 a year to come into this service, and they would hardly have done that if they thought £200 was going to be a permanent salary.
1814. It is reported that the vessels are delayed here in getting rid of their ballast? That is for want of accommodation for putting the ballast on shore. In some ports the discharge of the ballast is done by lighter, and no doubt if the Government had no ground to reclaim it would have to be done with lighters here; but, having ground to reclaim, it would pay the Government to erect ballast jetties, which would at the same time facilitate the despatch of ships that come to the port. [*Vide Appendix 32.*]
1815. *Mr. Wilson.*] Do you wear a uniform? No.
1816. Do you think it desirable that you should? I think a uniform is very necessary. I may tell you that frequently I have gone to a ship and received a very strong sort of reply. I think the uniform would have a tendency to command more respect.
1817. A smart cap and smart coat, with brass buttons and braid? Yes.
1818. As to the dredging,—Mr. Walsh, I understand, places the dredges, but you give the instructions to the men? No, I have nothing to do with the dredges. I take soundings, and I watch very closely the changes that are continually taking place. If I consider that a dredge is required to be placed in a certain position to remove some sandbank or some silting up that has taken place, I confer with Mr. Walsh, and, if possible, he places a dredge there.
1819. Is there any great want of more dredging in the harbour? There is. We want more accommodation for the shipping that comes into the port. There is not sufficient dredging work being done. The strides that modern shipping has taken in length and in draught make it absolutely necessary that we should have more accommodation.
1820. Is it a very pressing matter, this want of accommodation? Yes, immediate attention is required.
1821. You take the soundings? Yes, I give them to Mr. Walsh. There is an urgent want of more accommodation—ships have so increased in length and in draught.
1822. As to the pilot arrangements,—are you entirely in favour of this proposed introduction of a steam pilot-vessel? Yes, I consider it very necessary. With the present state of the trade of the port the existing arrangements are not up to date, and they are attended with very great danger. There is 75 per cent. more danger crossing the bar here in an open boat than in a steamer.
1823. Do you contend that with a steam vessel there would be less probability of the occurrence of wrecks? Yes, to an extent there would. But I would not suggest that the boat should go out and meet every vessel, such as small craft.
1824. The steam pilot-vessel could run out and warn any vessel coming down to stand off? Yes.
1825. Under those circumstances, the steam pilot-vessel might save lives and property? Yes.
1826. If a steam vessel were introduced, would it entail a rearrangement as regards the boatmen, &c.? I have worked that out, and suggested to the Board that if we had a steam pilot service inaugurated, I would, if possible, do away with one boat's crew (four men); but, at the same time, I would not do any injustice. Instead of dismissing them, let them take turn about on the steamer until such time as there may be an appointment.

1827. The introduction of the steam-vessel will, then, entail certain alterations and rearrangements? *H. Newton.*
Yes.
1828. You give instructions to pilots? Yes, instructions where to place the ships. *H. Newton.*
1829. You stated that you thought the lifeboat was taken out for practice once a month, was it not once a quarter? No, once a month. Lately, however, she got damaged, and since then we have launched her as little as we possibly could help. *3 April, 1897.*
1830. It was suggested to us in Sydney, in reference to the "Captain Cook," that the same course should be followed in Sydney as is followed at certain ports in the old country; that, instead of having a master on the "Captain Cook," the last pilot to come on board should take charge of her—he would be the commander for the time being;—would you approve of such an arrangement? That is a good arrangement in some instances. Take Melbourne for instance, where they take on board six or seven pilots, and go out to the Heads. But we have here an enormous number of entries, and supposing we were to have only two pilots on board, the pilot boat would, perhaps, go out and it would meet two ships, then both pilots would have to leave the steamer. It would be cutting it too fine to adopt such an arrangement here. We would have to increase the staff to do it.
1831. Would it not be economical if one of the Government launches, several of which, I understand, are in this harbour, could be used for towing the pilot-boats when they have long distances to go? Yes. I could not get through my work if I did not use my launch in running the men from one ship to another. Last Friday we had six ships to shift, and the lifeboat was out with sixteen men, leaving me only eight. The shipping that has loaded at the cranes must not be neglected, as delay only means loss of revenue to the Government. Everything must be prompt.
1832. The salary for the master of the "Ajax" is set down at £250 a year;—would that be £250 and found? Yes; I think he would be round, or else get an allowance.
1833. The master of the "Captain Cook" gets 18s. a week allowance;—supposing they both got 18s. a week allowance, and the "Ajax" man a salary of £250 and the "Captain Cook" man a salary of £416, would you consider them fair salaries;—is the "Captain Cook" billet worth £166 more? The man here will have more work to do. The man who takes the "Ajax" will have his work cut out. He must have good officers—officers with masters' certificates. All our pilots must have masters' certificates.
1834. The "Ajax" billet will be a harder one than the "Captain Cook"? Decidedly.
1835. I gather that there is no excessive staff here? No.
1836. Is it sufficient? We have had two pilots in quarantine in Sydney. We have had another two, at the same time, off the coast and unable to get back. Another one was placed in quarantine here in a ship from London. I had, therefore, to stand by myself in case the second pilot should be required. My assistant was sick, and if two ships had signalled for pilots through the night, I only had one pilot to send, and would have had to go myself. I have also been in this predicament: when I steamed down on one occasion, all the pilots were up the harbour getting eight or ten ships away. There was a slight mist, and after it had cleared up, a ship was seen close to and in want of a pilot. Not having a man, I jumped into the dingy, pulled outside, and boarded the ship as a pilot.
1837. But these difficulties are only occasional? Yes.
1838. Under ordinary circumstances, a staff of seven is sufficient? Yes.
1839. How about this arrangement, and supposing there is sufficient local talent? You hold an examination for pilots, not for any immediate vacancy, but those who pass to be put on a list for employment in time of emergency, payment to be made by fee; understanding, of course, that they would have first claim to a vacancy, should one occur. Generally, the men that we appoint are in employment. We have no talent about here looking for work. Only lately I wrote to Sydney with reference to employing someone. At the time, several of our pilots were subpoenaed to appear at the Supreme Court, and I asked if we could employ an exempt master; but it could not be fallen in with.
1840. Is there no retired master here, not too well off, who is capable and who could pass an examination and be put on the list, and be retained by a small fee to work when required? I know of one. Your suggestion would be well worth a trial. An emergency man could do the harbour work, which would relieve the pilots considerably. I would welcome anything like that with delight.
1841. Have you any suggestions to make? I think accommodation and facilities for mooring ships, which really means dredging, as the one entails the other, should be pushed on with as soon as possible.
1842. *Mr. Powell.*] Will increasing the accommodation mean increasing the cranes? Yes. We have a 90-acre basin. The idea was to dredge it out, and duplicate the cranes by running a wharf up inside. If that were carried out it would be a great boon; but the dredging is going on very slowly. The time has come to push the thing along. The want of accommodation gives me a great deal of worry and anxiety. We have vessels lying three abreast, and you can understand, when it is blowing, the trouble there is in getting the inside ship out, especially if a strong tide be running. Increased accommodation would minimise this.
1843. Do you think the difficulty in getting this accommodation would be so great if you had a local Board with full power? I think the matter only wants bringing before the Minister for Works and it will be pushed along.

MONDAY, 3 MAY, 1897.

[At the Offices of the Local Marine Board, Newcastle.]

PRESENT:—

GEORGE ALEXANDER WILSON, Esq., J.P.
JAMES POWELL, Esq., J.P.

Thomas Brooks, Member of the Chamber of Commerce, Newcastle, sworn and examined:—

1844. *Mr. Wilson.*] You are engaged in business in this port? Yes; I am a Lloyd's surveyor, and I have been thirty years at this port. *T. Brooks.*
1845. You know a good deal about the business of the port? Yes; I know the port from its inception. *3 May, 1897.*
- I was working for Mr. Moriarty when he laid out the harbour.
1846. What is your opinion of the present pilot system? My opinion is that it is not up to date. I think a steam pilot-vessel is an absolute necessity for the service. I thought so ten years ago.

1847.

- T. Brooks. 1847. Ship-owners, underwriters, and commercial people have no direct representation on the local Marine Board? No, none.
- 3 May, 1897. 1848. Do you think it is desirable that that should continue? I think the Marine Board should be swept away altogether. It is an abortion.
1849. Then how would you manage the harbour? The harbour-master and his staff could do that.
1850. Would you not require a trust of some kind—Harbour Trust, or some machinery of that kind? No; let it be worked on the same lines as the English Merchant Shipping Amendment Act of 1894, with such amendments as would be suitable to the Colony.
1851. Would it not be desirable to have trusts to have superintendence of all the dredging and berthing arrangements, &c.? No; that is already provided for by the Public Works Department.
1852. You think that even a local Board is not necessary? It is of little or no use except in an inquiry as to casualties at sea or collisions, and then you require nautical men for that.
1853. At present the Marine Board always inquire into such matters? Yes.
1854. That is to say, they exercise judicial functions as well as the functions of administering the work of the harbour? Yes.
1855. We will assume the Marine Board is to remain;—do you think it would be advisable to take away those judicial functions from the Board? If they remain, and you take that away, they will have nothing to do.
1856. Suppose you have a local Marine Board with full power, would it still be advisable that that Board should retain its judicial powers? No.
1857. Suppose you have a local Marine Board with full powers, even then you would recommend that the judicial inquiries should be provided for by a Judge, or a man of legal training, supported by two assessors with nautical or engineering experience, according to the matter to be inquired into, and such Court to sit apart from the present Marine Board altogether? Yes.
1858. Whether the Marine Board were swept away, as you advise, it would still hold good that such a court should be established? Yes; if we simply transcribe the English Act of 1894, with such modifications as would be suitable for the Colony, we will have all that is required.
1859. Then you are not in favour of a local trust for the management of the harbour? Individually, I think that our dredging is managed well and efficiently by men who have grown up in the business.
1860. Of course we know Captain Newton is a very efficient officer, but it is quite conceivable that you might have inefficient officers;—who should then be responsible for these officials if they were not efficient? The dredging operations come under the Works Department; but to control the pilot service you might have an advisory board of about three, as it would not be well to leave too much power or responsibility in any one man's hand. There must, however, be some alteration soon made in the present system, as now the Board are only agents to carry out the instructions of the Sydney Board.
1861. You are granting now that there must be a body of some kind to advise and instruct the harbour-master? Yes.
1862. Is it your opinion that it should be a local Board, independent of any other Board, and that they should have the management of the affairs of the port? Unquestionably. In one or two cases the Marine Board here have been questioned, because of taking action without first consulting the Sydney Board. There should be a local body, and the judicial functions of the Board should be taken away and vested in a Judge and two nautical assessors, who should be selected according to the nature of the matter to be inquired into. I think a court of that kind would have the confidence of the public.
1863. You are aware, I suppose, that in a Bill brought before a previous Parliament it was proposed to give representation to seamen and other interests;—supposing this court of a Judge with two assessors were established, do you think it would still be advisable that seamen should be represented on the Marine Board? If the judicial functions are taken away from the Board a great deal of the objection to having seamen represented on it would be removed. The way the Board is now constituted, should seamen be represented, the captain would run the risk of being tried by his cook.
1864. So far as this Marine Board is concerned there should be no representation at all, in your opinion? No; on the Marine Board we want good sound business men to administer affairs, and, on the whole, I believe the appointments would be safer in the hands of the Government.
1865. That is to say, that the Government might still have the nomination? Yes.
1866. You want a local Board and do not care very much whether it is nominated by the Government or elected by the shipping and commercial interests of Newcastle? Yes.
1867. Are you aware of any anomalies in the salaries paid to pilots and to the boatmen? Yes; I think the salaries ought to be equalised to some extent.
1868. Have you any suggestions to make? The berthing accommodation here is very deficient. They should commence immediately and construct a wharf inside the dyke, which would give relief. The same power that works the present set of cranes would be available for the extra set of cranes that would be placed on this wharf.
1869. Have you sufficient cranes? I think so, if worked to their utmost. The great detention is owing to the ships not being able to get rid of their ballast in time. We want additional facilities for discharging ballast.
1870. *Mr. Powell.*] Under the present system, the sea pilots are really harbour pilots as well? Yes.
1871. If you have an outside pilot-boat, the service will have to be reorganised somewhat; two sea pilots would be away in the vessel, and you would lose their services in the harbour;—do you therefore think it would be necessary to have harbour-masters for harbour movements, and keep sea pilots for going out? Two pilots would be required on the boat. They need not be outside altogether, as in fine weather they can see the ships a long way off. But if the matter was left to the harbour-master I feel sure he would make satisfactory arrangements.
1872. You state that you think local Boards might consist of Advisory Boards? Yes.
1873. Do you not think that the same system would apply equally well in Sydney? Most certainly.
1874. Supposing the judicial functions are confined to a Judge or a Stipendiary Magistrate with assessors, would that not give this advantage, that they could travel from port to port and constitute a court wherever they happened to be, or wherever their services were required? Yes; the best available men could be brought up here from Sydney in a very little time.
1875. Take the case of an accident on the Darling, it would carry justice to their door? Yes; it would be a very great convenience.
- 1876.

1876. Speaking of Harbour Trusts, I suppose you are aware that the experiment of a Harbour Trust has not been a great success in Wollongong? Yes. I think we ought to be thankful that we have our harbour under the care of the Government. T. Brooks.
3 May, 1897.

1877. *Mr. Wilson.*] The Wellington Harbour Trust has been a success? But they did not require much money there.

1878. *Mr. Powell.*] There are three elective members on the Board in Sydney;—in what way are the Newcastle interests represented by the elective portion of the Sydney Board? They are not represented at all, but I do not think that matters much. The shipowners of Newcastle go to Sydney to vote, and it is only the shipowners that are represented. The number of votes is very small at Newcastle. I am aware that two of the members of the Sydney Board have held seats from the inception of the Act, and that the owners of small vessels, and even punts, can outvote the owners of large trading ships. I do not think that the elective principle has been a success as representing the general interests of the Colony. Outside Sydney is not represented at all. The Insurance Offices should not have special representation, and I do not believe in a class representation on the Board.

1879. Do you not think such a Board as was proposed to be constituted by the Bill that was introduced would very likely be a contentious Board? Yes, I am certain it would. There could never be a satisfactory result from a Board so constituted.

1880. Is it your opinion that urgency is required in this business of getting a pilot vessel? Yes; the urgency is very great, and I am surprised that this matter has been delayed so long. I certainly think that a temporary vessel should be engaged pending the completion of the fitting-up of the "Ajax." But then again, the circumlocution that would probably have to be gone through to get a temporary boat would be so great that little would be gained. This is a very urgent matter, and I would impress upon the Commissioners to have some provision made before the winter weather sets in. There is another matter I would like to refer to. Captain Wetherill, previous to his retirement, attended to the time-ball. Now it is attended to by the Marine Board's messenger, an irresponsible person altogether. Masters of ships lying here almost daily take the time from that ball. It may, and it may not be correct. You require someone more competent than a messenger to attend to a matter of that importance.

1881. *Mr. Wilson.*] Before Mr. Wetherill retired, the Public Service Board instructed the telegraph master to attend to the matter, but he also retired; then we appointed another official of the telegraph office to do the work; but, very much to our surprise, Captain Newton informed us on last Saturday that this official had not taken up the work, and we have made a note of it.

1882. *Mr. Brooks.*] With regard to the "Ajax," her coming here will save the £450 a year voted for the towing of the life-boat. This will be well, as the tug, at times, when she has been called upon to go to sea, has refused. Again, when the "Ajax" arrives, you will want one less boat's crew, but they need not be dismissed, they could go towards manning the "Ajax." It is not a question of dismissing them, but of transferring them. There is still another matter I would like to bring under your notice. There should be compulsory pilotage for all vessels entering this port from any other than Australasian ports, including, of course, New Zealand. I have calculated that the Government will lose this year between £800 and £900 through removals having been made in the harbour without pilots. The staff is sufficient here to do all removals. As to the signals, I think there should be a flag-staff on Shepherd's Hill. In thick hazy weather Flag-staff Hill is obscured. A flag-staff on Shepherd's Hill would give a look-out 2 miles further south and 100 feet more height, which would give a ship an opportunity of getting out of danger. At present she does not see the flag until she must either come in or go adrift. The present flag-staff should be left; but you would only want a man down there in thick, hazy weather.

William B. Sharp, Member of the Chamber of Commerce, Newcastle, sworn, and examined:—

1883. *Mr. Wilson.*] You are engaged in business at this Port? Yes; I am a shipping agent and colliery shipping manager. W. B. Sharp.

1884. You have had considerable experience in the Port of Newcastle? Yes, I have been here about sixteen years. 3 May, 1897.

1885. As regards the constitution of the Marine Board here, they are simply nominees of the Government? Yes.

1886. The Newcastle shipping and commercial people have no direct voice in their election? No.

1887. Do you know what powers they exercise? They adjudicate in all cases of collisions in and adjacent to the port, and they have power to recommend the cancellation of certificates.

1888. Simply a power of recommendation? Yes.

1889. Do you think that a Board constituted as is the Marine Board at Newcastle, is the best conceivable body to hold judicial inquiries? No; I think all inquiries should be held by a body free from political influence. It ought to be purely judicial, say a District Court Judge with two nautical assessors. In New Zealand when an inquiry is to be made they call a court under judicial jurisdiction, and two assessors are appointed. The Government there have appointed a certain number of assessors, who are paid fees and take turns to sit. In England, under the 1894 Act, the Government make provision for the appointment of assessors by the Secretary of State.

1890. Do you think that if such a court were constituted here it would do away with the cry of representation for separate interests on the Marine Board? I think it would be a most equitable way for all parties concerned. I am not a very strong advocate for class representation on the Marine Board, because it is likely to lead to a clashing of interests within the Board itself. I think it would be much better if the Government appointed twelve nautical assessors for the Colony, who could adjudicate either in Sydney or at Newcastle.

1891. It has come out in evidence that the local Board have really very little power beyond that of holding an inquiry, and then that must be instituted by the Sydney Board, to whom must be submitted the recommendation;—do you think, seeing the importance to which this port has grown, that the local Marine Board should remain in that state? I think it would be very much better to have a judicial inquiry with assessors.

1892. That is the judicial side of the question, but take the administrative side? I certainly think the Board ought to be administered locally.

W. B. Sharp. 1893. And when a license is asked for by a boatman, you think the local Board should be authorised by law to issue such certificate? I think so. The Marine Board could still exist to advise the harbour-master in many little things.

3 May, 1897.

1894. Do you consider that the Marine Board at Newcastle has sufficient power? I think they have quite sufficient power for the local interest, but inquiries should be taken out of their hands.

1895. Take, as an instance, the issue of a boatman's license? I certainly think they should be allowed to issue a license.

1896. What is your opinion regarding the salaries paid to the pilots and to the boatmen? I do not think they are over paid.

1897. The point that stands out is the great difference between the salaries, whereby one pilot gets £200 and another £353 a year? I am not very conversant about the salaries.

1898. Do you think any more berthing accommodation is required here? Yes; that is demonstrated very nearly every day. Provisions have been made for the erection of certain cranes inside the Dyke, which would relieve the harbour very considerably, and would be a very good way of meeting the difficulty. There ought to be provision made for the shipment of cattle here, so as not to block the cranes and interfere with the coal trade. There is only one crane from which to ship bullocks, the No. 11 crane on the Dyke. The cattle trade is extending very considerably, and provision should be made for it, and thus relieve the cranes. If the £140,000 voted were judiciously expended on the break-water it would do a great deal of good. It is eighteen months since this money was voted and nothing has yet been done.

1899. *Mr. Powell.*] Do you think that a small advisory Board would be sufficient for all the wants of Newcastle—a small advisory Board responsible to the Minister, not to the Marine Board in Sydney? Yes, for the details of the harbour work.

1900. All judicial matters to be dealt with by proper legal authority? Yes, by a Judge or Stipendiary Magistrate with assessors.

1901. Do you not think that all licenses and small things like that might well be issued by the harbour-master without the intervention of any Board? Yes; the harbour-master might do most of the work himself.

1902. As representing the mercantile interests, do you think that a Board would work with shipowners, merchants, engineers, brokers, &c., represented on it? If there is going to be a representative Board here it would be better to have it on the lines of the English Act of 1894.

Henry William Finch, Member of the Chamber of Commerce, Newcastle, sworn, and examined:—

H. W. Finch. 1903. *Mr. Wilson.*] You are engaged in business at this port? Yes; I am a shipping clerk at R. B. Wallace's.

3 May, 1897.

1904. You have had long experience here? Yes.

1905. What is your opinion with reference to this question of a steam pilot-vessel? I think a steam pilot vessel is an absolute necessity. The present arrangement is not up to date, and is dangerous to life. This place is not like the majority of harbours. It is the centre of a bight, and the sea comes up in a few minutes. The sea is very dangerous in this bight, and there is no shelter.

1906. Are you aware that additional berthing facilities are wanted here? Yes; all round we want further berthing facilities. We very frequently have vessels waiting for a ballast berth, and at the same time the coal companies are ready to take them in. This want of accommodation causes much inconvenience. At present there is a vessel in the port with 300 tons of ballast, and the coal company is ready to take her on at once. Her master has, therefore, to pay 1s. 3d. per ton to lighter his ballast to accommodate the coal people, and being sand ballast, it has to be taken outside. Another thing, if the weather be bad you cannot take the ballast outside. Again, we often have three or four ships abreast. That is very bad. If it should be blowing you cannot get them out, and things get altogether capsized. If there was plenty of high-water space we could place the vessels singly, and the drawback would be removed.

1907. *Mr. Powell.*] Where could you place them? There is space at Waratah, and there is any quantity of water space to place ships to lie idle in the new basin. There is a small bar there, but that could be got over. Thirty or forty ships could be moored there if there were mooring-posts for them to lie against.

1908. *Mr. Wilson.*] Have you given any attention to the salaries paid to the pilots and boatmen at Newcastle? No.

1909. Have you any suggestions to make? We want constant dredging—constant improvement. Another thing, the cranes are so placed that if two ships are at (say) cranes 14 and 15, and one wants to load into the aft-hatch and the other into the fore-hatch, they cannot do it. At Home they have shifting cranes, which enable double the number of ships to be accommodated, as each crane can be moved along to each hatch.

1910. If these arrangements as proposed were made on the other side of the Dyke, and later on cranes were erected, travelling-cranes might be used? Yes; if ballast jetties were put down, a wharf could be put in, and new travelling-cranes could be placed on it. I would like to refer to the time-ball. Some years ago it was under the control of Captain Weatherill. It is now under no responsible control. The telegraph-master would be a good man to attend to it. The shipping people check their chronometers by the ball, which is dropped by signal from the Telegraph Office. I am not sure whether it does not now fall by electricity from Sydney. There is another matter I would like to refer to. Very frequently we are short of buoy-space for ships that have loaded. Only the other day a large ship, drawing 22 ft. 6 in., had to remain at the crane for over sixteen hours. There are only two berths in the harbour at which a modern ship drawing anything over 22 feet can lie, and then very frequently she has first to be put out of trim by loading deeper forward than aft.

George Melville, Assistant Harbour-master of the Port of Newcastle, sworn, and examined:—

G. Melville. 1911. *Mr. Powell.*] What is your age? I am 65 years of age according to the Government books, but I hardly know my correct age. I am almost certain that I am between 65 and 66 years of age.

3 May, 1897.

1912. Have you acted as a sea pilot at any time? Yes, but not often; only when none of the pilots were available. My work generally is to shift vessels at their berths.

1913.

1913. In what way are you assistant harbour-master? I carry out the harbour-master's instructions, and I appoint berths and remove ships. In his absence, which, however, is very seldom, I act on my own judgment. G. Melville.
3 May, 1897

1914. How long have you been acting as assistant harbour-master? About three years. Previous to taking up this duty I was chief pilot, and was on the pilot staff. My present salary is £29 10s. 3d. a month—about £350 a year. I receive the pay of the highest pilot in port. I have no regular working-hours. I am continually at my post from 5 o'clock in the morning until 6 o'clock at night. I am required to turn out at all hours of the night to keep the channel clear. Our harbour is so small, we must keep the channel clear.

WEDNESDAY, 19 MAY, 1897.

PRESENT:—

JOSEPH BARLING, Esq., J.P., PRESIDENT.
GEORGE ALEXANDER WILSON, Esq., J.P.
JAMES POWELL, Esq., J.P.

Joseph Henry Storey, J.P., Merchant, sworn, and examined:—

1915. *President.*] Are you well acquainted with matters in connection with the Marine Board, more especially concerning the insurance of vessels and so on? Yes. I am engaged in underwriting business, and am also Chairman of the Sydney Underwriters' Association, which controls the business in this Colony. J. H. Storey.
19 May, 1897.

1916. *Mr. Powell.*] You appear as representing the Underwriters' Association, and you are authorised to speak on their behalf? I am the Chairman, and the Association know that I am attending here.

1917. Are you and the Association generally interested in steam-vessels trading to the northern rivers of the Colony? Yes.

1918. Are you aware that a very large sum of money is paid annually by the Government for the services of steamtugs stationed at the entrances of several of the northern rivers? Yes.

1919. From your experience do you consider that that service, as now conducted, is efficient, or that it is capable of improvement; and, if so, in what way might that improvement be made? I think that the tugs are absolutely necessary on account of the treacherous nature of the bars; but I have long held the opinion that the Government should have the tugs in their own possession, and manned by the pilot and a proper crew. Some years ago I brought this under the notice of the Treasurer. It appears to me that there is a large expense in keeping up pilot stations at all these rivers; and the pilot and crew cannot be fully employed marking the channels and signalling the state of the tide, which is practically all the work they have to do. I think it is something like £6,000 or £7,000 that is paid in subsidies, and the total value of the whole of the steamers employed is not much more than from £25,000 to £30,000. The service can, I think, be better done with the pilot in charge of the steamtug. It is still worth the consideration of the Government whether they should not carry on the service themselves, although I am not an advocate of the Government doing everything.

1920. What I understand is that you think the Government should have suitable vessels commanded by the pilot and manned by the boats' crews now employed? Manned by efficient men.

1921. In place of the boats' crews now employed, with an engineer and assistant;—would that give a better service generally? I think it would give more satisfaction. The Government could then charge the towage.

1922. At the present time persons requiring the services of these boats pay the owners, and not the Government? Yes.

1923. It has been said that when a vessel gets into difficulties the owners of the tugs sometimes place themselves in the position of becoming salvors;—is that so? Whenever vessels get into difficulties tug-owners make special charges for any services rendered, over and above the towage charge.

1924. Then, of course, the owners of vessels are very much at the mercy of the tug people under such circumstances, and if the Government supplied the vessels difficulties of that kind could not arise? I consider that the difficulty would be minimised a great deal. If a vessel is rendered valuable assistance by a tug it should be paid for. There is a tendency as it is now to overcharge for services rendered.

1925. Then you think that small vessels of light draught and high power, specially constructed for the work and owned by the Government, would answer the purpose? I think so. The only river where there is a very expensive tug is the Richmond.

1926. The Government are paying £1,700 a year for a vessel there now? I did not know I was going to be asked about this; but I find that the subsidies paid are £6,200, and the value of the boats employed is about £27,000.

1927. There is another feature of the matter;—of course, you know that the pilotage rates have been reduced;—do you not think that if there were suitable vessels, such as we have spoken of, the vessels entering would generally take the services of the pilot, and be quite content to pay the small sum that is now charged for pilotage—2d. per ton? There would be no bar on account of expense. Of course, all the masters trading to those rivers are exempt. So long as the pilotage did not exceed what they pay at present for towage there would be no complaint. If they had to pay more, I am afraid they would not consider whether the service was better done or not.

1928. Do you think that if such vessels were placed on the stations it would reduce the cost of insurance in any way? It very likely would.

1929. And on the whole you think that vessels such as we have spoken of would give more satisfaction because they would be more under the control of the Government officer on the station? I think so.

1930. Going from that subject to the constitution of the Marine Board;—are you satisfied from your experience with the elective principle under which three wardens are elected; do you think the system is working well;—they appear to be elected, not by the large ship-owners, but by owners of small craft who have an aggregate which makes up the necessary voting qualification? I do not think the elective principle is the correct one. I do not think the representative Board is the correct Board, and if the ship-owners have representation, then there are very many other interests which have equal right to claim representation. I think the Board is faulty in that respect.

1931. Do you not think it would be better to separate the judicial functions of the Marine Board from the

J. H. Storey.
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the Executive, placing the judicial in the hands of a Judge or a Stipendiary Magistrate with legal training, assisted by nautical assessors? I think that the present system of inquiry before the Marine Board is unfair to the person brought before them. They inquire into the cause of the accident, collision, or wreck, and, after hearing the case, they summon a man before themselves to answer a charge which they prefer themselves, and then they sentence him themselves, so that they are practically the judge and jury on their own charge. I think the plan adopted in all other judicial inquiries is best. Take the Coroner's Court, for instance. The Coroner inquires into an accident, and if he charges any person, that person then goes on to a higher tribunal. In that respect we might copy the Victorian system. When a collision occurs there, the Marine Board hold an inquiry, and, if there is no blame attaching to anyone, the matter drops; but if blame is attached to anybody, then they found a charge against him, which is heard by a Magistrate, with nautical assessors. The whole case is then gone into, and the man can defend himself. I think that is very similar to the practice adopted in England. In all cases I have seen in English papers I have noticed that it is before so-and-so, Stipendiary Magistrate and nautical assessors.

1932. And the nautical assessors merely sit with the Judge or Stipendiary Magistrate and assist him with their skill and knowledge? Yes.

1933. *President.*] You were suggesting that tugs should be obtained by the Government, and put on these rivers, instead of subsidised tugs as at present; take the Richmond River as an example;—I think Mr. Powell pointed out that the subsidy was now £1,700 a year? Yes.

1934. Is it your opinion that the pilots who are now working the boats there could work the steamer; would there be sufficient men there to man and work the steamer;—there are a pilot and four hands? Yes; I think so. She is the largest tug on the coast; but I do not think she would have more than five hands.

1935. What do you think would be the value of the tug required for that river? I doubt whether such an expensive tug is wanted; but still she is there, and originally cost a good deal of money. I should estimate her value now at between £7,000 and £8,000.

1936. That tug would be about the same power as the "Thetis" or "Ajax"? I do not know the relative power of those boats.

1937. It would cost between £7,000 and £10,000? Yes.

1938. You would have to put on (say) £400 for interest on that capital, and working expenses in addition to that;—do you think, taking all that into account, it would still be to the interest of the Government to provide a tug of that kind? I think so. The matter of expense, however, can be calculated, taking the interest on cost, working expenses, &c., as against the subsidies now paid and towages to be charged for. I know that we waited on the Colonial Treasurer once about it, and he referred it to the Marine Board, but they decided against it altogether.

1939. Was that on the ground of extra expense? We never heard the ground.

1940. Have you any idea about what is paid in dues to these tugs—what they receive in a year in towage? That could be ascertained easily by getting statistics showing the arrivals and departures at each of the rivers during the year. I think the amount of the towage is fixed in the contract for the subsidy. There is a maximum charge, and from the tonnage in and out you could make a fair estimate of the returns.

1941. *Mr. Powell.*] The North Coast Company are the principal people trading there? Yes; but I do not think their steamers take the tugs. It is the sailing vessels who use them, and the number entering and leaving each year could be ascertained.

1942. *President.*] Arrivals and departures? Yes. Before I went to the Treasurer I got a question asked in the House, and we got the return that way.

1943. Do you know whether every ship entering or leaving the ports takes a tug? They do not if they can help it. They will sail in and out if they can, but they very rarely can manage to sail in and out.

1944. You think that taking the outwards and inwards we would get the number of times roughly? It is quite the exception for them to sail in or out. At many of the bars the wind that will sail a vessel out is a head wind when she gets out.

1945. I merely wish to get a basis of cost for the two systems;—may we take it as almost certain that every vessel sailing to these rivers must use the tugs? All the sailing vessels must—not the steamers.

1946. Do you think that a tug could serve more than one river? I do not think so.

1947. There must be a tug at each river? At the present time there is one tug trying to serve two rivers, the Nambucca and Bellinger, I think it is.

1948. *Mr. Powell.*] There is no trading to the Bellinger River at all now? Oh, yes; last week there was only 5 feet of water on the bar. This week there are 9 feet; and there is plenty of timber there for sailing vessels.

1949. *President.*] Then they do go to the Bellinger River now? Yes.

1950. Would you advocate any further harbours or rivers to be served by tugs? I think the only place where one tug serves two rivers is at Nambucca and Bellinger, and the trade of those two rivers warrants a tug each.

1951. You would not suggest any others that want a tug? I think all the others that need tugs have got them. They have got them from Wollongong up to the Tweed.

1952. *Mr. Powell.*] Then the Government should have the command of the vessels, and would be able to use them buoying the rivers and testing the depth on the bar, &c.;—there is a lot of work done now which could best be done by a small steamer? Yes; but the Marine Board sometimes clash with the Harbours and Rivers Department in that work. The Harbours and Rivers Department look after the rivers, I understand.

1953. *Mr. Wilson.*] Did you give any evidence with reference to the Marine Board before the Civil Service Commission? No; I heard evidence, being on that Commission.

1954. Did you give any attention to the question of salaries? Only when the Civil Service Inquiry was on.

1955. Take the boatmen;—I see the boatmen vary from £229, boatswain, salary and allowances, down to £96 a year;—do you think £229 is a reasonable salary for a man in that position? I am not competent to speak on that.

1956. Would you know anything about the salaries of seamen or firemen? We went into that fully, and compared the rates of wages paid by the Government and paid for similar work outside, and I think the Government were far and away higher. I had a scale prepared at the time comparing the rates of wages paid.

paid to masters and engineers outside with those paid by the Harbours and Rivers Department, and there J. H. Storey. was a wide discrepancy.

1957. Do you know anything about the salaries of pilots? The salary of a pilot was £300 a year.

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1958. You have no special knowledge of that? Except that I know the Sydney pilots get £300 a year. At one time it was competitive, and they got as much as they earned, but now they get a settled salary.

1959. You know the "Captain Cook" steamer, I suppose? That was a boat in which we thought that the officers were grossly overpaid. In our report we put the "Captain Cook" expenses as against one of the steamship company's expenses, and they showed a marked difference.

1960. The master of the "Captain Cook" gets £416 a year, and in addition 18s. a week for allowance? It is a gross overpayment. The master of a colonially-owned vessel, trading to any of the bar harbours, would get £300 a year, and their duties are much more arduous and risky.

1961. *Mr. Powell.*] I think you compared the expenses of the "Captain Cook" with those of one of the Hunter River boats? I took the Hunter River as the best paying one. If I had compared it with one of the others it would have been very much worse.

1962. *Mr. Wilson.*] We are advised that rather a different tug is wanted at the Richmond? I think a less expensive tug would now do. The Richmond is where all the money is being spent now to make it a good entrance. The trouble is that when vessels arrive off these bars the pilots cannot go out to them. If they commanded the tugs they would go off and sound the bar and tell the captains the depth of water on the bar. I have always been a great supporter of the present Marine Board, and think they have done very good work. We have got one of the finest-lighted coasts in the world, and I do not think the decisions of the Marine Board have been upset in a Court of law more than two or three times. I think that the Board should be nominated by the Government, and not a representative Board.

1963. *President.*] If we had a District Court Judge, with power to nominate two assessors, do you think a verdict of such a Court would carry great weight;—two assessors would be nominated in each case, not necessarily the same assessors each time, the Judge having the power of continually revising his Court, according to the necessities of the case? Such a verdict would most certainly carry great weight.

1964. Much greater weight than the present Court does? I think so. It would be fairer to the person charged.

1965. *Mr. Wilson.*] Do you not think it would have the effect of taking away this cry for special representation on the Board? I think it would. The only people who come before the Board for trial are officers and engineers, and if a seaman were on the Board he would sit on trial on a captain, while the seamen themselves are never put on trial.

1966. *President.*] It is almost inimical to the idea of calm judicial judgment to have conflicting interests among the judges themselves? Certainly so. The thing has worked so well in the old country that I think we should follow their example.

1967. Supposing such a tribunal as that were established, to what authority would you give the power to issue certificates? I think the Marine Board. It is their office to hold the necessary examination of the candidate, and I think they should issue the certificates.

1968. What I mean is this: If the judicial functions are separated from the administrative, you would have a Court to judge the cases, and there would be someone to take the management of marine affairs as superintendent of pilots, lighthouses, and harbours;—do you think it would be good to give him the power to issue certificates after proper examination? —

1969. *Mr. Powell.*] It is done virtually now;—Captain Hixson issues certificates on Captain Bedford's examination of seamen and Mr. Cruickshank's examination of engineers;—do you think there should be an officer simply under the Minister, leaving on one side questions of collisions, and loss of life, and suspension of certificates, and dealing simply with marine matters, pilots, lighthouses, &c.? The only difference I would make in the present system would be to take the final dealing with a person out of the hands of the Marine Board and pass them on to a Magistrate and assessors; but you must have a Marine Board to look after the navigation work of the Colony, and the lights, and the harbours. That body should issue the certificates.

1970. We suggest that we should put an officer in charge of pilots, harbours, and lights, &c., responsible to the Government and appointed by the Government, and give him power to issue certificates under proper regulation and examination, the Judicial Court having nothing whatever to do with that, but simply to inquire into collisions and accidents at sea, and to be a Court to deal with certificates on cause being shown? Would you propose that this Court should deal with cases from the initiation?

1971. Yes? Then, I think, there would be the same objection as there is now, because they could not pass the culprit—if I may so speak—on to some higher tribunal.

1972. Could not that be carried out by the officer I speak of;—should it not be his duty to bring these cases before the Court and prosecute? There are very many inquiries held where there is no occasion to prosecute.

1973. *Mr. Wilson.*] You think there should be a Board under any circumstances? I think so.

1974. And that the Board should still issue the certificates, because it has acted well in the past and there is no reason to change it? Quite so.

1975. *President.*] All you would recommend would be the Appeal Court? Yes; and that the elective principle be done away with. It should be a nominee Board. Originally the Board was composed of nautical men and two merchants. Mr. J. B. Watt and Sir George Dibbs were the members, I think. Now they have appointed Mr. Wildridge as a steamship expert.

1976. *Mr. Powell.*] He is nominated? Yes; for life. That is the worst of it; I do not think it should be for life. I think there are many cases in which the Marine Board do not make inquiries and which ought to be inquired into, such as collisions, &c., where masters have shown great carelessness, but by good fortune the damage has not been serious enough for the Marine Board to inquire into it.

1977. *President.*] How would you remedy that? I think the Marine Board should hold inquiry into all cases brought under their notice.

1978. *Mr. Wilson.*] If necessary, the Act should be altered? Yes.

1979. *President.*] Altered, so as to compel them to hold an inquiry? Yes.

1980. Is there anything else you could tell the Commissioners which you think would be of service to them in this inquiry? I do not think there is anything else. I have always been a supporter of the present Board. They have done good work, and, with the two exceptions I have pointed out, I should be very sorry to see any radical change, especially in the direction of a representative Board.

1981.

- J. H. Story 1981. You think that the present Board should be continued with the addition of the Appeal Court, and the members of the Board should be nominated by the Government? Yes.
- 19 May, 1897. 1982. *Mr. Powell.*] Do you think that the Board should take something like the position of the Board of Trade in England; that it should discharge all the executive functions, and that all cases of collisions, abandonments, loss of life, damage, &c., should be reported to a superior Court? Yes; the same as the Coroner and the Police Courts.
1983. *President.*] Would you make the decision of the Court final, or would you give an appeal to the Admiralty Court? I would be inclined to make it final; but I do not know how that would interfere with the principles of justice.
1984. *Mr. Wilson.*] I suppose you would be prepared to follow the English practice, and if it is final in England, it should be final here? Yes.

* James Fotheringham, Chief Officer of the "Captain Cook," re-examined:—

- J. Fotheringham. 1985. *President.*] Have you a captain's certificate? Yes.
- 19 May, 1897. 1986. *Mr. Wilson.*] When we were on board the "Captain Cook," we asked you certain questions about the absences of the master from the ship, especially at night. I asked if you had any actual record of his absences from the ship, and you said you could not say. I asked you, "Is he on board four nights in the week on an average?" You said, "He may be; I cannot remember." "Are his absences frequent from the ship at night?" "Yes; I would sooner that you asked somebody else?" Well; about that remark of mine about asking somebody else; of course I am a subordinate officer.
1987. We carefully told you your duty, and that you were not to consider that, but you were to tell the Commissioners anything you knew. When you say, "I would sooner that you asked somebody else," what do you mean by that? I am Captain Creer's subordinate officer, and my answering those questions would make him think and other people think that I am trying to do him damage.
1988. But in this matter we told you very plainly what your duty was, and we must have an answer? Very good, sir.
1989. *President.*] All you have to do is to tell the truth; not to paint it one way or the other, but tell the truth just as you would before a Court of Justice.
1990. *Mr. Wilson.*] We told you that we would protect you in regard to anything you said. Now, did you keep anything back from the Commission;—is there anything you ought to have told us? There is nothing you asked me that I did not answer truthfully.
1991. We asked you if you were keeping back anything that you ought to tell? Not that I know of.
1992. You are quite sure? Yes, quite sure. How do you mean, sir; keeping anything back?
1993. It is your duty to tell the Commissioners anything you know which may be not correct on board ship; anything within your knowledge, it does not matter what it is nor whom it involves, whether it is the master or anybody else—we do not say there is anything in this? I did not mean much by what I said. Your asking me that about Captain Creer made it appear that I was trying to injure my superior officer.
1994. Is there anything that you have withheld? No.
1995. Nothing whatever? No.
1996. Is Captain Creer perfectly steady? Well, he does drink sometimes.
1997. Will you tell us a little more about it;—have you seen him drunk? I have seen him when he had been drinking, but I would not say that he was drunk.
1998. Are you quite sure of that;—you have seen him when he had been drinking, but have not seen him drunk? I would not swear that I had not seen him drunk.
1999. Have you seen him drunk on duty; this is a question in which it is not only your duty to answer, but it is a question in which men's lives may be at stake? Since you examined me on board the "Captain Cook"?
2000. I do not make any limitation—within the last twelve months? Since you were on board I have been left in charge of the ship. Captain Creer has gone up to town on duty with the launch, and when he has come on board he has been that way, but of course he was not on duty.
2001. He has been to town and come on board and been that way; when he puts his foot on deck does he take command? Yes.
2002. Supposing there had been rough weather, and there was a call for you to go outside, would he be in a condition to take command on these occasions? He has always gone on the bridge, and I have gone with him.
2003. That is not the question; suppose you are not there at all, would he be in a position to command the ship; suppose, for instance, he had suspended you from duty when he came on board, and there was rough weather, would he be fit to go outside and bring in a ship? I do not think he would be so bad as that; he would be able to do it alright.
2004. In rough weather? Yes.
2005. And the lives of these men would be to some extent at stake;—do not misunderstand what I mean? I do not mean to say that it is right.
2006. The question is, would he be in a thoroughly fit state to take command of the ship when he put his foot on the deck in the state you say he was in; would he be in a fit condition to take the ship out and to bring her in; put yourself in the position of the seamen;—suppose you were a seaman on deck, would you care to be in that position? I do not think I would.
2007. Do you think that when in that state he is quite fit to take that ship out and put a pilot on board? There are always more than one on board. There are the pilots as well.
2008. That is not the question; he is paid close on £500 a year to do a certain duty; was he in a fit state to do that duty—never mind if there are twenty pilots on board;—was he in a fit condition to be in command of the ship? I do not think any man, when he is in that state, is in a condition to take charge.
2009. You do not think he would be fit, and therefore he was not fit; and that was since Mr. Powell and I were down on board;—he has been up to town and come down in that condition? Yes.
2010. Have you taken any notes of his absences from the ship since we were down there? No.
2011. No special note? No; I know he was away, because it is usual. We are in dry dock now. We go down to the station again to-morrow.

John

John Lawrence, Clerk to the Harbour-master, Marine Board, sworn, and examined :—

2012. *President.*] Will you briefly describe your duties? My duties in the first place are in regard to pilots' certificates—harbour-pilots and sea-pilots. In the first place they come and book in the office for removal certificates, and I look after it. I look after the sea-pilot's certificates, and forward one-half to the Custom House and the other half to the Auditor-General. The Customs collect the money. J. Lawrence.
19 May, 1897.
2013. And you advise the Auditor-General so that he may check the Customs? Yes; I receive the cash for all certificates issued by the Board—certificates for steamers or masters, foreign-going or coast trade, or for ballast licenses. I pay this cash to the accountant every night, and he pays it into the bank.
2014. You issue numbered receipts? Yes.
2015. Does the accountant check the receipt-book every day? He checks on the butts.
2016. You have no more to do with the money after you pay it to the Accountant? No.
2017. How much do you take in that way? About £2,000 last year, which was about the largest. I also have the revising of the requisitions from the out-stations, and readjust them. For instance, the Harbours and Rivers Department supply all paint for lighthouses. They generally come in on one requisition. I strike them off, and put them on another. We send some requisitions to the Stores and some to the Harbours and Rivers. When things are not in contract I have to ascertain from storekeepers what their charges are, and submit them to the Board, and make out the order. I have nothing more to do with it.
2018. Are there many goods ordered which are not in contract? No.
2019. Would there be £200 or £300 per annum? Not so much. I get the lowest prices I can and submit them. I can hardly tell you the work I have to do. I make out all orders for the Printing Office, and then I have the telegraph to attend to, sending orders or receiving messages from the out-stations. I have an ABC instrument which I work myself, connecting direct with the central station. I learnt the Morse system, but could not get a Morse instrument.
2020. Does this work occupy the whole of your time? Yes; writing letters and making specifications for boats, &c. I have been so long at it I can make out a specification for any boat.
2021. How long have you been in the Service? Thirty-two years and six months.
2022. Does Captain Lindeman give you orders? Oh, yes; he takes upon himself to give me orders.
2023. Do you mean to say it is not his proper duty to give you orders? In the first place I was appointed as clerk to Captain Hixson, who was then the harbour-master, and I have always looked upon him as my superior officer.
2024. You do not think it necessary to go to Captain Lindeman? I go to him, of course, as the duties of the office require.
2025. You are under Captain Lindeman? Yes, I suppose so.
2026. *Mr. Powell.*] Did you bring the order-book up with you? Yes.
2027. You had better show it to the Chairman. [*Order-book handed to Mr. Barling.*]
2028. That represents all the goods you order outside the contracts? Everything.
2029. Have you any assistance in your office? None.
2030. Who looks over your work, examines the books, supervises your work? There are no books to be examined. All the rest of the work goes out of the office.
2031. Does Captain Hixson visit your office? He comes down and looks over the order-book occasionally.
2032. *President.*] There are between thirty and forty orders this year;—are they all out of contract? No; there are some in contract.
2033. Do you not keep a book like that for orders in contract? No.
2034. You send the original requisition out? The requisitions go to the Treasury or the Harbours and Rivers Department, and they issue the orders.
2035. Can you tell me how many orders have been given this year under contract? I could not tell you unless I saw the requisitions.
2036. About how many do you get on an average—a requisition a day? May and October are the principal requisition months for out-stations, but occasionally they run short and we get a requisition.
2037. How do you check the requisitions? I have duplicates.
2038. Are the pilots ever checked;—suppose one of them asked for twice or three times what he usually ordered, could you detect it? Yes; by comparing with previous requisitions.
2039. And you know pretty well what their consumption ought to be? Yes; and if I think it is excessive I speak about it.
2040. *Mr. Powell.*] You know how much oil is used at every lighthouse? Yes.
2041. And you can check it? Yes; I have a monthly return of all that is consumed.
2042. Is the removal of vessels under your charge? Yes.
2043. Are vessels allowed to remove now without a harbour pilot? Yes.
2044. They go as they please? They are supposed to come and ask for permission from the harbour-master; but, as a matter of fact, they do not always do it, and go and shift unbeknown. I have no control over that whatever.
2045. You forward returns to the Board of Trade? Yes; casualties, wrecks, and such like.
2046. Is your telegraph work in connection with the signal-station at South Head? Yes.
2047. Where do you report to? To the central station in George-street, and they copy it on to the other instruments.
2048. Who telegraphs to the Flagstaff in Sydney? I do not know.
2049. Do they get reports by telegraph or by flags when vessels come in? By flags.
2050. Do you post the arrivals and departures at the Marine Board Office? Yes.
2051. And you receive all the pilot-logs? Yes.
2052. From the outports? Yes; the monthly reports.
2053. Have you any check on the accountant? The only check I have got is on the butt of the receipt-book.
2054. You only take his receipt;—you do not know what becomes of the money after that? No; other than I am informed it is paid in every day.
2055. *President.*] You do not look at his bank-book? No.
2056. *Mr. Powell.*] What amount of money was represented by the transaction with Weisel? This Weisel had an order for many years, and on one occasion some time ago he charged rather more, and what the accountant thought was high. I was asked by the Secretary about it, and said I supposed he had charged

- J. Lawrence. charged current rates, and he told me to mark "current rates" on the voucher. I did so, and they sent for the man afterwards, and he made a reduction.
- 19 May, 1897. 2057. How much money was represented by the transaction? Not much.
2058. £20? More than that.
2059. £100? I do not think so. It might be £100 or so.
2060. You had not many transactions of the kind? That was the only one we had. After that I went round to different parties and asked for tenders, and no one responded; and when we did get prices Weisel was the lowest.
2061. *Mr. Wilson.*] Have you any contract for coal? Yes.
2062. Are these orders for coal in contract? Yes.

FRIDAY, 21 MAY, 1897.

PRESENT:—

JOSEPH BARLING, Esq., J.P., PRESIDENT.
 GEORGE ALEXANDER WILSON, Esq., J.P.
 JAMES POWELL, Esq., J.P.

Thomas Robert Allt, Esq., J.P., Merchant, and Chairman of the North Coast Steam Navigation Company (Limited), sworn, and examined:—

- T. R. Allt. 2063. *President.*] We understand that you kindly appear here to assist us with some suggestions, which I have no doubt, will be very valuable to the Commissioners in framing their report;—what is your name?
 21 May, 1897 | Thomas Robert Allt.
2064. What is your occupation? Merchant, and Chairman of the North Coast Steam Navigation Company (Limited).
2065. Among other things we have had under consideration the subsidising of steam-tugs in connection with the rivers and harbours of the Colony, and we are aware that you, as Chairman of the North Coast Steam Navigation Company, are fully seized of the facts of the case; and we wish to ask your opinion on the present system of hiring these tugs? The tug service has been most unsatisfactory for a long time. The tug service and the pilots do not work well together; they are antagonistic. The tug-master has a down on the pilot if he allows a vessel to go in without the tug; and we have an idea—I do not say it is an actual fact, for it is hard to prove anything of the kind—but in consequence of this antagonism and jealousy between the two the tug-master may say, "The pilot had no right to let you come in; there is not enough water on the bar." I think the proper way to get over the difficulty is to amalgamate the two—that is to say, the pilot should have full charge of the tug. This would be a boon, not only to the steam companies, but also to sailers. The tug could do all that is wanted, and could go out and sound the bar. At present there are lots of times when the tugs do not think it prudent to go out. The man to judge whether it is prudent to go out is the pilot himself. If he thinks it is unsafe to go out because there is too much sea on the bar, then I think the ship-owner would be satisfied. Now, to show you what a rotten system it is, here we have been at the Richmond for a considerable time absolutely without a tug—that is, a tug capable of assisting a steamer or a ship when it is really wanted. The "Protector" needed extensive repairs, and was sent away to Sydney; and now an abortion of a boat is put there for that service. If the thing was in the hands of the Government, or in the hands of a Board, or of a steamship company like ourselves, we would not dare to allow such a rubbishy boat to take the place. These things are plastered over by the Government. I do not know how it is arranged. Whilst the pilot and tug services are separate there will always be trouble on these rivers. My idea is that the Government should charge tonnage dues to all vessels in and out. It should be a small sum—10s. in and 10s. out. Then the tug could pilot a steamer or sailing-vessel or assist a sailing-ship. Some of our captains are so disgusted with the manner in which the tug service is conducted that they infinitely prefer to run the risk of going without. At the present time there is a deal of friction between the tugboat captains or owners and the captains of both steam and sailing vessels. The tugboat owner is jealous, because he is not taken by the steamer; and the captain of the steamer thinks he can go in as well as the tug, and he goes in. When difficulties do arise, you are made to pay, and pay exorbitantly. The Marine Board, in their wisdom, have settled the price to be paid. I think it is £20 or £25 per tide for assistance by the tug to a vessel in distress. That is a very large sum. I find that during the last five years we have paid the tug service £3,220. That is in addition to the enormous sums paid by the Government as subsidies. On the Richmond the subsidy is £1,700, and we paid on that river alone £2,036.
2066. *Mr. Powell.*] Last year? No; in five years. Last year we paid £1,025. Here are the figures put before me by my secretary. [*Vide Appendix 47.*] If the two services were amalgamated I am quite certain they would work better for all parties, and it would be more remunerative to the Government to take them in hand themselves. There are a pilot and four men on these rivers, and what on earth they do I do not know. Two-thirds of their time they are doing nothing. I look upon them as a terrible waste of money. The steamboat could be worked very cheaply, and would not require more than half a dozen hands, and you have five now.
2067. You would want an engineer? Yes, only one, and the men who are now boatmen could do all the work on board. In case of an extraordinary emergency you could easily get a man if required. The Government have been paying years and years for a most unsatisfactory service. I speak unhesitatingly. I have not a man in my employ but will speak in most condemnatory terms of the tug service.
2068. *President.*] Do you know how many boats are subsidised by the Government? I could not tell you; but there are supposed to be tugs at the Richmond, Clarence, and Bellinger, and one at Nambucca supposed to attend to the Macleay as well, and that is a most absurd arrangement. The other day I needed a tug there—in fact, if it were not for the appliances the company has got themselves they could not carry on. The tug-boat for the Macleay is the tug for the Nambucca, and if she is inside at Nambucca she often cannot get out; it is a bad place. I suppose these tugs are what might be called "according to the terms of the contract"; but the terms of the contract are very loose, to my mind. These boats are not powerful enough in many instances to assist us.
2069. You think the contract itself is defective in its terms? I do not think it is sufficiently stringent.
2070. You mentioned the "Protector" being taken away, and a tug utterly deficient in power being put in

in its place;—is there no clause in the contract providing for the substitution of an efficient tug in such a case? I do not know. All I can tell is that the public have had to suffer. This boat is there.

2071. You testify to the fact that while the "Protector" is away a most inefficient vessel has been put in her place? Yes.

2072. The total amount of subsidy paid for the tugs is £6,000 per annum;—do you think it is desirable to provide tugs belonging to the Government, or that the Government should hire them? It would be more economical for the Government to have them themselves. They would have a better guarantee that they are always in good order. A chartered boat is not so satisfactory as a boat of your own. Then it is a question in my mind whether a paddle-boat would not be more serviceable on these rivers than a tug. It would draw less water. I believe a little boat would do for most of the Northern rivers. She should not draw more than 5 feet 6 inches when deeply laden, and the ordinary draught of water would be 4 ft. 6 in., and with that she could generally get across the bars; whereas most of these tugs are drawing 6 feet of water.

2073. *Mr. Powell.*] Built for the purpose? Yes; when there is a sea on the screw is half the time out of water, but a paddle-boat may be on the ground and yet go forward, as the paddles go deep down.

2074. She would have better steering-power? Yes.

2075. You think the subsidy is a very large waste of money? I do. It is a very unsatisfactory service. I am very strongly of that opinion.

2076. Have you any idea what would be the cost of the tugs required;—take the Richmond, that is where the most powerful tug is required? I think these tugs could be built for about £5,000 a piece, especially if you were building half a dozen. I am not speaking with a book to guide me; but from my experience I think a boat of 40 or 50 horse-power would be quite enough.

2077. *Mr. Wilson.*] Does that mean that the machinery would be imported or made here? Imported. It would cost too much if made here. Sometimes, in a small contract of £8,000 or £9,000, there is a difference of £3,000 between one firm and another.

2078. *President.*] You think a capital sum of £30,000 would provide all the steamers? You could get half-a-dozen good tugs for £30,000, but machinery must be imported to do this.

2079. Have you any idea what would be the cost of maintenance? Well, you want one fireman, one engineer, a pilot, and perhaps three deck-hands. I do not think the wages ought to come to more than £100 a month at the outside, and the consumption of coal would not be very great, because modern machinery is not very trying upon coal, and the Government get their coal very cheaply. I would not recommend them to convey their own coal to the stations unless, of course, they have a boat going. Schooners would carry it cheapest.

2080. £1,200 a year would pay the wages you say;—what would be a fair sum for maintenance other than wages—coal, stores, repairs, and so on? You would not use more than about 4 tons of coal a day. That would be about £90, and there would be the maintenance of the men. I do not think it would cost more than £300 a month, wages included.

2081. I should think you were very liberal in that? Yes; I should like to get £300 a month to do it, I will admit.

2082. What would be the life of these steamers? If well maintained, they will last almost any time.

2083. Still, you must write off 10 per cent. of the value each year for depreciation? Oh, no; 5 per cent. would be ample.

2084. And then you would allow 5 per cent. for renewal? You should write off 5 per cent. per annum.

2085. And that would provide for a new tug in twenty years' time? Yes.

2086. And that would provide for all the necessities of the case? Yes; I have steamers that have been running for over twenty years. That is 5 per cent. for depreciation, not for maintenance.

2087. What I mean is for the replacement of the capital? That is quite enough.

2088. Would you not want a new boiler every seven years? Not every seventeen years now. If you have capable men your boiler will last as long as you like. I have a boiler that has been working for over twenty years. Boilers to-day and boilers five and twenty years ago are different. When I was first introduced to steam the life of a tip-top boiler was ten years. I have seen in my experience boilers renewed in five years, but the march of improvement has been so great that boilers practically last twenty or twenty-five years. I think you might fairly estimate the life of a boiler at fourteen or fifteen years.

2089. Would that come in the 5 per cent. which would be put aside for renewal? No.

2090. Would it come in the £3,600 for maintenance? Yes.

2091. Can you think of any other use to which those tugs could be put? Yes. Looking after the river, seeing that the buoys are properly laid down, and looking after and buoying off shoal places. The rivers are always shifting in a marvellous manner. In one place there may be 15 feet of water now, and three months hence there may not be enough water to float the steamer over. All the rivers have been very shallow indeed for the last twelve months. They are a source of continual trouble. Here is what one of my captains says:—"I have known the pilot wish to sound the bar, and the tug-master to refuse him the use of the tug. I got my ship aground on The Manning crossing on one occasion with the tugboat towing me. The pilot warned me one way, and the master of the tug another, and there were no buoys."

[Those buoys ought to be laid down by the tugs.] "No buoys to give me any help as to which way to steer. On the Macleay River, when a tug is stationed there, it is just the same, and it is the same at the Richmond River, and has been for years past." [Fide Appendix 42.] Tonnage dues should be charged, and the pilot-boat should guide the steamer into the river, assuming the tug to be in charge of the pilot. It is only where the corners are sharp that the steamers want assistance from the tug at all. They are obliged to get the tug in order to enable them to get round quickly. The tug being shorter slows quicker.

2092. What tonnage rates would you suggest? About 10s. in and 10s. out, whether the tug is wanted or not. Every vessel should be charged in order to help to pay for the maintenance of the tug.

2093. It would be pilot dues practically? Yes.

2094. Do you think the shipping community, the owners of these little schooners, would object to that? I would not object to it, and I do not think they would. I do not think the masters of the little schooners would object, because it is far more to their advantage than it is to mine.

2095. You think that would be a sufficient charge for such a service? I think so. You must recollect that very frequently they are not wanted at all. I might go there for six months and not use the tug; but when I do want a tug it is right that I should pay for it, because she is there ready all those six months in case I do want her.

- T. R. Alt.
21 May, 1897.
2096. Would you have any special charge when a vessel got into trouble? There might be some extra remuneration, but it should not be done in the bleeding manner in which it is done at present. It is by sanction of the Marine Board that this £25 is charged.
2097. Would it be very easy to find out what revenue the tonnage rates you advocate would produce? Yes. If that system is adopted there will be more vessels going to the river. It is the absence of a proper pilot service that prevents vessels going into the river.
2098. Is it the absence of a proper pilot service that prevents sailing vessels going in? It is prohibitory almost for sailing vessels. I saw a vessel lay on and off for two days at the Macleay recently before she could come in. In advocating as I do the amalgamation of the services, and getting it done at a fair and reasonable rate, I am really arguing against the interests of my own company.
2099. *Mr. Powell.*] I suppose you consider it desirable to have a stronger-powered vessel at the Richmond than at the other rivers? I daresay you would want a vessel with a little more power at the Richmond. I am basing my estimate of cost on a small vessel of about 40 horse-power. That is quite sufficient for all reasonable purposes.
2100. Boats of that class could be built here, and machinery imported? Yes.
2101. They would be better built here? Yes; I would sooner do that. Of course, you had better build six and have them all alike, and have a little more power. If you have six sets of engines, all on the same pattern, it is an enormous advantage to the builder and to the person employing the boats. All the duplicate parts fit each boat. They are made from a common pattern, and you would get them built cheaper by getting them all alike. That is rather a big order for an engineering firm here.
2102. Would they be content to take the work and import the parts? Yes; they would build the hull here right enough. My estimate is without elaborate fittings. Look at the elaborate fittings on board the "Captain Cook." You do not want to go to all that expense—common, plain, pine fittings would do. Fine fittings are an absolute waste. It is not the hull in our own steamers that costs the money; it is the fittings.
2103. Taking the cost of the tugs, and the expenses of the pilots and boat's crew, at the present time the Richmond River costs the Government over £3,000 a year? Yes. I tell you I do not know what the pilot does.
2104. He would have work to do under the proposed system? Of course he would. There would be no gardening done, nor would he be able to sow corn, potatoes, and so on.
2105. Would such a vessel be very useful for river work? Yes. I do not see why the Government should not do the river towing. The tug-boat gets it now. Why should not the Government do it, providing a fair rate was fixed without entering into competition with private individuals. The Government tug could do all the towing of punts.
2106. At the present time you are paying £1,025 in addition to the £1,600 paid by the Government. We may assume there is a revenue from Yeager's boats, and from the small schooners which are constantly running? There is a lot of work on the river, towing in and out.
2107. There were thirty-one vessels for January, February, and March, in and out; they take the tug as a matter of course, I suppose? I have three steamers going in and out a week; four steamers in the Clarence; but, of course, you would have to take the good with the bad in those tonnage dues. I consider that if the tug were stationed at the Clarence, notwithstanding the depth of water, and although you never use the tug, the charge should be made.
2108. Do you think it should be a fixed charge, or a maximum or a minimum, and regulate it on the tonnage? I do not know. I think I should have a maximum and a minimum charge—about 10s. in and out would be a fair thing. Boats from a company like ours should be paying £3 a week, whether we use the tugs or not.
2109. But that would be a great let-down for you if you are now paying £1,000 a year? I do not always pay that; I think that would be about a fair charge and a fair remuneration. I think the tug service, if amalgamated, would be a great saving to the Government.
2110. *President.*] Can you tell us about how long the tugs are employed;—are they engaged all day long;—would there not be days when they are not required at all? Yes.
2111. And such steamers would be available for the dredge service? Yes. It is only at flood-tide that they are of any use at all. At ebb-tide they cannot go in or out. None of the bar-harbours are supposed to be practicable except at flood-tide; in fact, we do not attempt it.
2112. *Mr. Powell.*] Do you think the Marine Board, as at present constituted, fairly represents the shipping interests of the Colony;—I do not mean the shipping interests of vessels registered only in the Colony, but the whole, the great shipping interests of the port? I think it would be better if some of the merchants who understand shipping were on the Board, and not all purely nautical men. In the past there has been, well, I will not say favouritism, but it is done by election, except the nominees of the Government. It does not work as satisfactorily as it ought. There is another difficulty,—you have to separate a man who is even indirectly mixed up with scammers or sailers. No doubt nautical men are the best men to settle matters of that kind.
2113. *Mr. Wilson.*] Nautical questions, no doubt? Yes.
2114. *Mr. Powell.*] Do you think a Court, presided over by a Judge or Stipendiary Magistrate, assisted by nautical men, would be more satisfactory? I think it would. It would be far better, although Captain Hixson is a very able man, I admit; at the same time I do not think he understands the legal aspect. They may give what is called a sensible decision, but it may not be a legal decision, and, therefore, if the Court were presided over by a legal functionary it might be more satisfactory.
2115. The Marine Board should deal with all the executive details? Yes.
2116. And questions involving property and life, and cancellation of certificates, and matters of that kind, should be dealt with by a court presided over by a Judge or Magistrate legally trained? Yes.
2117. With such assistance as he might require in each particular case—the assistance of men of engineering skill or nautical men, according to circumstances? Yes. We have seen a lot of money thrown away lately in lawsuits, points decided one day, and overthrown the next.
2118. *President.*] What should you pay to the captain of a tug—£15 a month? You would not want to pay the captain of a tug a very high rate. I think he would be entitled to £20, because he is captain of the tug and pilot.
2119. *Mr. Powell.*] The Tweed, Clarence, and Macleay pilots are getting £240 and £25 allowances as well—

- well—£265 altogether? The captain of those sailing ships going up and down the coast only gets £12 a month. We pay our captains from £18 a month.
2120. What is the highest you pay? £22 10s. These men getting £20 ought to be provided for or some allowance made. Of course, feeding men on board boats does not cost much. You can feed them very well for about 2s. 6d. each per day.
2121. *President.*] We have had evidence that we could do it for 2s.? There are not numbers enough. The fewer the number the higher the rate.
2122. *Mr. Wilson.*] There are two pilots at £403, and they range from £398, £393, and so on down to £275;—what do you think of that? I think £20 to £25 a month is fair. It is a responsible position, but at the same time I think it is a very easy one; but it does not do to kill ambition, and they are men, as a rule, very capable, and if you want capable men, there is no doubt you must pay them. It is no use trying to cheescpare men in that position, because it would be a great loss to the Service generally. I would rather advocate giving them an extra £10 a month, than taking off 10s., and if a man is pilot and captain, £30 a month would not be too much, although he is not always absolutely employed. There are times when he might have to be out at night and receive no extra pay.
2123. Of course the pilot is very much tied to his station? Yes; he is. He is very much tied. At the same time at some of these places it is easy. The men are obliged to employ themselves farming or something of the kind. You have to put a pilot in a place where there is, perhaps, very little work for him. There might be two or three ships in a day, or perhaps not one in a week, but he cannot be employed half his time. There should be a scale of pay adjusted to the requirements of the places. It would be hard lines to give a man a small pittance, and forbid him doing something else to supplement his income; he might have a wife and family.

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Francis John Thomas, Esq., Manager of the Newcastle and Hunter River Steamship Company, Limited,
sworn, and examined:—

2124. *Mr. Powell.*] You have had a long experience in connection with shipping? Yes; over thirty year's experience as a manager of steamship companies, and during that time, I have, of course, had opportunities of observing the working of the Marine Board.
2125. Do you think from what you have seen and know, that the Marine Board as at present constituted represents, and gives satisfaction to, the shipping interests of the Colony generally? I do. I see nothing objectionable in the present mode of representation. A Bill was brought in lately, which I think rather objectionable, to extend the interests represented.
2126. That is more particularly with reference to the elective character of the Board? Yes; in fact it lessened the nomineeship and extended the representation to persons who are not amenable to the jurisdiction of the Board.
2127. Do you think you would be satisfied with the elective principle as it is now existing under the present Board? I think it fairly represents the interests, so as to do justice to all concerned. For instance, it may be said that the shipowners are the only persons who have voted in the election of the representatives who are not nominated by the Government; but, on the other hand, it will be seen that the shipowners have from time to time elected retired shipmasters. I think these retired ship-masters fairly investigate and represent the claims of the masters and officers of the vessels. Then again as far as the engineers are concerned, the Government have nominated Mr. Wildridge, an engineer, to the Board, acknowledging that the engineers had some right to representation on the Board, so that their cases should be fairly heard and investigated. So you may say the ship-owners, masters, and engineers, are represented; and, I think, about fairly represented.
2128. And the new Bill contemplates an extension of the principle? Yes, to persons who are not amenable to the jurisdiction of the Board. For instance, the Marine Board has no jurisdiction over the crew of the vessel, the seamen, firemen, trimmers, stewards, and so on.
2129. And it is proposed that the insurance interest shall be represented? I think the insurance interest is pretty fairly represented by the ship-owners; but I do not see anything objectionable in the insurance interest being represented if it is desired. I think that arose, however, more out of the proposal to have other interests represented. It was thought that if other interests were represented the underwriters also ought to be represented.
2130. Did it not appear to you as something of an anomaly that the great shipping companies, who have interests in vessels coming constantly to this port, should be wholly unrepresented, and that a few towing vessels or lighters or yachts should be represented on the Marine Board? That is a matter of legislation. I do not see any reason why all who come under the jurisdiction of the Marine Board should not be represented in some way; but perhaps it is thought that the Government nominees pretty well safeguard the other interests. However, the principle of owners voting might be extended with advantage to vessels coming from abroad. I have not thought much over that matter, nor how far they are concerned. We are more immediately concerned than they are, because they come here under the Board of Trade certificates.
2131. But the proportion of vessels registered in the Colony is infinitesimal as compared with the trade of the port by vessels not registered in the Colony? Yes, no doubt it is; but then, you see, the vessels which are registered in the Colony are the vessels that are principally surveyed by the officers of the Marine Board, and are more subject to their inspection and control.
2132. But the Board deals with all matters of collisions and wrecks, and cancellations of certificates, with all vessels, irrespective of where they are registered? Yes; they investigate and make a report; and, I suppose, with regard to Home vessels, they would report to the Board of Trade.
2133. They deal with them here, and report to the Board of Trade afterwards? Yes.
2134. I suppose you do know that the English practice is somewhat different to our own practice here, and that matters of the kind referred to are dealt with by a Judge or Stipendiary Magistrate, assisted by nautical assessors? I believe that is peculiar to London. I believe that in the outports they have local Boards, which deal with matters much in the same way as we do here.
2135. They have local Boards, but the matters are reported by them to the Board of Trade, and the inquiry is then held by a Judge or Stipendiary Magistrate, assisted by nautical assessors, nominated by the Board of Trade? No doubt you have all the information at your command; but I understood that

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F. J. Thomas. the practice was that in London the inquiries were conducted by a Stipendiary Magistrate and nautical assessors; but in the outports, wherever there were local Boards, they were conducted in the same way as here.

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2136. I think you will find that a Stipendiary Magistrate conducts the examinations at Liverpool and all the large ports? I have not had personal experience of the practice in England. No doubt the members of the Commission are well informed respecting this matter.

2137. One of the most experienced magistrates in dealing with matters of the kind is Mr. Raffles, of Liverpool, whose name is almost a homeword in dealing with maritime difficulties? Yes.

2138. Do you think such a Board would be acceptable here;—the Marine Board to continue to deal with executive matters, and all questions relating to collisions, wrecks, loss of life, cancellation of certificates, abandonments, and damages should be dealt with by a competent court, presided over by a legally-trained man with the assistance I have spoken of? It might be accepted here if our legislators thought fit to make such an alteration, but I do not think it is necessary.

2139. Will you tell us something about the rate of wages paid by your company on the coast for masters, mates, firemen, and engineers? I shall be very glad to furnish the Commission with a return if they would let me know what information they require.

2140. Can you make any suggestion for the improvement of the pilot service? No; we have not much concern with them. Most of our masters are exempt. I would like to say this: That after all my experience with the Marine Board, which has been a long one, I have found that, as far as routine work is concerned, we have much less trouble now owing to the excellent administration of the Marine Board, than we had in the early days, that is to say with regard to the issue or extension of certificates, or anything that a ship-owner may require. We find that the Marine Board now-a-days are willing to meet us and do anything that is reasonable, at the same time safeguarding the interests of the public. I think the administration of the present Marine Board under Captain Hixson is excellent so far as all the routine work is concerned.

2141. The routine work is simply the work of the office? Yes; Captain Hixson, having had a long experience, and being disposed to meet the ship-owners in every reasonable way, has succeeded in giving general satisfaction so far as I can learn.

2142. It has not been your ill-fortune to have a case before the Board? Yes; I can speak without prejudice, for most of the cases recently decided by the Marine Board have been decided against us; but nevertheless I recognise that the Marine Board have always endeavoured to act impartially, and I think it is the fault of the persons who elect the retired ship-masters if they do not elect capable men.

2143. I do not think there is any desire to reflect on the members of the Board;—we speak of the Board as a whole? I have no feeling that any injustice has ever been done, yet we have never received any favour from the Marine Board.

2144. *Mr. Wilson.*] Have you ever given attention to the scale of salaries they pay? No; I have given some evidence before the Commission to inquire into the Civil Service with regard to the wages paid by our company at that time. My evidence is printed in the report. Some comparison was made at that time between the wages paid by our company and those paid on the "Captain Cook."

2145. Take the "Captain Cook." The master gets £416 a year, and 18s. a week for victualling;—what do you think of that salary? I think it is very large. Considering the services rendered, and the services rendered by the masters in our trade, I think the pay is very high.

2146. Take the man who has the care of the lightship down the harbour. He gets between £300 and £400 a year;—what do you think of that? I think that is too much. Still you must give what you consider a fair salary, so as to have a vigilant man in charge.

2147. Remembering that he is tied to his post there? Yes; of course, you should give more salary than the man would command in the open market.

2148. Is a salary of between £300 and £400 a year for the master of that ship high, in your opinion? I think it is rather high. Is he victualled as well?

2149. No; that includes everything? Of course, he is tied down there. I think about £300 would be ample remuneration.

2150. He is not tied down much; he has a boat's crew there, and can get up to town in the daytime? A man like that receives as good pay as one of our masters who has been many years in the service, and the only difference is that the master of one of our vessels is victualled as well; in fact, we pay some of our captains much less.

2151. The duties cannot be compared? No. In fact there is not much responsibility; it only requires a man to be faithful, sober, and vigilant.

2152. It does not require any professional knowledge? Not at all. He has only to keep his lamps and himself in order. Of course, it is better to be liberal to a faithful servant, but still I think the remuneration is high.

2153. Is it your opinion that with pilots, boatmen, the men on the lightship, and men in similar positions, the Marine Board should err on the side of liberality in the matter of salaries, and that they should be well paid within reason? Yes.

2154. Do you think that £416 a year and 18s. a week is too much for the master of the "Captain Cook"? Yes, I think so, considering what men of equal qualifications obtain in other services.

2155. What do you think is fair pay for a boatman? I have not much knowledge on that subject.

2156. If you had to employ a boatman to row about every day of the week, including Sunday, what would you pay? £2 2s. or £2 10s. a week. That is putting it down at the commercial level, you know. He would be considered pretty well paid at that.

2157. They are not victualled? I mean without victualling.

2158. As a matter of fact, they begin at £96 a year, and go up to £144? There is no necessity to pay extraordinarily high wages to those men, unless they have got extremely hazardous work to perform.

2159. Do you consider the work very hazardous? I do not know the nature of the work. I am speaking of an ordinary boatman in the harbour.

2160. This is a boatman in connection with pilot duties, putting pilots on board ship, and taking them off outside in the open sea? I think a man like that ought to be better paid than a man who is employed in smooth waters. My idea was simply for boatmen in the harbour.

John See, Esq., M.L.A., sworn, and examined:—

2161. *President.*] We understand that you are prepared to give us information which will be very valuable to us;—what is your name? John See.

2162. And your position? Member of the Legislative Assembly and merchant.

2163. I think you are prepared to give us some information about the subsidised tugs in connection with the Marine Board on the rivers? I think the tug service ought to be under the control of the pilots, and have always thought so. The object, no doubt, of these tug-boats was to assist sailing vessels and steamers, so that greater facilities could be given to the settlers on the various rivers. The intention was a good one, but I do not think it has worked satisfactorily, for the reason that the information which captains of steamers desire, and which they ought to have in the freest possible manner, is sometimes difficult to get, because the tugboats are not under the control of the pilots; so that, although the pilot can ask to be taken out to examine the bar, and that sort of thing, he has not anything like the control he would have if the tug were made part of his business. I have known cases on more than one of the rivers where the pilot and the captain of the tug were at variance, and consequently the captain of a vessel trading to the river could not get the information from the pilot or from the tugboat captain that he sought to get. These bars, particularly the Bellinger, the Nambucca, the Richmond, and the Manning are very treacherous, and they vary almost with each tide; and it is necessary that the captains of the vessels that go to those rivers should have the fullest information, and very often the captain of an ocean-going boat would be largely benefited if he could go on board the tug himself with the pilot to sound the bar for himself, and a great many accidents would be avoided if that were so. I am speaking with very great deliberation. I do not wish to charge the captains of these tugboats with neglect of duty, but I think the whole system is wrong in that respect on all the rivers that have a pilot and crew of four men. They have not got very much to do, because when it is rough the pilot cannot sound the bar, and when there is a lump of a sea on he cannot take his boat. The tugboats are built so that they can take the bar at any time, unless it is extremely rough. The principal work in connection with navigation is done by the tugboats, as they are the instruments used for sounding the bar. What I think ought to be done, and it would be a large saving, would be for the Government to provide an efficient tug on each of the rivers, and put the pilots now on those rivers in charge of the tugs, using the present pilots' crews to man the tugboats, for which purpose they would be ample. I am quite sure there would be a considerable saving, and a very much better service rendered to the ship-owners, and the greater the facilities afforded to the proprietors of steamers the more economically they can work their business and the cheaper they can carry the produce for the people.

2164. That would practically mean a help to the settlement of the Colony? Yes. There has been an enormous loss on these bars. It is a dangerous business, but a great many of the accidents could or would have been avoided if these tugboats had been worked on a proper system. I gave Mr. Alt an idea of the kind of evidence I could give, and he has already given you some of the information I asked our office to afford; but I would like to point out that, in addition to the Government subsidy of £1,750 at the Richmond, the North Coast Steam Navigation Company paid the tugs £1,025 in 1896. Some of that would go to the Government if they had control—not the whole, for the charges are excessive. It very often happens that steamers get ashore whilst in tow of the tugs, and the services which are rendered afterwards, such as laying out kedges, and various other things necessary to get the boats off, are all charged for at a very high price. The North Coast Steam Navigation Company paid £1,025 to the tug in addition to the Government subsidy, and there was also an amount from other people, the whole making a very large sum. The more we have to pay, the more we have to charge, and, therefore, it comes back to first principles, and the persons who patronise our boats have to pay more than they would under other circumstances. The system I propose would give us a better and more efficient means of ascertaining the state of the bar. I gave my cordial support to having the tugs on the rivers, because, unless the Government took it in hand, there is not enough work on any of these rivers to pay the tugboat without assistance. And, further, the tugboat would suffer, and a very much higher rate would have to be charged by the tugs; but if the pilot at each river had charge of the tug, and the latter were manned by the pilot's crew, I think the saving would be fully one-half. When I was Treasurer I mentioned this matter more than once to Captain Hixson, who seemed to think that the cost of maintenance would be larger than the subsidy which is paid for the tugboats. I do not think so. The life of a tugboat like that at the Richmond would be at least fifteen years, I think, for the original engines, boilers, and hull; but then, wooden boats would be more suitable than iron, and the only extra expense would be to copper them once in four or five years. Considering the sum the Government pay in subsidies, and the extra cost of maintaining a crew in addition to that, I think the Government could effect a very large saving, and give the public—the people interested—a very much more efficient service. I think the tugboats ought to be at the disposal of the captains of the various steamers or sailing vessels at any time it is practicable to use them; and, as these boats are made suitable for bar harbours, there is no danger whatever in taking the bar with them. They are short and have plenty of power. There is danger, however, in attempting the bar with a steamer like the "Tomki" or the "Burrawong." Of course pilots stationed at the Heads would confer with the captains of the steamers, and they would have a very much better knowledge as to whether it was prudent to attempt to even try to sound the bar when it was very rough. When it is shallow they cannot attempt getting out over these bars, because the wave would be from 3 to 4 feet, and the depth of water on the bar about 6 feet, and the steamer would only have about 1 foot under her. The very object of giving the subsidies was to give facilities to steamers to get into the rivers. I do not think the tug services as capable and efficient as they ought to be, unless they are absolutely under the control of the pilot, and then the pilot would be under no compliment to anybody for the tug, because practically it will be his boat. The captain of the tug gets the subsidy, but does not do the work. The pilot has no absolute power to say that the captain of the tug shall take him out to the bar, and when he asks, the captain may say, "It is not prudent to attempt it, and I am not going." In other words, this is a money-making business, and it ought not to be. The Government should make a charge; that is only fair. I am quite sure that, with what they save, and with the towages they would earn, the Government would make an enormous saving on the whole service. The proper way would be to provide suitable tugs for the various rivers, and there should be a capital account, from which so much would have to be written off every year for depreciation.

2165. How much would you say? About 10 per cent. We reckon the life of a steamer—a coasting boat—at about ten years, and I should not think a boat would pay unless I could write off 10 per cent. every year, because at the end of ten years she would want new boilers, and at the end of that time to put her

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her in good repair would cost about half her original cost. The steamboat business is not like any other business; every trip you make the boat is being depreciated; she is sinking under your feet.

2166. Do you think 10 per cent. would be ample? Yes. If you started this tug service with £20,000 worth of steamers and wrote off £2,000 per annum, you would make ample provision. I question very much if that would not even provide for the loss of a boat now and then.

2167. Mr. Allt told us 5 per cent. would be sufficient? You see these boats are not very hard-worked; but yet they might get a bump on the bar and you might have to copper it. It would be very prudent indeed to do that.

2168. Have you any idea what it would cost to maintain one of these boats? You would need an engineer; the pilot would be captain. You have four men, and one, or perhaps two, of these could be dispensed with, as, if you had the tug, you would not want the pilot boat, and its crew could be used on the steamer when wanted. I think £20 a month would cover the extra wages. Then there are the coals, which are not a great item, and the ordinary steamboat requisites, oil and so on. I should think the extreme would be £50 a month for everything, including all the extras. If the men who are now manning the pilot boat are not suitable for the tug, you could easily get men who could fire the boat and pull an oar whenever necessary. The men would be better off if they had something to do. It is an awful life to live there week after week and have nothing to do.

2169. Your idea is that if we get Government tugs the wages now paid to the men on the stations, the subsidy, and the receipts obtained from towage would far more than counterbalance the direct expense the Government would have to undertake in connection with the tugs? I think there would be a saving of 50 per cent. and a far more efficient service. All my captains agree that the value of the service is beyond doubt. These men speak from experience. They carry their lives in their hands. They know how necessary it is that they should have the best advice. In saying this, I am not complaining about the masters of the tug-boats. They cannot very well serve two masters. If I were one of them, I think I would try to get as much subsidy as I could and do as little as I could for it; and if there was any probable extra risk in sounding the bar, the chances are that I should put it off until the next day. Sometimes risks are taken which are not always advisable, and very often accidents happen as the result of taking that risk.

2170. What pilotage rate do you think would be fair? I should fix it as low as possible, because the lower, in reason, you make it the oftener the tugs will be used. Suppose I was the proprietor of a steamer. If you charged £10 for the use of the tug the chances are I should not take her unless I was compelled to do so; whereas if you charged me £2 or so I would use her every time, because I would not take the risk. Even if you do not put a rope on a steamer the tug is there to give a pull at the stem or the stern, as the case may be. When a vessel gets stuck on a bar the sand immediately begins to settle round it, and the waves get on it, but if the tug is handy she would pull the vessel off in a few minutes. The charge would have to be varied according to the size of the ship.

2171. You would charge a tonnage rate? Yes; I think so.

2172. What would be a fair tonnage rate? I really do not know, but I think about 2d. a ton, or something like that.

2173. That would be much better than a uniform rate, which would be levied on every kind of vessel alike? I think so. The cheaper, in reason, the charge is, the more likely it would be that the tugs would be used. It is not so much a matter of the charge as a matter of the convenience which would follow. When one of our steamers gets ashore we have to pay enormous sums for services rendered by a boat subsidised by the Government for the purpose of assisting steamers—services which ought to be included in the subsidy which the Government pays. When a man is in the water he does not stop to ask what is the charge for a lifebuoy—it is a matter of life and death—and so with the captain of a steamer when he gets in danger. It is only when it is all over that you find they are going to charge a stiff price. The Government will not want to make money out of people's necessities. If the tug is there it is only reasonable to expect that if a steamer does get into distress and wants a kedge that it will be done without any charge.

2174. Do you think that dissatisfaction is felt among all the sea-faring people;—do you think you are voicing the general experience? I am so far as this country is concerned, and while I have been connected with this company, which is for the last twenty years. Our captains all think it would be an immense advantage to them if the tug were controlled by the pilot. Here is a letter from Captain W. Nelson, master of the "Wyrallah":—

I beg to state that in no instance have I found the present system to work satisfactorily. There is always a certain amount of bad feeling between the two services. On one occasion I arrived off a bar. Another steamer was standing off and on, flying a signal for the tug. The tug came out with the pilot on board. The pilot hailed me, gave me the depth of water, and directions for inside channel. I, therefore, steamed in, and the tug lost a towage. This is the sort of thing that causes enmity between the two, and it is certainly against the best interests of the shipping that it should exist.

[*Tide Appendix 42.*] I have not seen any of these letters previously. When Mr. Powell asked me if I would care to give evidence, I thought the matter over, and came to the conclusion that I would be very glad to do so, and I asked the captains to give me their opinion about the present service. That letter is from the master of the "Wyrallah," Captain Nelson, a most capable man, who has been trading here for over twenty years. Here is another letter from Captain Wood, who has been a master on the coast for the last quarter of a century. He has been to the Richmond, Macleay, Clarence, Manning, and Port Macquarie. On all those rivers the pilot would not be liable to make a mistake if he had control of the tugboat. If a tugboat-master gets the captain of an ocean-going vessel into difficulty there is no inquiry into the tugboat captain's mistake, but the other poor fellow is dealt with. I would propose that there should be no tugboat. It would be the pilot-boat, and there would be no money-making business. One ship-owner would not have advantage over others. There would be no partiality at all if my rivals have the same facilities and rights as I. These rivers are peculiar. In the wet season the bars get cleared, but in the dry season they always shoal, and we have always got some difficulty, as at the present time. At the Macleay at the present time we have to get stuff in over the bar with a drogher—a shallow stern-wheel boat. There is the possibility of the tugs not keeping the best tackle, and if there is one thing which needs to be good more than another in this service it is the tow-rope, for if the tow-rope broke on a bar the boat would be in a fix.

2175. Do they ever have a spare tow-rope? I think so. Here is another letter from the captain of the "Electra." [*Vide Appendix 42.*] You see they all go to prove the same thing. Here again is a long
one

one from the captain of the "Coraki," who trades to the Manning. He states: "In my opinion, the pilots ought to have full charge of the tug-boats on all the rivers." [*Vide Appendix 42.*] I want it to be distinctly understood that I am not opposing the owners of the existing tugs, but am speaking for the good of the people on the rivers—in the interests of the public.

John See,
M.L.A.
21 May, 1897.

2176. I can see that steam proprietors would rather lose by it than gain;—in some respects it would enable sailing vessels to compete with them on more even terms? There is no doubt that the tug service is intended to compensate the people to some extent for the disability they labour under by living on these rivers under difficulties. There is no doubt these tugs have done good service, but I am quite sure that a great deal more can be done.

2177. *Mr. Wilson.*] Is it true that a premium is offered these tug-masters to allow vessels to get into difficulties? I do not know.

2178. They would earn more? Yes, they would. I have never come into contact with a man who would be bad enough to do that.

2179. He would be a "wrecker," would he not? Yes, he would. Speaking as one of the largest proprietors and managing director of the North Coast Steam Navigation Company, I should not in the least object to pay for services rendered, because no price charged for towage would be anything like the penalty that would follow one of the vessels getting ashore. That is one of the greatest calamities that can overtake a ship-owner. They disappoint their customers and they lose their ship for a time. During the time I was ship-owning I think I lost £25,000 through strandings.

2180. If the pilots had control of the tugs they would be better able to attend to the sounding and marking of the channels? Undoubtedly. There is a lot of work on the rivers. Take the Manning for instance; they have a great deal of trouble between Taree and Wingham, and they have dredged out what they call a channel by taking out the shingle, and when there is a big rush of flood-water it sometimes spills those shingles into the channel again, and before anything can be done at all somebody has to go out and examine the river and sound it. The pilot is the right man to do that, and the tug-boat ought to be at his command without any conditions, whereas now he only gets it as a compliment. The captain of the tug may say, "I expect a vessel in to-day, and cannot let you have the tug for the work you want to do." The pilot should have the tug, and could arrange his work so as to go up the river when the tide was low, and come back and pull in a vessel when the tide was up.

2181. *President.*] Do you think a steam-tug owned by the Government could do a great deal of other work, such as marking the channels, fixing buoys, and helping dredges? I daresay she could. In one of the services one of these tugs is supposed to go to the Solitary Island with provisions once a month.

2182. What would be the wage of a captain of a coasting vessel? The average wage of a captain is about £20 a month and his food, but some of them get more.

2183. What would be the average wage of an A.B. P. £6 a month and his food.

2184. And an engineer? From £16 to £20 for first engineer, but they are paid according to the size of the ships. That is the wage rate on the coast.

2185. Have the seamen to assist in unloading the ship? Yes. When in port they are supposed to work eight hours. If they start at 6 they work till 4, with two hours for meals; and then if they work beyond that they are paid for overtime. At sea they work in four-hour watches.

2186. What do you think about the constitution of the Marine Board? I think that perhaps the Board should be a nominee Board entirely. Three men would be ample—a first-class nautical man, a first-class engineer, and a man something like one of our District Court Judges—a judicial man—as Chairman.

2187. And you would thus have every interest really represented in such a Board? You would get rid of all that trouble about ship-owners, sailors, engineers, and merchants electing men to the Board. After all it is the wish and intention of all right-thinking men that each accident or misfortune should be judged upon its merits, and not by way of bias or prejudice, and it seems to me that two men are as good as two hundred. You might as well say that you require two judges on every case.

2188. Do you think there are conflicting interests on the Board? Yes. It is the ship-owners' interest to get the best men they can to command their boats to protect their own interests, because the better the men they have the better they will succeed. It is to their interest that accidents should be minimised as much as possible by having proper discipline, by properly providing the ships with the necessary requisites. Then if an accident happens the Board want to know who is to blame. The inquiry is not for the purpose of punishing the ship-owner, but to prevent the recurrence of the accident. The inquiry may lead to an improvement in navigation, and thus prevent such an accident happening again. A nominee Board would remove the friction that has occurred from time to time about the election of members to the Board. If you had a man like Captain Edie, for instance, on the Board I do not think anyone would question what he did. There are others, but I mention Captain Edie as one, not for any special reason, but as a capable practical man. Then another representing the engineering department, and a judicial man, and I think you would have a Marine Board that would give satisfaction.

2189. Do you think that Board would obtain the confidence of the whole country? If you had a Board with sailors and owners and so on represented, it would be a sort of political thing. I take it that the Marine Board is not intended for that sort of thing at all; there ought to be no feeling, no partiality. I believe these men have done the best they can in the inquiries they have conducted, but the agitation that has been going on has created a lot of unnecessary feeling, and it would be better to remove the Marine Board from the possibility of any question of partisanship.

2190. Having these class representatives on the Board would appear to be subversive of all idea of calm judgment? If you had these representative seamen on the Board, you would not be likely to get unprejudiced judgment. The laws say that a ship-owner must have a certificated captain, engineer, and officers, and if there is neglect of duty the Marine Board have the power of punishing those in charge. The ship-owner is only an item after all, he is no more than the public who travel in his ships. If he is a sensible man, he knows it will pay him better to equip his ship in the best way. If the public believe that I am careful in the selection of the men in my steamers, and look after my steamers all I can, they will trust me; but it is just as much to the interest of every individual man that everything should be done fairly in the investigations, as it is to mine or the underwriters. Underwriting is a business, and I do not see why underwriters should not be represented, if there is to be all-round representation. Their interest is greater than that of the owners, if there is a loss. But I do not see why any special interest should be represented. There should not be the possibility of anybody having his sympathies influenced one way or the other.

- John See,
M.L.A.
21 May, 1897.
2191. It has been suggested that the judicial body should be a tribunal, apart from the Marine Board? I do not see why they should not constitute the Marine Board.
2192. It has been suggested that the Marine Board should confine itself to management, and that there should be a Judicial Court? That would be too cumbersome, I think. If there is a collision, the man in fault brings a big liability on his owner. Suppose a case came before the Marine Board, and they had to refer it to the Court, that might not settle it. It might go on again to the Supreme Court.
2193. Suppose the tribunal could move about and open an inquiry at any point? That would hardly be necessary.
2194. *Mr. Powell.*] The idea is to separate the judicial from the executive, and have a Board to deal with certificates of competency, examination, and so on? You must have all your officers. You have a man to put the various men through their facings. On the certificate of "Mr. Jones" that "Mr. Barling" has gone through his examination, and is fit to be appointed a captain, he gets his certificate from the Marine Board. You must have a man like that. You must have a man like Mr. Cruickshank. You must not lessen the stringency of examination, rather increase it. I think that every steamer, passenger or otherwise, ought to have a certificate. The law properly compels the owner to get a certificate twice a year that his vessel is fit to carry passengers. The anomaly is that a vessel carrying cargo need not undergo that examination, and can therefore go outside the Heads with bad boilers and bad engines. The sailorman's life ought to be considered quite as much as a passenger's life. There is no power to condemn such boats. They should be examined every year, and Mr. Cruickshank should be able to say to the captain, "Your boiler requires repairs." The inspector should be able to come and say, "Your masts are all wrong," and have them put right. That ought to be incorporated in any future Bill. No Bill will be effective unless it makes provision for all steamers to be under the supervision of the Government.
2195. The Board of Trade refer inquiries into wrecks, abandonment of vessels, &c., to a special tribunal, and the ordinary work of issuing certificates and examining seamen goes on under the Board of Trade? I do not see that there is any necessity to separate it. The President, or anybody appointed by the Government under the Act, would sign the certificates under the assurance that the examination had been gone through. That is a small matter. The most important thing is to get these inquiries conducted by impartial people.
2196. *President.*] For the judicial business you would have a District Court Judge as President, and two competent assessors; but for executive management you would have a man like Captain Edie in charge of the Department;—do you think that would gain the confidence of the whole community? Yes; before a man can get an engineer's certificate he must first be a mechanical engineer, and then must serve a certain time before getting a certificate as marine engineer. He must have a certain amount of practice before he gets his certificate. He must go through a certain course, just as you must go through a certain course to get a degree at the University. You do not want to impose unnecessary restrictions; but you do want to conserve life. There is a possibility now of an owner running his boat in such a condition as to put life in danger. All these things ought to be under Government control, not for the purpose of restricting and interfering with people, but simply to secure safety. Then, I think the effect of constituting the Marine Board in that way would be to get rid of the irritation that has existed from time to time. This party has wanted something, that party has wanted something, and there are discussions in Parliament. If I get up and advocate my opinion, it is at once said I am advocating the interests of steamship owners. If everything were done in a slipshod way, I should have no security myself. It is much more satisfactory to everyone if there is regularity. Then another man, representing what is called the Labour Party, gets up and says, "You are representing the interests of the shipowners; I must have my say." I think it would be absurd to have a Board composed of master, sailor, and engineer. It ought to be exactly like the courts of law—judicial. If a man commits a misdemeanour he is tried, and, if proved guilty, punished by the law. The Marine Board should be like that. There is a law to guide them, and the infringement of that law is to be followed by punishment, the purpose of which is to prevent others from making the same mistake. I have given this matter a good deal of consideration. This is a public matter entirely, and I have been glad to do this, not from personal motives, but for the good of all.

SUNDAY, 30 MAY, 1897.

[At the Lighthouse, Yamba, Clarence River.]

PRESENT:—

GEORGE ALEXANDER WILSON, Esq., J.P.
JAMES POWELL, Esq., J.P.

Henry McAuley, Pilot at Yamba, sworn, and examined:—

- H. McAuley.
30 May, 1897.
2197. *Mr. Powell.*] How many boatmen have you? Five—three at £126, that is McAuley, Quinn, and Freeburn; Carr at £106, and Law at £96.
2198. And each of the men is allowed £18 a year for value of quarters? Yes.
2199. I presume they all do the same kind of work? One is told off for the lighthouse work, that is McAuley. He also looks out.
2200. Is he alone in the lighthouse without assistance? Yes.
2201. Then you really have four boatmen, and they all do the same work? Yes.
2202. What is the reason for the difference in the salaries—the lowest is £96 and the highest £126? The £96 man only came lately, and has had no increase. The other men got increases up to the maximum.
2203. They entered at £96? No; one only entered at £96, the others were at it before.
2204. Law had the misfortune to come on when the increases were not allowed? Yes.
2205. And they all do the same work? Yes.
2206. Have you a lifeboat here? We have a whaleboat which we made into a lifeboat with plenty of cork and air-tight tanks.
2207. Has she been used? No.
2208. Has she been out for exercise? Yes.
2209. Do your boatmen man her? Yes.
2210. Do they receive anything for that service? No.

2211.

2211. Do you receive anything for the lifeboat? No.
2212. Would you consider it your duty to go in that boat if required? Yes.
2213. You have a tug here subsidised by the Government? Yes.
2214. The subsidy is £750 a year? Yes.
2215. Do you find her servicable for the work she has to do? Yes.
2216. What is her power? I could not say, but she is really a good tugboat.
2217. How long has she been here? Since the 1st of August.
2218. What boat was here previously? The "Dunniskey."
2219. How many hands are there on board that vessel? Three belonging to her.
2220. Describe them? Master, engineer, and deck-hand and fireman combined, the one doing both duties. The captain also has his sou there most of the time, but I do not know whether he is paid.
2221. Is that the whole of them? Yes.
2222. Do you know what wages they are paid? The captain and engineer get £10 a month and 5 per cent. on all she earns; the deck-hand £6 a month. There are, sometimes, another man or two, but I only know of the three men belonging to the boat.
2223. When a vessel has the services of the tug, the "Conqueror," do you charge pilotage? Yes, if the master is not exempt.
2224. And they charge for towing? Yes.
2225. What rates do they charge? Fourpence a ton in and 4d. a ton out.
2226. Do they charge those rates under the present Act? Yes.
2227. Are they authorised to collect tonnage rates or pilotage rates? A tonnage rate of 4d. a ton, and the river towage is extra on that.
2228. I thought they could charge only the pilotage, and you say they charge 4d. a ton;—do you charge 4d. a ton? No, 2d. a ton; but they still charge 4d.
2229. In and out? Yes.
2230. How many vessels had you in during the period since 1st January this year? Twenty-seven.
2231. How many of those employed the "Conqueror"? All.
2232. What would their tonnage be? There were thirteen inwards and fourteen outwards from the 1st January to date;—2,067 tons inwards and 3,157 tons outwards.
2233. Does that account for the brigantine up the river? Yes; that includes her.
2234. That is 5,764 tons? Yes.
2235. From that we can form an idea of the revenue they are getting? Yes; but that does not include the river towage.
2236. Do they tow far up? Mostly to Martin's Point.
2237. What do they charge as a rule? According to the size of the vessel—£2 or £3.
2238. £3 would be about the highest? Yes.
2239. Has it ever occurred to you that it would be better for the Service if you had a suitable tug entirely under your own control, belonging to the Government, manned by your own men; I do not mean a "Captain Cook," but a suitable, handy vessel of sufficient power, with an engineer under your command, and supersede the employment of these boatmen as boatmen, and utilise them on such a vessel as I have suggested? No; it has not.
2240. What do you think about it now at first sight;—of course, the vessel would earn something for pilotage, and such like, and would be very convenient for harbour purposes generally, for putting down buoys and moorings, and for sounding the bar? I do all that with this boat.
2241. But I am supposing that you had a boat under your own charge? I do not see why we could not work her with the station crew.
2242. You could work her;—you have been an old salt? I could work her.
2243. Do you think such a proposal advisable;—would it work? I really do not see why it should not. Of course, it will be throwing all the responsibility on the Government.
2244. When you act as a pilot all the responsibility is thrown on the Government? They are responsible for my action, but I do not know whether they would be responsible for the tug if anything happened at the time.
2245. But you are in charge of the tug at the time? She is in my charge and supposed to do as I order, but the master of the tug always handles his own boat; I do not handle her. He is supposed to be under my control and do as I tell him, but he steers the boat and works it; and, of course, if I give him an order he obeys it.
2246. Have you ever had any difference of opinion with this man? As regards working the boat, no.
2247. In any other way connected with the business? Yes; we have had a little difference.
2248. A little friction? Yes; he has been rather peculiar at times.
2249. Do you not think that would be all removed if you had this vessel yourself? Yes; all that would be removed.
2250. There is no reflection on you or your men when I say you are not fully employed now? No, sir; I wish we were. We would all be far better off. Time would go away very much better.
2251. If you had this boat under your control, and these men incorporated in that service, do you not think it would give them more to do, and they would take more interest in what they had to do? Yes; it would give them a lot more to do. For instance, we could keep the boat in nice trim.
2252. You think it might be attempted then? There is no question about it. It can be done all right by my crew, but the responsibility would come on the Government more. I do not see anything else.
2253. *Mr. Wilson.*] Would the Government have more responsibility than the present owners of the tug have?
2254. *Mr. Powell.*] No more responsibility than Mr. McAuley would have in his own boat.
2255. *Mr. Wilson.*] Are your boatmen satisfactory? Yes.
2256. Are they good men? Yes.
2257. *Mr. Powell.*] How long is the lightkeeper on duty? Well, the lamp burns pretty well all night when she is set and trimmed properly.
2258. Does he remain in the lighthouse? Yes. He is on duty pretty well all day, cleans the lamp in the morning, and keeps a look-out.

TUESDAY, 1 JUNE, 1897.

[At the Court-house, Ballina.]

PRESENT:—

GEORGE ALEXANDER WILSON, Esq., J.P.
JAMES POWELL, Esq., J.P.

Robert Adie Fraser, Pilot at Ballina, sworn, and examined:—

- R. A. Fraser. 2259. *Mr. Powell.*] You are the pilot at the Heads, and you are also sub-collector of Customs, I believe? Yes, sir.
- 1 June, 1897. 2260. How long have you been here? Since 1st March, 1890.
2261. At what salary were you appointed? £150, with a stipulated increase of £10 per annum.
2262. And that increase you received up to £180? I received it up to £180. It was stopped in 1893.
2263. Then you have quarters? Yes.
2264. Valued at £25 a year? Yes, so I believe.
2265. What did you receive for your Customs work? £52 a year up to July last year.
2266. You have Parker;—he is down here as boatman? They all rate as boatmen.
2267. But Parker is the lightkeeper? Yes. I moved him from the boat to the lighthouse some years ago.
2268. Does he give the whole of his time to the boat? Yes, he is entirely there. He has two lights,
2269. There is Graham, the signalman;—is the whole of his time occupied as signalman? Yes.
2270. He is always on the look-out? Yes.
2271. Then you have four other boatmen at salaries varying from £126 to £106? Yes, three at £126, one at £116, and two at £106.
2272. I suppose they are all doing the same kind of work? The same kind of work, and they are the same class of men.
2273. And their quarters are valued at £18 a year? Yes.
2274. Do you find the trade on the river increasing? It has been of late, with steamers; but sailing vessels are decreasing, not in number, but in size.
2275. What draught of water can you get over the bar now? About 8 feet, but I think I would only get about 7 feet to-day. There is so much sea; it is shifting and changing continually. I shifted the beacons three times last week. We have had exceptionally heavy seas these last ten days. The channel is working north.
2276. Do you use the "Protector" for sounding? Yes; it is the subsidised boat.
2277. Is she an efficient boat for this particular work? Yes.
2278. She is all that is desirable? Yes, because you cannot get a deeper-draught boat with the same power.
2279. What is her draught? Six feet six inches.
2280. How is she manned? Four is the number she generally carries, master, engineer, fireman, and deck-hand.
2281. Have you any idea how they are paid? I think so.
2282. The master? £4 a week.
2283. The engineer? £14 a month.
2284. The fireman? And the sailor, I think, get £2 10s. a week. I am not certain about this; they do not come under me.
2285. And the deck-hand? Would be the same as the fireman.
2286. And do they all find themselves? I suppose so, but I am not sure of it.
2287. During the time the "Protector" was away what boat took her place? A little boat called the "Emma Pyers."
2288. When this "Protector" is working on the service, does the master work under your instructions? Only when I order, for sounding the bar. I have no jurisdiction over him as to towing vessels.
2289. Suppose you are in charge of the tug, bringing in a vessel as pilot? Then, of course, he follows my instructions.
2290. At other times he is free to do as he pleases? Yes.
2291. Do you know anything about the charges he makes for the service of the boat? Fourpence a ton.
2292. Is that the contract made with the contractor? Yes; I have a copy here. [Vide Appendix 43.]
2293. Is that the regulation? It is the regulation, not the contract.
2294. This regulation fixes the rate? Yes.
2295. Fourpence per ton each way? Yes; that is if they tow.
2296. And if the vessel has your services as pilot, the pilotage is in addition, I suppose? Yes; it was reduced lately.
2297. Have you any idea what the earnings of the tug are? I have a slight idea. In 1896 she must have got £1,500. That is outside of what she received from the Dredging Department; I do not know what she received from that.
2298. Other work? I do not know the charges for removing dredges, and so on. At one time I know they charged £10 for towing to the North Creek.
2299. How many leading lights have you got on the river? Eight pairs.
2300. By whom are those attended to? By people living on the farms near the lights.
2301. And they supply the oil? The oil only; we supply the wicks.
2302. Do you visit them? Yes; about twice a year I pick a time to go up and paint the beacons. I want to go up now.
2303. Do you ever hear any complaints about their not being properly attended to? Occasionally from some of the masters. They are only small lamps, and are apt to go out on a blowy night.
2304. I suppose the steamers do not require your services at all? The masters are all exempt.
2305. They never ask for your services? No. Some time ago, in 1891, I had a lot of piloting to do.
2306. I have a return here of three months' work taken from your own log, and I see that the sailing-vessel work was really very small? Very small.
2307. And they are all boats of small tonnage? There was only £148 last year for towing them, which the "Protector" did.

2308. You did not get anything at all? I got nothing last year; only about £5 for a launch that came from the Clarence. R. A. Fraser.
2309. Your salaries and contingencies, and one thing and another, go into about £3,300 a year? I suppose so. The leading lights are £39 a year each, and there are eight sets; that is £312. 1 June, 1897.
2310. From the experience you have got since you have been here, do you think there would be any advantage in the Government owning their own tugs, putting you in charge as master, and utilising the services of the boatmen in connection with the vessel, which would be powerful and of light draught, suitable to the business;—did you ever have any friction with the tug-master? There is always a certain amount of friction.
2311. If all this were in the hands of the Government, do you think it would be better for the service? I am always there now at every tide—twice a day sometimes.
2312. I suppose your men are not fully employed? We could not do with any less.
2313. But if they were employed on a tug, the property of the Government, for which you would be responsible, their services would be better utilised? Yes.
2314. Have you given any thought to this as a proposal that might be made? Yes.
2315. What is the result of that, speaking generally? It would cost a big sum to begin with.
2316. For the last ten years the Government have spent more than £70,000 in subsidies; that would go a long way towards the cost of purchasing boats? There is no doubt about that.
2317. What do you estimate the value of the "Protector" at? She is an old ship. Here is the master's report, which came from Sydney last week. She is all patched and repaired. She was built in 1885, and has been twice renewed since then. [*Vide Appendix 44.*]
2318. Do you think a vessel equal to her in all respects could be built for £7,000? Yes, I think so.
2319. If a boat cost £7,000 she would be up to date, and have modern engines? Yes.
2320. The boatmen's services could be so utilised that there would be a considerable saving? Yes; but you would require a couple of men besides an engineer and a fireman.
2321. You have four men now, and employment might be found elsewhere for any who might not be wanted on the tug? Yes.
2322. Has the "Protector" been used much by the Government Departments other than the dredge service for towing? No. Some two or three years back we had a lot of punts come for the Government, and she has always towed them in, and she used to be employed in moving some of the big dredges, but now the Government have a powerful tug and use her.
2323. The class of vessel you want is to go outside? Yes; of course there is this to be thought of—the opposition. You would naturally make a stipulated price, and somebody else might come along and do it for less; though I do not think there is sufficient inducement for anything of that kind.
2324. So far, then, as you have given consideration to the matter, you think it would be an advantage to have boats of this description owned by the Government; it would be better for you and the trade? Yes.
2325. *Mr. Wilson.*] Mr. Powell asked you something about your relations with the tug-master;—you have had some trouble occasionally? I have never had sufficient to make a complaint; still there is always a certain amount of this, "All right, I'll be with you," and not doing it; never sufficient to report on.
2326. Has he refused to go out? I have frequently asked, and, of course, if there was a heavy sea on he would refuse.
2327. He, of course, looks after his own vessel? Yes.
2328. In your opinion, had you had charge of a good capable tug you would have gone out? I would have a look at it anyhow. It is some distance from here to the bar.
2329. Regarding this tug for £7,000, a vessel with modern engines would of course be very economical so far as coal is concerned;—do you happen to know what the saving per cent. would be in a modern steamer as compared with an old one? I do not know. The coal is a very small item. A vessel here would simply steam about three hours a day.
2330. A new vessel would be economical? Yes.
2331. Who is the owner of the "Protector"? A local man, Mr. Fenwick, was the owner, but he died last year.
2332. Have you anything to say regarding your own salary? I have been working here for a very small salary ever since I came here. I have lost £100 through that £10 per annum increase being stopped. I came in at £150 to rise to £275, but the increment stopped at £180.
2333. Did you come in with a special promise of increase up to £275? I did, sir.
2334. Is there any document to show that? The regulations.
2335. You contend that you had a special arrangement for these increases? I would not have taken the position but for that. I did, sir.
2336. *Mr. Powell.*] Were you in a steamer before? Yes; I have been in steamers since 1870.
2337. Have you any idea of what it would cost to work a boat like the "Protector"? I have never given that matter a thought, having no idea I would be asked about it. It would not take much to get a vessel of that stamp.
2338. There is insurance, and interest on the cost? The hawsers would be a big item—a 10-inch rope and a wire rope 3½ inches.
2339. I suppose the insurance on that boat would be pretty heavy? I do not think she is insured. The insurance would be 12 per cent., I think.
2340. That is why it goes badly with them to go out in bad weather—the boat is not insured? It is against her going out in bad weather.
2341. That is when she is most wanted? Yes.
2342. Well, if a boat cannot be used when she is most wanted, it detracts from her value, does it not? Yes.
2343. *Mr. Wilson.*] I understand that the Richmond River requires a steamer of a special class? It is a shallow bar. They have always had a paddle-boat, and they think they must have a paddle-boat. I think a twin screw boat would work it. In a paddle-boat the power is on top, while with a screw it is deeper.

[At the Office of the District Engineer, Harbours and Rivers Department, Ballina.]

Thomas William Keele, District Engineer, Harbours and Rivers Department, sworn, and examined:—

T. W. Keele. 2344. *Mr. Powell.*] The Government are paying £1,770 a year to the tug "Protector," and it is understood that the towage received by the owners in addition to that is about £1,500 a year; it is also understood that you employed this vessel occasionally, and paid an additional sum for towage;—could you give us an idea of what you paid during any period for towing to the "Protector"? Yes. I do not think we have paid more than £200 for towing since I have been here. That is for shifting the dredge during seven and a half years.

2345. Was she employed in any other way? No; we have our own tug here.

2346. *Mr. Wilson.*] Did you always have your own tug here? Not always.

2347. *Mr. Powell.*] The Government are paying the pilot and boatmen about £886 a year, and contingencies amounting to about £400, and the Commissioners seem to entertain the idea that it would be desirable to build special Government tugs for the pilot work, utilising the pilot as master and pilot, and using the boatmen, who are now not so fully employed as they might be, to man the tug;—it is thought that a better and more reliable service could thus be got, and at a less cost? I certainly think it would be more reliable.

2348. There is an idea that there is very often friction between the master of the subsidised tug and the pilot, and that such a state of affairs is very undesirable;—do you think that the sole control should be in the hands of the pilot? I do.

2349. A suitable vessel of light draught and proper power should be got? I have always been of the opinion that the tug service here should be conducted by the pilot, and that he should, with his men, control the tug. It would save all this friction, and you would certainly have a better service, and, I believe, a cheaper one. These boatmen are more than half their time doing nothing, whereas work could always be found for them on the tug.

2350. Do you think, from your own knowledge, that there has been friction? Yes; to my own knowledge. It is owing to Mr. Fraser being a masterful man that he has been able to hold his own. We will not stand any nonsense. He is a very good man. Fenwick had a good deal of influence, and used to threaten this man over and over again if he did not do so and so, he would shift him. Fraser often used to say to me that he did not know how far he might go, and asked me for advice about what he should do, and I told him to hold his end up, and he has generally come out on top. I think Mr. Fraser has shown a great deal of tact.

2351. So far as safety to lives and property is concerned, do you think the plan proposed is likely to be a good one? I think so, certainly. As it is now, in a case of emergency, he is the man to get them out of it. They certainly have a very good man on the tug, but he is not a trained seaman—he is a landsman. He is not a man trained all his life to the sea.

2352. There might be a difference of opinion, perhaps, about going out to sound the bar, and the master of the tug, representing the owner, might think it wrong to peril his owner's interests by sending the tug out, and the pilot might be of opinion that the tug could safely go out, but has no power to positively order? No; he has not.

2353. In the other case, with the command of the vessel, he would have all the responsibility and all the power? I have always been of opinion that that should be done.

2354. I suppose you have no idea of the cost of building these vessels? No; I have heard that the "Protector" cost £5,000.

2355. She is valued to-day at very much less than that? Yes.

WEDNESDAY, 2 JUNE, 1897.

[At the "Freemasons' Hotel," Lismore.]

PRESENT:—

GEORGE ALEXANDER WILSON, Esq., J.P.

JAMES POWELL, Esq., J.P.

J. F. O'Flynn, Esq., Mayor of Lismore, sworn, and examined:—

J. F. O'Flynn. 2356. *Mr. Wilson.*] We are a Commission to inquire into the management of the Marine Board. We understand you have some information to give us. Will you kindly tell us in your own way? My ideas are that, with a view to keeping the navigable waters of the North Arm, Bungawalbyn Creek, the South Arm, Lester Creek, and Cooper's Creek in a clear state for navigation, and to prevent the people from blocking the right-of-way with rafts of timber, that some officer should be appointed for the district, representing the Marine Board if you like, to see, when trees or snags drop in, that they are taken out at once, and not allowed to settle there and cause shoaling, involving much expense in dredging afterwards. It would answer our purposes if we had some officer of the Marine Board empowered to do that.

2357. Could you suggest any particular public officer? Of all the public officers I know here, Mr. Blakeney is the one who knows most about the duties. His duties as an officer of the Harbours and Rivers Department bring him here constantly. He is on this section of the river.

2358. Is he intimately acquainted with that section of the river? Yes; he has been here for about ten years. Most of his time at present is spent on the South Arm, doing some fascine work there. He knows all those places, and has assisted in snagging them all.

2359. The necessity for an appointment of that kind is that the pilot, who has to work from Ballina upwards, really cannot attend to this? He is never up here; I have never seen him once in fourteen years. His duties down there confine him to that place, and to looking after the buoys down there. No one can claim him. As Mayor of this town I never hear of shoal places in the river until they are sources of annoyance. Then we report it, either to Mr. Keele or to the Minister, and there is time lost; whereas, if this is looked to in its very beginning it will be much better.

2360. Is it possible that trees will block the place up, and that people will be blocked altogether from bringing their produce down? That has happened before now. A large tree would block any of those settlers.

2361.

2361. When that has happened, Mr. Blakeney, as an officer of the Harbours and Rivers Department, has been the man to be sent to remove it in all cases? In all cases. Those snags have been allowed to remain sometimes, no one reporting them, until they are really an obstruction and a perfect nuisance, and they have to be removed. If Mr. Blakeney were to do it at once it would save a lot of expense, as silt gathers round it, and they have to remove tons of stuff and drag it away with scoops, and have to get the dredge up here. There is a small dredge on the river. Those watercourses are well navigable now for the class of boats that go up there for sugarcane and other produce. We are very jealous that they should be kept navigable. I think it will be a saving of money if it be done. It cannot do otherwise than save money eventually.

J. F. O'Flynn.
2 June, 1897.

2362. *Mr. Powell.*] If an officer having authority were appointed for such a service, I take it that his authority would be respected, and the obstructions would be removed promptly? Undoubtedly, I think so, if he had sufficient authority. The reason I mention Mr. Blakeney is his knowledge of the place, and his technical knowledge makes him the most suitable person I know for it.

2363. And if these obstructions were promptly removed the expenses would be small as compared with the present expenses? They would be minimised very much.

2364. The main river is looked after by the pilot to a certain point? I think up to about Woodburn or perhaps Coraki; but all the other navigable places have no one looking after them unless they become impassable, and then we have to report the matter to head-quarters, and it takes a long time to get it remedied. We simply want them to confer authority upon someone to do it. I think Mr. Hickson in the Harbours and Rivers Department was very anxious to get it done, but he failed to get the other Branch to do it. It was said that it would require an Act of Parliament to do what we asked for. In our correspondence we have never approached Captain Hixson of the Marine Board; we have dealt entirely with the other Department.

2365. *Mr. Wilson.*] If Mr. Blakeney were made an officer of the Marine Board, for the purpose of keeping the river clear, without interfering with his position in the Harbours and Rivers Department, would that be satisfactory? If you could get that done it would meet all that we want.

SATURDAY, 5 JUNE, 1897.

[At the "Australian Hotel," Tweed Heads.]

PRESENT:—

GEORGE ALEXANDER WILSON, Esq., J.P.

JAMES POWELL, Esq., J.P.

William McGregor, Master Mariner, and Pilot at Tweed Heads Station, sworn, and examined:—

2366. *Mr. Powell.*] How long have you been pilot? Twenty-seven years and six months.

2367. You have five hands employed here under you? Yes.

2368. And one of them is the lightkeeper? Yes.

2369. Does he look after the signals as well? No; the signal station is not at the same place.

2370. Who attends to the signals? The other four take it in turns.

2371. Then you have four boatmen, one of whom attends to the signals, and the fifth man attends to the light at Fingal Head? Yes.

2372. There is a difference in the pay of these men; one, Shepherdson, gets £106, and the others get £126? Yes.

2373. Are they all doing the same kind of duty? Yes.

2374. And it is only the accident of the stoppage of the increments that leaves Shepherdson at £106? Yes.

2375. Is there a subsidised tug here? Yes.

2376. For which the Government pay £850 a year? I do not know.

2377. Is the service you get from that boat quite satisfactory in every respect? Yes.

2378. Is she ready at all times and in all weathers? Yes.

2379. Is she under your charge or command? No; she is only under my command when I tell the master I want her.

2380. Does he respect and act under your instructions? Always, sir.

2381. I suppose your men are not always employed;—they necessarily cannot be? No.

2382. There is a good deal of slack time? Yes.

2383. Looking at the cost of the tug, which I can tell you is about £850 a year, and the amount that is paid to your people in salaries, which is another £850 all told, bringing it up to about £1,700 a year,—do you think it would be possible to improve the service advantageously for the port, and for the benefit of ships visiting the port, if the Government were to have suitable tugs of their own at these bar rivers—vessels of good power, light draught of water, built specially for the work, placed in command of the pilot at the station, and manned by the boatmen or other men in their place—that is, using the boatmen where they can be used, and getting others where they cannot? I am afraid we would want more hands to put into the tug.

2384. How many hands has this tug? Three hands.

2385. She has a master? Yes.

2386. What pay does he get? I fancy it is £10 a month, and a percentage on all towing.

2387. What percentage;—10 per cent. is the usual thing at all the other places? I really could not say.

2388. And there is an engineer, I suppose? Yes.

2389. What does he get? I think he gets the same, but would not be sure.

2390. What other hands have they? A fireman at £6 a month.

2391. Is that all? That is all.

2392. That is £26 a month;—well, we are putting against that your four boatmen and yourself, so you see you have more men at your command than the master of the tug has;—he has only himself, engineer, and fireman? I may mention that I am always on board the tug myself, and take one man to sound.

2393. That is when you go out on sounding work? Yes.

2394. Ten years, at the present rate of subsidy, would mean that the Government paid £8,500, and this would pay for a first-class tug for your work nearly twice over. We are looking at it simply from an economical

W.
McGregor.
5 June, 1897.

- W. McGregor. economical point of view. You would have the tug entirely under your own charge, and manned by your own men—four men and an engineer, or three men and an engineer, according to requirements? Yes.
- 5 June, 1887. 2395. It would be suitable for harbour work, such as you have to do, and for soundings and such like. Now, the Commission ask you to think a little over that, and to give them the benefit of your knowledge and experience? If there were a little more room in the harbour I would say that would be right; but the harbour is so contracted that there are plenty of times when I have to man my boat and go to the assistance even of the tug. In bad weather it takes them all their time to look after the tug. If I were on board the tug I am afraid I should be in such a narrow place that by the time I got the tug in safety a vessel that might be in danger would be gone altogether. I call the man from the signal-staff when there is any emergency, because the three men are not enough for the boat. By the time that I could make the tug fast, if I had it, and man the boat with which to get at a vessel, it would be too late to do anything. What has to be done has to be done immediately.
2396. *Mr. Wilson.*] Then you must have your boat as a stand-by? It must be always in readiness.
2397. *Mr. Powell.*] That still might be? I will say this, that the only time I am taken now is in an emergency. I have got the place beacons and buoyed in such a way that they can actually see the road; and it is only when the nights are bad that they call for the pilot. I hardly get a chance to make anything now.
2398. That is the point—you are not wanted except when there is a difficulty? That is it. If there were a little more room, so that we could turn about anyway readily, it might be different; but in the sugar season, when the place is lined with vessels and punts, there are plenty of times when there is no room for the tug, and she must shift away.
2399. You could take the boat and leave a competent man in the tug? Yes.
2400. And you would have more men than that tug has got? Yes.
2401. *Mr. Wilson.*] If there were a competent man on the tug, with a fireman and a deck-hand, he could act as is done at present, and wait in attendance where he was wanted? Yes.
2402. *Mr. Powell.*] The main object is to put the tug entirely under the control of the pilot? Yes.
2403. In some of the ports we have visited there seems to have been a little friction? So I have here; but, fortunately, never much with them. I seem to have got along pretty smoothly. Occasionally there would be a few words; but, take it all through, I have got on very well.
2404. When there is an emergency I can quite believe that it is of all things most desirable that you should work in thorough concert, or that there should be one controlling influence? It is like this: when there is an accident everything is left wholly and solely to me. It is not so very long ago since a vessel got into trouble, and I manned the boat to go and see if my services were wanted; and I found the tug was in a difficulty, and went on board. I said, "Tom, you will be in a difficulty if you are not careful." I had to get both the tug and the schooner out of the difficulty, and all I got for it was 25s. In this narrow place it would be awkward for the pilot to have the tug.
2405. In moderately fair weather the tug goes out and earns the money, and you are not wanted at all, but when the difficulties come you have to go out and get a mere nothing, a 25s., and the tug is of no value to you? Yes.
2406. You know this vessel is making a good deal of money, in addition to this subsidy, in pilotage, none of which goes to the Consolidated Revenue, but to the proprietors;—do you know how much it is? No.
2407. But you know he is entitled to charge a minimum of 4d. a ton, in and out? Yes.
2408. And also 2s. 6d. a ton for whatever cargo he raises? Yes.
2409. All that is in addition to the subsidy;—it seems to me it would be far more economical for the Government to take the whole matter over, charge the towage, give the service, and let you have control? Would there not be more risk on the Government?
2410. *Mr. Powell.*] The risk will be the same as now, whatever that risk may be.
2411. *Mr. Wilson.*] The risk of wilful negligence, the same as there is now.
2412. *Mr. Powell.*] I never heard of any action being brought against the Government for any misdeeds on the part of a pilot in this Colony yet; and certainly, with the improved appliances that it is contemplated to place at your disposal, it seems to me that the chances of claims for accidents would be very much reduced? Yes.
2413. *Mr. Wilson.*] I think we might assure you that you would have the best boat for the purposes that money could buy? Yes.
2414. *Mr. Powell.*] Undoubtedly the best money can buy. Of course no person can be so well qualified to give an opinion as yourself, and those who have been occupied as you have at these bar harbours so many years.
2415. *Mr. Wilson.*] If you have not thought this matter out before, we might have a further conversation to-morrow morning about it? I have never thought of anything of the kind.
2416. *Mr. Powell.*] You have had this tug about twelve or fourteen years. It seems to be an actual necessity. It must be had if vessels are to get out of and into these rivers? There is one thing, the tugs are really serviceable.
2417. So would a tug under your control be really serviceable? I mean the tugs altogether. I have known vessels lying here for weeks and weeks, waiting for chances, but not getting them; but now they go away regularly.
2418. If you had the tug under your control, she would do a great deal of the work you are now doing with a great deal more ease to all concerned. I suppose they very rarely go out except to bring vessels in and take them out? Well, they have got to go out every day when it is possible, for the sake of sounding. The bar is continually changing. The leading marks are hardly ever left in the same position. Whenever there is any sign from the flagstaff of a change, I get away and sound at once to see if it is altering. Every day if there is a chance I go out, except Sunday.
2419. Perhaps you would like time to think it over? The only thing I see is the awkwardness of getting one fast, but you say that could be got over by appointing a man to look after the tug.
2420. *Mr. Wilson.*] Suppose there is a good man appointed, even getting the same wages as the man now in control—you might assume that this very man is appointed—but under your orders; there is a case in Newcastle now—the master of the tug has been appointed master of the "Ajax" there? Even the present master does what I tell him.
2421. The question is, is it workable in that way; suppose the Marine Board put a man, absolutely competent

competent and absolutely under your orders, in charge; you may make up your mind it would save a lot of money; would it work;—suppose the present crew were put in charge? I cannot see but that it would, in that way. W. McGregor.

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2422. You want sufficient strength to man the tug and work the boat? Yes; that is required in a place of this kind.
2423. Suppose the Marine Board gave you sufficient strength to man the boat, and put proper men in the tug, it would be workable just as it is now? Well, it is worked that way now.
2424. *Mr. Powell.*] With the disadvantage that all the benefit and profit goes to the tug? I do not know anything about that.
2425. That is all the Commission have to do, to suggest improvements in management with a view to economy? I was not looking at the figures, but at the working.
2426. *Mr. Wilson.*] They must be earning a good bit during the busy sugar season when there are a lot of vessels alongside? At a rough guess, I suppose they take forty odd towages a year. The steamers that take the tug when the bar is bad do not take the tug when it is good. That is forty in and out.
2427. What would they average? I think they would be above the minimum; but there might be a couple of schooners just on the minimum. When the bar is good steamers go without the tug.
2428. At any rate, the money going to the proprietor of the tug now would go to the State under this proposal? Yes; it is somewhere about forty, most of it during the sugar season. There would not be so many during the other half-year.
2429. *Mr. Powell.*] The wages on board this vessel now are very little over £300 a year? Yes.
2430. And they are receiving a subsidy of £850, with the towage in addition? Yes.
2431. While they are getting towage you are getting no pilotage? No pilotage at all. I used to do pretty well with pilotages before; they all took me. Until lately they were taking me, until I grumbled, and told them they were treating me unfairly, and only took me when it was bad.
2432. You are not bound to answer at all unless you like; at the Clarence we discussed this with Captain McAuley, and at the Richmond with Captain Fraser, and they both seemed to turn it over pretty much in their minds; but they came to the conclusion at last that they thought it would be very desirable to carry on the service without a divided responsibility? If the tug were manned in the way suggested by Mr. Wilson, as well as the pilot-boat, it would be the thing. I think it would be too much for the pilot to man the tug and the boat with the same crew.
2433. The two would go together? But I was thinking that if the pilot and his men had really to man the steamboat as well they could not do it.
2434. *Mr. Wilson.*] How many are there? Four and myself.
2435. To man the tug there would be three wanted? Yes.
2436. Would you still want the other five;—you would want three in the tug, and how many in the boat? Four. I would have to shift about and go between them both.
2437. You must also take into consideration that it is not always going to be such bad weather that you would want both; the tug would do the work in ordinary weather, would it not? Yes.
2438. It would be only under extraordinary circumstances that you would require both? Yes.
2439. So that the bulk of the time the tug would be under your command, and you would have the boat as a stand-by? Yes. With the exception of the work on buoys and beacons, and putting leading marks in order, the men would merely man the boat and stand by to come when the signal was given that anything was wrong.
2440. The tug would do all the harbour and river work that you want? Yes.
2441. And she would be ready for any emergency? Yes.
2442. In fact, the position would be very much like what it is at present, except that the service would be worked in a more economical manner? Yes. Well, if it were to be manned the same way as it is now, I do not see anything against it.
2443. The Government would have their own boat and get the earnings; and as against the cost of the boat would go the yearly subsidy they are paying now, and the revenue the tug is earning now? Yes.
2444. Suppose your tug cost £4,000, there would be interest on £4,000 and insurance and depreciation on £4,000, and to meet that there would be a saving of the subsidy and the earnings which this particular steamer would make? Yes; her towages.
2445. *Mr. Powell.*] Take the £4,000 at 4 per cent., the Government rate.
2446. *Mr. Wilson.*] That is high in these days; that is £160 a year; then there is depreciation at 10 per cent.—£400 a year; that is £560. Insurance—the Government never insure—still there is a risk? There is a great deal of risk indeed.
2447. *Mr. Powell.*] The subsidised tugs are not insured? I rather think they are.
2448. *Mr. Wilson.*] That has to be provided for? Yes.
2449. *Mr. Powell.*] What would be the rates for insurance? Somewhere about 12 per cent.
2450. Would 12 per cent. cover it, do you think? They will only take half the risk now, I think. I would not be sure. I think it is 12 per cent. I have never bothered myself about that part of it.
2451. If you had your own vessel you would bother about it? That is just it.
2452. *Mr. Wilson.*] You have never had occasion to look at the business aspect of it? No.
2453. *Mr. Powell.*] Then, looking at the general aspect;—if the boats you now have were kept ready to use as occasion might require, you think it would be the right thing for the Government to own their own tug, manned by your men, and placed under your charge? I do not see anything against it, if it is manned the same as these boats are, so long as the Government will take the risk.
2454. It is only like giving you a "Captain Cook" or an "Ajax"? I thought you wanted to man the tug with the same men as are here now.
2455. That was the idea at first? It would require more than that. It would require four men in the boat on an emergency and someone on the tug.
2456. *Mr. Wilson.*] Would you want three men in the tug always? You see they have two men and a boy now. I think it would be running too much of a risk to attempt to do it myself with the boatmen, even allowing that they are fit for the work. There would be too few to look after the two jobs.
2457. *Mr. Powell.*] There might be more men wanted at one port than at another.
2458. *Mr. Wilson.*] We must treat it as a whole;—there might be one or two wanted here more than at another place, owing to the exceptional difficulty of the bar? Yes.

- W. McGregor.
5 June, 1897.
2459. If you did not want a man or two more here, it would not interfere with the general principle—in fact, it would appear to me to be just carrying out the present system, only the Government would own the boat instead of a private man? Yes.
2460. *Mr. Powell.*] In some cases there would be one pilot instead of two? Yes.
2461. *Mr. Wilson.*] Has the tug-master ever refused to go out when called upon by you? Never. All I have to say is, "I want the boat," and it is all right. There is not the slightest friction.
2462. *Mr. Powell.*] Have you had this same boat, the "Terranora," for long? Not very long. The first boat we had is away down in Queensland now.
2463. Who owned her? Buckle.
2464. You had no difficulty with her? None whatever; in fact, I think it has just been about as easy a worked boat as any of them.
2465. This is Corrigan's boat, is it not? Yes.
2466. Is she a screw? Yes.
2467. Do you think the screw is suitable for the work? Well, I never had a paddle-boat; but my own opinion would be that a paddle would be better than a screw; but as a number of others seem to think differently it is not for me, as one man, to say.
2468. For bar work you think a paddle would be better? I think there would be more pull than with a screw. There is a continual pull with a paddle-boat, though she would not be so good a seaboat as a screw.
2469. What about turning; would not a paddle-boat turn better? She would turn, but she would not run on the sea so well.

FRIDAY, 18 JUNE, 1897.

PRESENT:—

JOSEPH BARLING, Esq., J.P., PRESIDENT.
JAMES POWELL, Esq., J.P.

Frederick William Jackson, Manager of the Union Steamship Company of New Zealand, sworn, and examined:—

- F. W. Jackson.
18 June, 1897.
2470. *Mr. Powell.*] The Commission think that from your experience in shipping matters in New Zealand you may be able to give them some information in regard to the constitution and working of the Marine Board; the general idea we have proceeded on is, that perhaps it would be desirable to separate the judicial from the executive function of the Board—that is to say, let the Marine Board, somewhat differently constituted, deal with the details of harbour and shipping business, but let all questions of law be dealt with by a more competent tribunal such as is that in existence in Great Britain, and, I think, also in New Zealand; we would also like, generally, any opinions you may have formed about the work of the present Board? Well, our company does not come very much in contact with the present Marine Board, our only dealings with them being in connection with certificates which it necessary to get here for our passenger steamers. These vessels get certificates to run a certain period. I think all the Steamship Companies are with us in this respect. We have a grievance that, while in other Colonies a certificate is granted for twelve months, here it is only granted for six months, which means, of course, a stoppage of the running of steamers, interfering with their movements. They have to be taken out of the trade, put in dock and overhauled twice a year, as against once a year in nearly all the other Colonies. In New Zealand and Victoria the certificate lasts for twelve months. In New South Wales and Queensland it only lasts six months. We all consider that a grievance, not so much because of the fees we have to pay, although they have been increased, but because of the general stoppage of our business arrangements which causes considerable inconvenience.
2471. *President.*] Would you kindly say what the overhaul actually means? The delay is anything from three days to a week. We, as well as other companies, feel it very much because we, for our own sakes, keep our steamers in proper order. They are not allowed to get into a bad state. We do not want to court a break-down. The engineers on board are supposed to, and they do, keep the vessels in good order, under the supervision of superintending engineers; but according to the laws here we have to stop our ships every six months in order that the authorities may examine them, and see that they are in order. We do not think it necessary, because at any period in that six months the Government engineers at ports of call, and other authorities can go on board the steamers and satisfy themselves whether or not they are being kept up; and if they have reason to find serious fault with anything they can call upon the owners at any time to put the vessel into sea-going order.
2472. Do they examine the hull as well as the machinery? Yes.
2473. Do they need to dock the steamer? Yes. Then there is another matter which means an additional tax. Take our steamer the "Oonah," trading between here and Hobart. The fees used to be £4 for the work of surveying.
2474. *Mr. Powell.*] I think that was the maximum fee? Yes. Now it is increased in this way: an additional £1 is charged for every 300 tons or part thereof. That alteration was made on the 16th November, 1896. That is somewhat of a tax upon us. One steamer the other day cost us £10, or 10 guineas, instead of £4.
2475. Twice a year? Yes. That was the "Monowai." That seems to be a tax, because the money they get cannot pay all the expenses of the Board, nor do they seek that. If £4 sufficed for so many years, you would think it would continue to suffice, because there have been so many more steamers. I do not think it would require any more officials.
2476. I wonder that those interested allow these things to go through the Legislature without examination of the Bills? I know this was taken up by the Steamship Owners' Association. I think the Bill went through very quickly; I might say accidentally. We made representations to the Legislature, but the matter was not followed up.
2477. I spoke of the constitution of the Board; there are three nominee members and three elective members, and the voting qualification is limited to owners of vessels registered in the port;—I take it you are not represented, as your vessels are not registered here? No. That I look on as an injustice, that

that while all companies are subject to the Board, they have no voice in the election of officials to serve on it. It seems to me that it would only be a right and proper thing that companies like ourselves should have some say in the election of wardens or members to the Board.

2478. *President.*] There are something like 90,000 tons represented—that is, Colonial—and there is something like 1,250,000 tons unrepresented.

2479. *Mr. Powell.*] You must not lose sight of the fact that the nominee members are supposed to represent you.

2480. *President.*] And not only have the people who vote got elective representation, but they share in the ordinary Government representation.

2481. *Mr. Powell.*] If you were represented, then other interests would require representation? I do not say that our company should be represented, but I say that a large amount of tonnage coming here is practically unrepresented. In order to have a vote it would be necessary to register a portion of our vessels here. Companies do not care about that. They have a headquarters, and their vessels are always registered there. It seems to me that, in common with others, we should have a voice in things as they are now, but if it were altered, all the company would have to do would be to bow to the alteration.

2482. If the elective principle were abolished, and a Board presided over by a competent legal authority, placed over the Board in that part of its action, there would be no need for representation? None at all; and I should say that that would be a very much more satisfactory tribunal than the present one is or has been.

2483. *President.*] The idea is, that this tribunal would be presided over by, say, a District Court Judge, and that he should have power, with the sanction of the Governor, to select assessors in every case that might come up for decision? I believe that would give general satisfaction.

2484. That is to say, in one case he would want an engineer as assessor, and in another case a nautical man, and so on? I understand. I think that would give general satisfaction, as there have been so many changes in connection with the construction and arrangements of vessels generally, that unless a man has been on board as commander or officer during the last few years he is completely out of touch with the new arrangements.

2485. *Mr. Powell.*] This contemplates having competent persons—experts in every branch—as assessors. That appears to have answered well in New Zealand, where a Stipendiary Magistrate presides? Yes; I think that is the impression generally among those who have thought about it. I think what you have suggested covers the whole ground.

2486. Do you say that a Court presided over by a Judge or Stipendiary Magistrate, or other legally-trained authority, should deal with all matters of collisions, cancellations of certificates, loss of life and accidents, and that the functions of the Harbour Department should be discharged by a competent officer or officers, and confined to the executive details and business of the Board relating to marine matters? Yes; I think so.

2487. Are you willing to say that you think generally that the present Marine Board as constituted has not given general satisfaction to the whole of the business interests of shipping visiting and trading with New South Wales? Well, you see, while I may have that personal opinion my company has had no reason at all to complain. My personal opinion is derived from the reports I have seen in the newspapers.

2488. Do you think it would be better to alter the principle of election by making it wider and embracing all interests, or getting rid of it altogether? I think this proposal to have a Judge and two nautical assessors, or three, as the case may be, covers the whole ground. It removes the necessity of representation for the engineers, the firemen, and the seamen. They would get representation in the two nautical assessors.

2489. *President.*] You approve of that? Yes; the only thing I would point out is this, that the Judge would have to be very careful in the selection of the men to help him, because there are men and men, and it is not because a man is a shipmaster that he is necessarily an expert. There are many masters whose opinion I would not always care to accept. I have another matter I should like to say something about. Pilotage exemption certificates were formerly issued to any person holding a master's certificate who passed the necessary examination, so that chief officers holding masters' certificates who had been in and out of port three times as deck officers, were able to pass, but now they must be in actual command before the Board will allow them to go up for examination. I believe of late this rule has been made, more against the foreign-going vessels taking exemption certificates, but which militates against inter-colonial companies. To put the matter plainly—if we had to pay pilotage at every port we went in and out of it would require a huge expenditure, so that our own men must become exempt from pilotage and be able to bring our ships in and out of port without paying dues. As it is now, if an officer wanted to pass for an exemption certificate, he simply could not do so until he was in command of a ship; that means that we would be mulct in pilotage for the time being, while he was learning. Before he could go up he had to be in and out of the port three times as a chief officer. Now, a chief officer who has been in and out of the port three times, cannot go up until he is in actual command of a ship. If we have to pay pilotage for a vessel to be brought in by one of those men it acts against his being appointed to a command. We could not pay £20 for pilotage for putting him in command.

2490. *Mr. Powell.*] That is only a regulation of the Board—that a man must be in and out three times? We do not find fault with that. I should say a man could not fairly pass the examination before he had been in and out three times, as he would not know the marks. Our men must pass and become pilots, as we must avoid pilotage. If we had to pay pilotage in and out for all our vessels it would be a terrific sum.

2491. Are there any other points you can think of which you would like to mention? I have not taken note of any other things.

Captain F. Hixson, R.N., re-examined:—

2492. *Mr. Powell.*] The Commission, as you know, have been travelling north in connection with this inquiry, and at Lismore the Mayor called our attention to obstructions in the river. He says that trees frequently fall across the creeks in places and block the settlers from getting their cane down to Broad-water; the punts are obstructed, and it is a source of great inconvenience and expense, as they have no person

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person to whom they can refer. Now it seems to the Commission that you have powers under the 19th section of the Navigation Act perhaps to give them some relief. You have "the preservation of ports, harbours, havens, and navigable creeks and rivers" within your jurisdiction, and if there is any officer there who can act for you to meet the wishes of those people, it seems to the Board it would be desirable to do so? There is a special provision in the body of the Act to meet cases of the sort, and we frequently do meet them, but it is a thing that is attended with a great deal of difficulty. "If any trees be felled on the bank of any navigable waters —"

2493. That is, if they are "felled"? But let me go on. "If any tree or trees be felled on the bank of any navigable waters so that any part of such tree or trees shall be in or over such waters, or within high-water or flood mark, and the same be not removed within ten days after having been so felled, the owner or occupier of the land from which such tree or trees shall have been felled shall incur a penalty not less than £1 and not exceeding £10 for every tree so cut and not removed, in addition to the actual cost of removing the same, such cost to be assessed by the Justice of the Peace at the time of imposing such penalty" (section 112, Navigation Act of 1871). That is the clause that gives us power, and, as I say, we frequently act in such cases, but it gives us a good deal of trouble.

2494. But this does not refer to timber that is felled; it is timber that is washed down in the creeks? Our remedy always is the pilots. We generally get their assistance to advise us in matters of this sort, and we invariably do what we can, but the case is surrounded with a great deal of difficulty.

2495. Would not the case be met if a local Marine Board were formed, with the assistance of the pilot—I do not mean a paid Board? My experience is, you no sooner get a voluntary Board fairly in order but they at once go for fees. They would not take any interest in it otherwise.

2496. The importance of these rivers seems to demand a direct and effective control? We often do control and do what we can. We get the assistance of the Harbours and Rivers Department, and also the Police.

2497. May we say that any matter of that kind brought under the notice of the pilot and communicated to your Board would receive attention? Yes, certainly.

2498. *President.*] The real difficulty is that you have not the money? Yes; that is the difficulty.

2499. Of course, you cannot trace falling snags to anybody? Very often people fell cedar so that it may be washed down by the first flood.

2500. But is it not the real difficulty that you have not the money? Yes; and if you deal with one of these creeks you have to deal with the whole lot.

2501. You would have to get a crab dredge and a crane, and it would mean an expenditure of thousands? Yes; the great remedy is a big flood.

2502. The pine logs sink, and become most dangerous? Of course, we are the conservators of the navigable waters, and if we had money to deal with the rivers of the Colony we could do so; but it would simply cause enormous expense.

2503. *Mr. Powell.*] Are your boatmen supplied with clothing? Certain of them.

2504. What clothing do they get? They get two suits a year. Those men carry the Governor about and do other official work about Sydney; two men at Newcastle are also supplied. There are eighteen in Sydney.

2505. Is there any particular reason for not supplying the Newcastle men? Yes; I think they are paid very well without it, and if we clothed them we would have to go all along the coast. We do not clothe these men in Sydney in order to relieve their purses. We do it so that they may look decent and shipshape.

2506. Are the seamen on the "Captain Cook" supplied? No; they have made a good many applications for it, and I have always refused it. The launch-men, eighteen in Sydney and two in Newcastle, are the only men employed in taking the Governor and Ministers and distinguished visitors about.

2507. Now about this increment matter, which has received some attention since we saw you last: taking the list furnished by the Marine Board of the salaries for the year 1883, and comparing that list with the salaries for the year 1896, there seems to be a large advance, a very considerable advance, although I think there was a 10 per cent. reduction on salaries generally? It did not reach these men that you speak of now. It was on people receiving over £200 a year, who do not come under the regulations.

2508. Were not those coming under the regulations reduced? No; their cases were met by the increment being stopped two or three years.

2509. I want to point out that the salaries of 1883 and 1896 differ to the extent of 30 per cent. or 35 per cent.—that is to say, they were 30 per cent. to 35 per cent. more in 1896 than in 1883? Does that mean in the aggregate, or on certain individuals? There have been increases in numbers since then.

2510. On certain individuals? Very likely. The arrangement with the pilots is that they enter at £250, and rise to £450, but they have to serve twenty years for that.

2511. Take the Newcastle pilots: in 1883 three pilots received a salary of £250; now those pilots in 1896 were receiving £353? Yes; I think you will find also that in the latter year the rent of their houses is deducted.

2512. I am giving you the actual amounts paid;—£250 as against £353, from 1883 to 1896—thirteen years? Well, an increment of £10 a year would make a difference of £130 in that time. Those are all precisely in accordance with the regulations.

2513. That is all due to the regulations? Yes.

2514. Does it not seem somewhat unfair that the great body of the Civil Service should be in a worse position with regard to their salaries than they were in 1883, and that this particular body of the Civil Service are in so much better a position? The explanation of that is that the people to whom you refer come in at a minimum rate. As I explained, the pilot in Port Jackson comes in at £250 a year. No one would say that these men's responsibilities were not very great, and that they were not underpaid at £250.

2515. I think they come in lower than that? No; the men at £150 are the second-class pilots at the bar harbours.

2516. Take the salary paid to Captain Lindeman: it appears that he was receiving in 1883 £400, and he now appears to be receiving £470; that is an increase of 20 per cent.? The Marine Board employees are peculiar and different from any other employees in the Government. A man once a pilot is always a pilot, and a man once a secretary remains in the same position. In other branches I know men who

joined

joined the Service when Captain Lindeman did who, by promotion, have got to twice his salary. The work of the office has largely increased since 1883. Capt. F. Hixson, R.N.

2517. That is more an argument why the service should be made part of the general service; I think the object of the Commission is to try to get information to enable the Government to deal with the Marine Board in relation to the Service generally? The Government, of course, can repeal the Act and pass a new Act. 18 June, 1897.

2518. It is only by repealing the Act? Yes.

2519. I see you have a messenger at £150;—does he receive any other emoluments of any kind? No.

2520. Is he a sober, respectable man—is he all that is desirable? He has been thirty-five years in the Department, and does his work all right. I have never seen him otherwise than sober.

2521. It is a very high salary for a messenger? You see it is by the regulation. He came in at £75. We have another messenger at £75.

2522. Are the lifeboats in Sydney and Newcastle under the control of the Marine Board in any way? They are under the control of the Marine Board.

2523. I see there is a sum of £1,000 voted by Parliament for that particular service, £600 for gratuities; that, I presume, is for the manning and working of the boats? Yes.

2524. And £400 for a steam-tug at Newcastle? Yes.

2525. And that tug is for lifeboat service? Yes.

2526. To whom is it paid? To J. and A. Brown. I wrote to the Government some time ago, saying that, as the "Ajax" is to be put on the pilot service at Newcastle, we should not require this tug, and six months' notice should be given to Messrs. J. and A. Brown of the discontinuance of the contract.

2527. Of course the money is paid as a retainer, so that a tug shall be ready at any time if required? That is so.

2528. I notice there are twenty-two boatmen at Newcastle, and they receive £12 each for lifeboat service:—is that so? Yes.

2529. We were informed by the harbour-master at Newcastle, Captain Newton, that this boat goes out four times a year for practice? That is so.

2530. Well, then, practically these men receive £3 each time they go out? Practically. In a lifeboat service a man almost carries his life in his hands, and we have had a great deal of trouble at Newcastle, and had difficulty in manning the lifeboat, and it has merged into what it is now, that the Government boatmen are paid, not for going into the lifeboat, but are given this additional money for volunteering for the lifeboat service.

2531. *President.*] If they are out on actual service, are they given anything extra? Yes; they receive 25s. each if they save life. The money is given them as a retainer. They are constantly in practice—constantly in the boats in and about the harbour. I do not think we could do better. If a catastrophe were to occur off Newcastle, and there were a want of readiness on the part of the lifeboats to go out, there would be such a fuss, and properly, that it is better to let things remain as they are.

2532. *Mr. Powell.*] Taking the Sydney lifeboat, according to the evidence we have got, things do not seem to be quite so satisfactory;—the Sydney lifeboat goes out for practice four times a year? There are no stated times. The lifeboat is sent out, whenever we tell them to exercise her, from the office. It might be four times a year. As a matter of fact, we send out when it is least expected.

2533. This vessel seems to cost £9 when she goes out? Yes. The lifeboat service in Sydney is very much less expensive than in Newcastle; but, as I said before, there has been such loss of life at Newcastle. We had very great trouble when the "Cawarra" was lost, and the difficulty is so great, and the necessity for a lifeboat so much greater than in Sydney, that the cost in one place is very much heavier than in the other.

2534. *President.*] I suppose it is not very likely to be required in Sydney? The fact is, the lifeboat service in Sydney is not nearly so likely to be required as in Newcastle, where there is a fresh setting out of the harbour and the oyster-bank there. There has been a great amount of heroism displayed in the lifeboat service in Newcastle.

2535. *Mr. Powell.*] At Watson's Bay they have not sufficient men to man the boat? No. We send them down a message to exercise the lifeboat, a signal is put up at the flagstaff, men are taken, and they exercise the boat.

2536. Captain Creer told us that he picked up the men at Watson's Bay—fishermen or any others he could get? Yes.

2537. Well, that does not seem to quite accord with perfect practice to pick up whomsoever he can get? He is wrong. We hoist a lifeboat signal at the top of the flagstaff. All the people about the Bay know what that means, and they rush to the lifeboat and offer their services.

2538. Well, we can only take the evidence given us; that is the statement:—"We require thirteen men for the boat. I pick up whoever I can get hold of, fishermen, and they get 10s. every time the boat goes out"? He makes a mistake. In place of his picking them up they run to him.

2539. Then it appears that Captain Creer gets £1 each time the boat goes out, but he does not go out at all? Yes, he is the organiser. If you want people to take an interest in anything of this sort you must pay them.

2540. He says that he follows them? Yes: in his steamer.

2541. He also told us that the lifeboat had not at any time been the means by which life had been saved in Sydney? He is quite right. Not in my time. We have rescued a good many lives, but we have never done it actually with the lifeboat; in fact, since the pilot boat has been there she has to a very great extent taken up the work of the lifeboat. She is there with her steam up any minute night or day, and her little boats, with which she puts the pilots on board vessels coming in, are such excellent little boats that they are much more handy than the big lifeboat.

2542. Do you not think that the pilot staff in Sydney is larger than the business requires; the whole number of vessels entering the port last year and leaving was 629 in all, and there are five pilots? Well, under the old arrangement, when you well know the pilotage was excessive, and the vessels did all they possibly could to avoid taking a pilot, I should agree with you; but latterly the pilotage certificates have been withheld, and we have had evidence already that the pilot service is becoming more active than it was. I am quite sure that before long in place of reducing the number of pilots we shall have to increase them.

2543. But all pilots are licensed? Certainly.

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2544. Do you not think a smaller permanent staff would be sufficient for the port, with various glut pilots for emergencies? I think, if you attempt to disturb the pilotage arrangements of this port, you will create a great deal of disaffection and bad feeling in the mercantile community, because they insist upon having a pilot the instant they want one.

2545. That would give it to them? I think the public are very well satisfied with the present arrangements, and I really do not see how you could alter them.

2546. It is only a question of expense; the glut pilots would be additional men, who would be engaged when they were required? What scheme would you propound?

2547. It would be like the English practice? Sydney is a very peculiar place in that respect, for the services of pilots are wanted most unexpectedly. In early times we had great trouble. There was scarcely a paper you could pick up but had something about the inefficiency of the pilot service. Since we have had the steamer and the pilots on board there have been no complaints.

2548. I find that five pilots during March brought in thirty-six vessels—that is, seven vessels each—and they probably took the same number out;—does that not seem very little work to show for so large an outlay? It does, certainly; but then give us a busy month. You know that between March and June is the slackest shipping time we have in the port. This is a slack time, and I really do not see that we could reduce the expenses.

2549. That return was given to me? No one knows better than you that the pilot work has been reduced almost to a minimum in consequence of the excessive charges connected therewith; and you know now there has been a great change, and that this change will bring about more business in the service.

2550. *President.*] It has hardly had time to take effect? All the men who hold certificates will continue to use them, but there are very few issued now, while a few months ago men were able to get them without trouble. Now there is a maximum charge of £20 for pilotage, and the owners and everybody prefer that the official pilot should bring the ships in.

2551. *Mr. Powell.*] With foreign-going ships I have no doubt it will be so? Yes.

2552. It has been suggested from more than one quarter that the pilot latest on board should take command and be replaced as ships are boarded; of course, the master of the "Captain Cook" is a licensed pilot—in fact, no man could be in that position unless he is a licensed pilot; the suggestion is that the man latest on board should be master for the time being, he, of course, having a competent chief officer? This is the first time the subject has been mentioned to me, but I am averse to it altogether. The man in charge of the pilot steamer now down there is the head man in charge of the whole service; he controls everybody. We had great difficulty in working out this present arrangement, and it answers admirably as it is. I know that in some cases in the English Channel such a system prevails, and in Melbourne, but in these cases the pilots are not Government officers. They are all working among themselves; they are amalgamated together, and the vessel they are aboard of belongs to them. When we introduced this system we had a great deal of trouble to do so. The pilots were getting in fees from £800 to £900 a year, and they all worked as much as they possibly could against getting this steamer. They did not want to be kept on board a steamer for £350 when they had been earning £800 or £900 and going home every night. The arrangement has answered admirably.

2553. The chief officer would be competent to take command, I suppose? Yes. The chief officer should not be there unless he is a competent sailor.

2554. He holds a master's certificate? Yes; but there are men and men. Many men hold master's certificates, but when they come to carry out their practical work often fail.

2555. About the lightship, the "Bramble": it appeared to the Commission on their visit that while everything appeared to be satisfactory the sum expended for the service seemed to be very large—£800 per annum;—do you think there is any way in which that might be reduced? I do not think it could. On the English coast lightships they have always eight men on board. Perhaps not always, but I saw a case the other day where an English lightship foundered and her crew, composed of eight men, were all drowned. We have five here, and apart from the actual lightship they have to take care of two other lights.

2556. But there is not a very close analogy between a lightship on the Goodwin Sands and a lightship here? No; but I have known the lightship break adrift, and it has required a lot of men to take care of her. There is a cook, three men, and the master. The cook, of course, can go in the boat. Then you must consider the question of leave; you cannot keep men constantly on board the ship; they require a certain amount of leave, and you require men capable of doing the work in their absence.

2557. There is another question: after visiting these bar harbours, we find there is a very strong opinion formed and expressed in favour of changing the tug system and substituting more suitable vessels owned by the Government for the purpose—vessels controlled by the pilots and manned by boatmen or other suitable men not necessarily their boatmen, with an engineer in each case, &c.: now, if you have given any thought to that, will you kindly give us your opinion on the subject generally as to whether it would be a better service, whether it would be less or more economical, and whether it would be more effective for the purpose intended? I am averse to any changes in that respect. The fact is that in early days Mr. Stuart, afterwards Sir Alexander Stuart, told me he was going to put £10,000 on the Estimates for a tug for the Richmond River, and I told him I thought it would be far preferable that he should introduce the subsidy system, "because," I said, "if you give £10,000 to the Richmond River you will have to give £10,000 to every other river in the country, and you will create a most expensive and unsatisfactory Department." Well, he yielded to my arguments, and in place of providing the Government tug he agreed to subsidise one. The matter turned out successfully. Now, at the Richmond, which, I might say, is a very dangerous place, they have lost several tugs. This system extends all over the coast, and there have frequently been proposals to bring about a plan something like that you are shadowing forth. I think it would be a great mistake to introduce it. I am sure the expense would be very much larger than would appear on paper, and I think it is a matter where the Government should not further interfere. Private enterprise does the work quite as effectually as the Government ever could do it, and the expense is certainly on the decrease. I think the time is not far distant now, when, in consequence of the great changes which have taken place in the trade of the coast by steamers taking the place almost everywhere of sailing vessels, the cost will be still further reduced. It would be quite a mistake for the Government to own these vessels. In some places where the trade is almost altogether in steam and the expenses of the subsidised tugs so great, I should be inclined to recommend the Government not to continue the expense. For instance, the Tweed and the Clarence receive large subsidies for tugs, and there is really very little work for

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- for them, because most of the trade of these rivers is done by steam. If you commence to make the tug service a Government service, I am quite sure the expenses will go on increasing until it becomes of enormous cost to the country, for every river on the coast would insist on having a tug. There are some places, too, where a tug does the work of two rivers, and these rivers will each insist on having a tug of its own. The tenders we have just called have brought a reduction of something like £1,200 under what it was previously, and I am sure the expenses will go down as we go on; but if they do not go down it will be a question whether the tugs should not be done away with altogether in certain places.
2558. As a matter of fact, almost every river now has its tug with the exception of two—the Nambucca and the Bellinger? The Bellinger has one itself. Where tugs serve two rivers are at the Tweed and Brunswick, and at the Nambucca and Macleay. Those are the only two. We have a tug at Wollongong too.
2559. Looking at it from a commercial point of view: from your showing, Sir Alexander Stuart proposed to put a tug at the Richmond at a cost of £10,000? Yes.
2560. How long ago was that? Fifteen years, perhaps—when Sir Alexander Stuart was Treasurer as Mr. Stuart.
2561. Say ten years; ten years' subsidy would be £17,000? Yes.
2562. The Government have paid more than £17,000 in subsidies to steamers during that period? That is right, sir.
2563. So that we have £17,000 against £10,000? Yes; but there was a very valuable tug lost—the "Francis Hixson." I am quite sure that if the Government had owned these tugs they would have had to pay much more than £10,000 additional to replace those wrecked and damaged.
2564. But these are all insurable risks? I believe, at the Richmond, that the contractor has to pay 12 per cent. for all that he insures.
2565. Take the subsidy paid to the contractor—£1,770 a year; it is estimated, we were told, I think, by Mr. Allt and Mr. See, that they paid for the services of the "Protector" between £1,100 and £1,200 in one year? Do they?
2566. Suppose we take an average of £800 a year? Yes.
2567. According to Mr. Cruickshank's estimate the expenses of working that boat are £2,460 a year for coal, ropes, bonus to the men, 12 per cent. insurance, 5 per cent. depreciation, and £30 for repairs to hull and machinery, and docking; all these matters seem to have been very carefully gone into by Mr. Cruickshank—that is, £2,460 against £2,570? Is that including the earnings?
2568. This leaves a small balance in favour of the ship; we will put the case the other way round now; what shall we say for the pilot—£20 a month? Yes.
2569. That is £240, is it not? Yes.
2570. Then what do you say for the engineer—£18? Yes.
2571. That is £216? Yes.
2572. Well, two firemen—£120 each? Yes.
2573. That is £240, is it not? Yes.
2574. We want two deck-hands; that will be another £240? Yes.
2575. That would be about the equipment? Yes.
2576. Then the maintenance on Mr. Cruickshank's estimate; take that at £150 a month—£600 a year? Yes.
2577. Add that up, and see what it would come to; it would be about £2,700 a year, would it not? Yes.
2578. Well, now, on the other side of the book, we have to take credit for the subsidy—£1,770? Yes.
2579. And the earnings—say, £800? Yes. I might say, though, I know the present tug proprietors have great difficulty in getting their earnings.
2580. But the Government have no difficulty in that direction? How would the Government get it?
2581. They would get paid? These men have not the money.
2582. But they give orders? I am told by Mr. Buckle he has lost a great amount of money.
2583. Well, this amount of money employs the men and employs the pilot, and you have the boat to the good? I have seen many of these schemes. It looks very well on paper; but it does not turn out well. This service appears to be self-supporting. I am very averse to the Government taking up a service of this sort, which would lead to enormous expense. You would require spare boats. For instance, there have been troubles with four different boats in six weeks. The wear and tear there is perhaps five times what it is in Sydney Harbour.
2584. We have heard a great deal about these tugs;—it appears to me that when they are most wanted they are not available? I never heard such a thing. I know a lot of the people in the districts have their own schemes, and want the Government to do this and that; but, you know, under the present system the men do not get their pay unless they render the service, and I must say complaints have been very infrequent in regard to want of attendance of the tug. I have been urged over and over again on the same points you are taking up, and several Members of Parliament advocate the system. I have talked it over with the Premier and Treasurer, and I am sure the expenses of the Government would be largely increased if you were to change the system.
2585. There is one case,—we have evidence that the master of the tug is actually a landsman—he is not a trained seaman at all? He must have a certificate.
2586. I assure you I got this upon very good authority? Is he inefficient in his work?
2587. He is said to be inefficient; he is not considered to be the right man for an emergency, and I take it if there is any time when a tug is required it is in time of emergency; and we find that there is a good deal of friction between the tug-masters and the pilots? That is at the Clarence, I suppose.
2588. I am not speaking of any place? There may be friction.
2589. There is not only friction, but the vessel is not under the charge of the pilot? We had a case reported only the other day. There had been very bad weather at the Richmond, and the pilot thought the bar had subsided, and wanted to cross in a certain position, and the master of the tug would not go that channel, but went another channel. It appeared in this instance that the pilot was right, and the following day he induced the master of the tug to go that channel.
2590. There are two masters in that case? Yes.
2591. That is unfortunate? I do not think so. The master of the vessel is in charge of her, and he controls her. In most of these places there is a most amicable arrangement between the pilots and the tug-masters, but there is difference of opinion occasionally.

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2592. There is a great deal of friction, and the pilot has not that control which it is desirable he should have. Going on to another matter, which I have left until last, and which I go into with the full consent and desire of Mr. Wilson, who visited the outports with me. About the matter of the "Captain Cook"; we seem to think from the evidence we have got that the sum of £3,300 per annum is a large sum for so small a service; I think you yourself are of opinion that it seems a large sum? Yes.

2593. The impression left on the members of the Commission who visited the "Captain Cook" was that nothing short of a very complete and thorough reform was necessary in the conduct and management of that vessel. I do not know, but I suppose you know pretty well everything that is going on;—do you think that that vessel, from information supplied to your office, was only about thirty-eight hours away from her moorings during the whole month of March? Very likely.

2594. That is according to the returns furnished? Yes.

2595. Well, then, do you know that the master seldom passes a night aboard that vessel? No.

2596. You are not aware of that fact? I was not aware of that fact.

2597. Do you not think that the master should be on board, of all other times, at night? I do not know. I do not think that he should. I do not think that human nature could stand a man being always on board ship at night.

2598. They all go to sleep on board—they all turn in? Yes; but if a man has his family on shore in a service of that sort he should have some time with them. I quite admit that he should be on board more than on shore. If it is fine weather, and he has his officers on board, I do not think he should be called upon to be on board ship every night.

2599. We do not say every night? He should live on board his vessel, as a rule; but, if a man has his house and family close to, it is very hard that he should not have a night ashore occasionally.

2600. And you think that generally the ship should be his home? Yes. This vessel is called by me at night, and is frequently rendering service. The fact is, that the vessel bears a high character for efficiency. If we ask anybody about the port if the people on board are asleep, I assure you, the general report would be in their favour.

2601. All I say, or may say, is based entirely upon the evidence given by the people on board; the evidence is, that the master is not always on board the ship? I think you had better send for the master. The man, I told you some time ago is over 70 years of age, and is on the list for retrenchment, and he is going.

2602. You remember giving evidence about a Mr. Hay? Yes.

2603. And that man said that the captain was never wholly sober—he said that? He simply said what was not true. I tell you that this man Hay was only on board the ship for a short time. He had been captain of a big ship. He was on board our ship a short time, and knowing his character I am not surprised at his saying anything.

2604. Are you aware that Captain Creer's habits are such as to render him an undesirable person to be even in nominal charge of the "Captain Cook"? No.

2605. I presume that, having said what I have, the matter will engage the attention of the Marine Board? If we are going to discharge the man, what is the use?

2606. I mean to say his habits? The man's age is 71. He does not look more than 50 or 55. No man about the harbour, in or out of the Department, bears a higher character than Joseph Creer does, and I deny altogether that he is a drunkard.

2607. We only go by the evidence; that evidence is of such a character that we should be wanting in our duty if we had not taken notice of it? I have known this man for over twenty years. More than ten years ago there was trouble between him and one of the pilots about drink; but that, until now, is the only rumour that ever I heard against his sobriety, and I must really again ask you to look at the man. He is 71 years of age, and does not look a drunkard.

2608. I have seen him—it is not my opinion—it is what is sworn to in the evidence? Well, you have sworn me, and I assure you that Joseph Creer is not a drunkard. He is a man who is as much respected in the Port of Sydney, as any sailor man about.

2609. *President.*] About the "Protector"; there has been evidence given to us here that when the "Protector" has been removed for repairs a very poor substitute has been sent; of course, I have not seen the contract;—does it provide that a vessel equal to the "Protector" should be sent? It does not say "equal"; it says "substitute." What you say is perfectly right. Not long ago she had to go to Sydney for repairs, and her place was taken by an inferior vessel, but you cannot always have exactly what you want. The rumours going about the coast are sometimes absurd. A vessel was lost at the Bellinger, and the public were up and expected that a vessel would drop from the clouds to take her place at once. The "Emma Pyers" is not the best boat in the world, but the owner of the tug had to put a boat on at once.

2610. How long would that substitute last? I think the "Protector" was away about a month.

2611. And that, I suppose, would occur about two or three times a year? Not so often as that. The "Protector" did not leave her station until this last time for several years.

2612. Speaking about the tugs being owned by the Government: I think that you admitted the financial aspect of the case on paper would tell in favour of the Government continuing the tugs? Yes, if the present value of the tugs were taken, but if the Government were to supply tugs, I am certain the people at the Clarence would insist on having a tug as good as that at the Richmond, whereas the present one at the Clarence is very much inferior to that at the Richmond.

2613. Your objection to it is this: that if the Government take upon themselves the responsibility of supplying the tugs there would be an instant demand for a larger number of tugs? That is it.

2614. That is to say, the rivers which have now no tugs would press to have one? Yes.

2615. *Mr. Powell.*] They all have? I have given you three that have not, and there are others.

2616. *President.*] So that from your view the number of tugs that would be required would not be the same as are now used, but that plus tugs for the rivers that now have no tugs? Yes. On the other hand, the system that is in vogue now is on the wane. For instance, the last time we called tenders we saved £1,200. The prices are going down, and the day is arriving when we need not supply tugs at all. We supplied them when it was sailing-vessels which could not get in or out without them; but now, take the Tweed, there are only steamers plying there.

2617. *Mr. Powell.*] The steamers are the best customers on the Richmond? At the Richmond—yes; at the Clarence they seldom take the tug. If you want to exercise economy take the tug off the Clarence River

River, because there is really no necessity for it. If you put Government tugs on you put them on in perpetuity. I am only giving you my opinion. I am not attempting to dictate.

2618. *President.*] Suppose the Government owned the tugs, could not they be used by the Works Department in the dredging works on the rivers? I do not know whether they could.

2619. *Mr. Powell.*] It is the opinion of the people on the rivers generally? It would be, for instance, in a place where the traffic is regular.

2620. *President.*] Would you kindly look into that matter with Mr. Darley and have a talk with the Works Department about it, and, perhaps, give us a little more information on that point? Yes.

2621. You would use the pilot to man the tug, and you must take into account the fees earned in cases of distress. You do not know the amounts the tugs are receiving? No; I know that at Port Macquarie there is a private tug sent up to compete against the Government tug.

2622. *Mr. Powell.*] There is a commercial side to that as well? If we could do all the Government work in the river by the tug, there would be something in that; but then there is another point to consider: those extensive works at the Clarence and the Richmond will only last a short time.

2623. *President.*] They will be always dredging? —

2624. *Mr. Powell.*] By the look of it, it may be some years before that is finished at the Clarence and the Richmond? When the tugs are at work down at the Heads the scheme might be worked in. I may say these tugs do not come under the Marine Board Act whatever. They have been taken on by the Government without any reference to the Marine Board, and latterly they have been put on our Estimate. We did not father them. It was brought on by the agitation of Members and the Press.

2625. *President.*] It is something like this: the people say, "You are spending a lot of money on the railways, and you should do this to open up our rivers"? Yes; the people about there are very unreasonable indeed in forcing claims on the Government.

2626. *Mr. Powell.*] Your man at the Richmond is not the man to put up a signal to come in or go out when it is not safe; he kept two steamers there the other day; I pified them? Well, if a steamer is lost he is responsible, and I expect he had reasons for acting as he did.

2627. *President.*] The pilot's only object is to relieve himself of responsibility? He is only human; but if he does not let a vessel come in he will hear of it all over the district, and these men try to do their best for the trade and commerce of the district.

Henry Pettit, Harbour-master of Sydney, sworn, and examined:—

2628. *President.*] You are senior harbour-master? Yes; I have two assistants.

2629. Who are they? Captain Bracegirdle and Captain Thompson.

2630. *Mr. Powell.*] What is your age? I was born in 1830.

2631. Then you are 66 years of age? Yes.

2632. What salary do you receive? £356 a year, and pay income tax on that.

2633. Are there any other emoluments? No.

2634. The Departmental return is here at £371? That is, perhaps, not allowing for the deduction of the Superannuation Fund, to which I pay 4 per cent.

2635. That is salary also; that is an investment; you will get a *quid pro quo*. Then your salary is £371? That must be correct then, sir.

2636. Will you say what your duties are in connection with the harbour? Removing every third ship. I take my turn with the other two regularly, and look after beacons and buoys, and see that the fairways and approaches to the different wharfs are kept clear.

2637. There are three officers charged with that duty? Yes; the principal duty is removing these large ships.

2638. The removal fees paid during late years appear to have fallen off very much;—how do you account for that? There has been an alteration. At one time the sea-pilots in taking these ships to sea used to be charged for. A ship, for instance, going to Newcastle from the wharf at night to sea, there used to be removal charged, and it was discontinued; and if they have not the services of the harbour removal officer, they were not charged for it, and now they do it because they find it is not compulsory, and they avail themselves of the privilege.

2639. That is to say, they remove without the harbour-master's consent? Oh, no; they come in and apply, but they move a ship if they feel themselves competent.

2640. And you have no means of preventing that? Not that I am aware of. If they do it legitimately—that is, if they have that privilege—I do not see how we can prevent that.

2641. How many vessels do you think you remove in the year—the three of you? I suppose on an average about sixty ships a month. That is taking the busy time with the slack time.

2642. That is for three harbour-masters? Yes; three of us.

2643. That would not go one a day for each of you, would it? There are the Saturday afternoons and the Sundays taken off.

2644. That would be rather less than one a day then? Yes.

2645. In accounting for the reduction of the dues—all the vessels do not go to Newcastle that go at night? It is principally the Newcastle vessels that go at night.

2646. But there must be very few of these. That cannot affect the removal dues very much? No; but as I say, they have the privilege of removal, and remove them themselves.

2647. Is it a fact that the sea-pilots now come up to the wharf and take vessels right away to sea from the wharf? Yes; even a home-bound ship. If the captain wishes to go direct to sea from the wharf, there is no removal given, and the sea-pilot takes the ship from the wharf right to sea, and no removal charged for it. If he dropped his anchor there might possibly be a charge, but if he is ordered to take the ship from the wharf to sea he frequently does it.

2648. Is not that trenching on your duties as harbour pilot? It would be if it were compulsory for those ships to take a harbour pilot. The sea pilot does that duty. I never heard it questioned.

2649. Do you not think that in the ordinary practice of pilots the sea pilot should take the vessel in sea pilot waters—that is, from Fort Denison? That was the old rule which used to be enforced, and if the sea pilot did the harbour pilot's work it was charged, although no certificate went into the Customs for the removal.

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- removal. The officer who had to do with that work used to sign the certificates for vessels handled by the sea pilots, and they were signed by the harbour-master, and went in to the Customs. That is how it used to be arranged until very lately.
2650. You will admit that the sea pilots' and harbour pilots' water was accurately defined, and the line was drawn at Fort Denison? That was understood in the early times.
2651. Now the sea-pilot, by taking the vessel from the wharf, prevents you from charging the harbour pilot's removals? Quite so.
2652. That is how you account for the loss of revenue, and for your having less work to do than you otherwise would have to do? That is it; and these people have the privilege to move their ships if they can do so. The mail-boats, for instance, go right from the wharf to sea, and now those which are exempt from sea pilotage take the harbour pilot and move into the stream, and in the same way with the vessels coming in; we take them from the fair-way.
2653. Have you known of the harbour pilot taking a vessel direct to sea, or taking her below Fort Denison? Oh, yes; we have only got now Neutral Bay and Bradley's Head to take a ship to.
2654. Do you take them round Bradley's? No.
2655. Have you ever heard of such a case? I have not done so, unless I have gone on board a mail-boat that has been docked and overhauled.
2656. The question has been raised that the harbour pilots have sometimes taken vessels direct from the wharf, not exactly to sea, but they have taken them down the harbour beyond Bradley's? Well, I have never done that, and I think I can answer for my two assistants. They may have taken them down a little further if the captain has requested them to do so, but I do not think they have taken them below Bradley's.
2657. An exempt master might avail himself of that service? Yes.
2658. *President.*] You are satisfied with your assistants, Thompson, Bracegirdle, and Sangster? Sangster is not under me; he is a new man.
2659. Do you not know anything about his duties? I know he has to supervise the cargo.
2660. He is not under your orders at all? No.
2661. With regard to Captains Bracegirdle and Thompson, are you satisfied with them? They are most efficient officers.
2662. You are perfectly at liberty to make any remarks you like if there is anything you think may be of help to us in our investigation? I do not think that I can say anything.

Frederick Bracegirdle, Assistant Harbour-master in Sydney, sworn, and examined:—

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2663. *President.*] How long have you held that position? Twelve and a half years.
2664. And you were taking vessels into the Clarence River before? Yes; fifteen and a half years in that.
2665. What is your age? I have been giving in the wrong age. I am 62 years of age, and I have been saying that I am 64. I have a paper here to show that I am 62. I was born in 1835.
2666. *Mr. Powell.*] Will you be good enough to describe your duties? The principal duty is removing ships; this is our principal work. Of course, we have to go about and sound the different new wharfs, after the dredging, in places we have to take them to.
2667. Have you ever kept any account of the number of ships you remove? Yes.
2668. How many did you remove last month? That is our slack time. I moved sixteen in April and sixteen in May, and the pilotage amounted to £70 in one instance and £72 in the other.
2669. It is the harbour-dues that you charge, not pilotage? I mean the removal-dues.
2670. You removed sixteen in April and sixteen in May? Yes.
2671. Do you consider that as a fair average of the work? No, it is for winter-time; but that is the slack time.
2672. What would be a fair average, taking the year through? For the first five years I moved 1,372, the next year 220, the next 260, the next 295, the next 136, the next 156, the next 168, and last year I moved 191.
2673. How do you account for the falling off? They are larger-sized vessels. The average tonnage was only 1,700 for the first five years, and for the last year it is 3,492.
2674. Is this 191 vessels for one year? Yes; for last year.
2675. *President.*] As ships increase in size they decrease in numbers? Yes.
2776. Have you anything to say on the subject of our inquiry? I do not think there is anything I could say, except that I do not like to see these ships that are not exempt moving about the harbour themselves occasionally.
2677. *Mr. Powell.*] You want an alteration in the Act of Parliament to settle that; have you been trading to the bar rivers at all? Yes.
2678. Which rivers? Port Macquarie, Clarence, Richmond; but principally to the Clarence.
2679. You have been to the Richmond? Yes.
2680. Were the tugs working in your time? Yes.
2681. What do you think of those tugs;—do you think they were working well? I did not like it in one way. I think the pilot should have more control over them.
2682. We know there is some friction going on? Sometimes, when the pilot wants to go out and sound the bar, there is a doubt about the water; and, of course, the captain of the ship wants to look after his owner's interest, and not run any risk with it, and says there is not enough water there, and you can hardly make him go. Otherwise, I do not think that there is any risk. We never had tugs at the Clarence; we always went in and out at all hours. I have been over the Clarence bar 1,368 times.
2683. From what you have seen, and knowing that there is sometimes a little friction, do you not think it would be far better if the Government had tugs of their own, and put the pilot in command? Yes; I should think it would.
2684. Employing the boatmen on the vessel and having an engineer, and a more suitable vessel for the work built under proper inspection for the Government, and placed in charge of the pilot;—do you think the public would be better served? I think so myself.
2685. Such a tug would be available for sounding the bar at any time, for looking after moorings, and for looking after buoys? Yes; and also built to suit the particular place.

2686. Each place has some speciality, and requires some special consideration? Yes. If a tug draws more than the vessel she is towing, although she could not get out the vessel might.
2687. Do you think if the Government had tugs of that kind the public generally would avail themselves of their services? I think so. Of course there would be bound to be a lot against it. I think it would be better for the vessels themselves, no doubt.
2688. And better for the pilots? Yes. They would feel that they could go and do their duty without being obliged by the captain of the tug.
2689. They have no power to take the ship? No.
2690. The pilot, if he had charge, would be the best judge of the safety of going out and the safety of the vessel? Yes.

F.
Bracegirdle.
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Thomas Robertson Thompson, Assistant Harbour-master, Sydney, sworn, and examined:—

2691. *President.*] You are assistant to Captain Pettit? Yes.
2692. How long have you been employed? I have been eleven and a half years in this position; twelve years' service altogether.
2693. *Mr. Powell.*] What is your age? I am 40.
2694. And your salary? £281.
2695. That is including allowances? Including everything.
2696. Your salary is £250? The salary now is £281—that is, including allowances.
2697. *President.*] Do you pay to the Superannuation? Yes.
2698. Does that include what you pay? Yes.
2699. £281 is the gross salary? Yes.
2700. *Mr. Powell.*] Will you please tell the Commission what your duties are? To remove vessels about the harbour from stream to wharf or wharf to stream by the different tugs, and place them in the docks; and I have sometimes been called upon to go and inspect vessels in the absence of the inspectors.
2701. That is only occasionally? That is occasionally; about once in six months. It is not reckoned as part of my duties, but I am sometimes called upon to do it.
2702. How many vessels do you remove in the course of a year;—can you tell how many you removed last year? In a rough way, I moved about 209 or 210.
2703. Have you been in command on the coast here? No; I was chief officer in the Bulli boats before I joined the service.
2704. You have been on the coast then? Yes.
2705. But you had nothing to do with the Harbour Department before you joined? No; not the Harbour Department. I had great experience with the colliers in the present work I have got to do. I was in and out three or four times a week.
2706. Did you ever trade to the bar harbours north? No; I have never traded there. I would like to say something about my salary. Our work now up the harbour is considered by all the shipmasters we have anything to do with as having much more work attached to it than the sea-pilots have to do. They say now, by the way the steamers come in, and also by the way the sailing-vessels tow in, that the work required most is the harbour work; and we are the poorer paid.
2707. *President.*] Your salary is less than the sea-pilots? Yes.
2708. You have more work to do? Yes; and our responsibilities are more. We have more liability to do damage to ships than the sea-pilots have.
2709. *Mr. Powell.*] You are there not to do damage to ships? We have the liability. I think our record is a pretty good one. I would like that to be adjusted. I have been in the Service twelve years, and there are three or four servants that I am senior to who are getting £400 a year.
2710. Are not the vacancies on the sea-pilot staff filled up from the harbour staff? No; I applied when I came here, and I was told that I was doing my duty, and they did not want to make any more changes. I was in a class under the Civil Service Act of 1884 then, and the sea-pilots were not in that, and they said if they sent me there, they would put me out of the Service.
2711. *President.*] We will take a note of that matter.
2712. *Mr. Powell.*] You are not killed with work? Not at present. Our work comes during one six months in the year, in the wool season. Very often then we have to get up early in the morning and stay late at night. We have to take the work as it comes. I have done as many as four vessels in a day.
2713. *President.*] What is supposed to be your own time? It is supposed to be from sunrise to sunset, but the wind gets up in summer time, and it is dangerous to move these ships in a strong wind.

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Alexander Sangster, Inspector of Shipping, sworn, and examined:—

2714. *President.*] How long have you been in the Service? Five months.
2715. You have been appointed temporarily pending the result of this examination? Yes.
2716. Just give us more particularly your work, and under whose instructions you act? What I have had to do since I have been there has been very varied in a number of cases—that is, inspecting shipping generally.
2717. For what purpose;—you do not, for instance, inspect the engines? Principally the loading and equipment.
2718. The spars? Spars, rigging, and in fact everything in connection with the shipping except her engines and hull.
2719. Before the ships go away do you inspect the load line? Yes.
2720. As a matter of fact, every ship before it leaves is inspected by you? No; most of them are, but not all.
2721. What are the exceptions? Ships that we cannot see through so many leaving at the same time. But we generally see them on or before sailing.
2722. Is it in pursuance of the requirement of the Act of Parliament that you do that? Yes.
2723. Do you give a certificate? No.
2724. Under whose orders do you act? Captain Lindeman, the Secretary.
2725. You receive orders direct from Captain Lindeman? Yes.
2726. You have nothing to do with Captain Pettit? No.

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- A. Sangster. 2727. *Mr. Powell.*] When you say you receive your orders from Captain Lindeman, what kind of orders do you refer to? We go in in the morning and inquire if there is anything particular to do, and then we have a list of all the shipping that is leaving the port that day, and see them and go round the wharfs inspecting other ships, going on board, seeing their lamps and rigging and boats and life buoys and life belts and everything. I have taken a note of all the duties I have done since I started.
- 18 June, 1897. 2728. Are those passenger ships you are speaking of? Yes; passenger ships and ships that have no certificate.
2729. You are a ship-master, are you not? Yes.
2730. How about this load-line—that is fixed by the owner;—you have nothing to do as an official with fixing the load-line? Yes.
2731. Under what Act? Under the Merchant Shipping Act, I think.
2732. Here is the Act;—it is the owner's business to mark it? We do not mark it. We only work out what she is allowed.
2733. *President.*] It is the safety load-line;—if the ship is loaded beyond a certain depth she renders herself liable to danger and to accident? Yes.
2734. *Mr. Powell.*] You recommend the place for marking the line? Yes.
2735. About going on board those ships, what does that mean;—does it mean a critical investigation into their condition, or does it mean a mere cursory view? In our instructions we have to go on board all ships coming to the port at any time, and inspect their lamps and gear generally.
2736. Are we to understand that you examine every ship that comes into Port Jackson thoroughly, and see that she is thoroughly found? Not all ships.
2737. What ships then? Principally the intercolonial steamers and colliers.
2738. Well, the intercolonial steamers are mostly passenger-boats? Yes.
2739. Do you examine them with reference to their passenger fittings? I have nothing to do with that, but I have assisted the shipwright surveyor in that.
2740. Have you anything to do with the boats? In ships that do not require certificates, and in ships that have had their certificate for some time, I take notice if the boats are still in their places, and all their appliances, such as life-lines and davits, and see that they are not jammed up with cargo.
2741. Do you see them put in the water occasionally? No.
2742. Who does that? The shipwright surveyor.
2743. He comes under the Imperial Act and the local Act? Also the Merchant Shipping Act.
2744. Do you find yourself fully occupied with what you are doing? Yes.
2745. Is it a work of any importance;—do you not think that a man of your position in the mercantile marine should have something better than that—going on board ships and seeing that boats are all right? I did when I first joined; I thought that I would have more important work to do.
2746. Do you feel yourself capable of taking the position of pilot? Yes. I was five years in command of a large sailing ship.
2747. Into this port? Yes; I was running to this port for seventeen years.
2748. And do you go down about all these wharfs in Sussex-street? Yes; I know them pretty well.
2749. About the colliers—they are not passenger-boats? No; but they have to be watched pretty carefully in lamps and boats. I find they want more watching than any others. The shipwright surveyor does not go through them.
2750. You are a kind of an assistant to the shipwright surveyor? Yes; I have assisted him in most of his emigration measurements since I have been on.
2751. You measure for the cubic space? Yes.
2752. You are termed a water-bailiff;—do you know what that means? No; I do not.
2753. You have an office, and you do not know what it means? Since I have been there I have asked on several occasions what water-bailiff means.
2754. It is not very satisfactory to hold an appointment and not to know what it means? No; it is not.
2755. Then, generally the work you do is more in the nature of assisting the shipwright surveyor? That and the inspection of shipping. Our principal duties are in watching the deck cargoes of ships, overloading of ships, and loading below the load-line.
2756. Inspection is a very vague term? There are a great number of things to do. We are sent out nearly every morning. There is always something to do. I have had things to do which I thought were not quite in keeping with my calling, such as delivering circulars.
2757. It seems a big salary to pay for a duty of that kind? —
2758. *President.*] Do you mean to say that you act as a messenger in the office? Not as a messenger, but I have been delivering circulars.
2759. And what other work have you done that you think you ought not to do? I could not say that there is any other work that I thought I ought not to do.
2760. I mean work you did not expect to do? I thought when I joined the Board that my work would be principally surveying ships, and seeing their condition at the time.
2761. Did you do that? Yes.
2762. And something else? There are lots of things. I could not tell you at the moment, but I have taken a note of the principal duties I have done since I have been there.
2763. Are you fully employed? Yes. We do lots of things. When we are not very busy we go round the wharfs, and see that ships have proper gangways and nets under them; but you have got to have a good sea-faring knowledge to go on board and speak about anything to the captain.
2764. Have you anything you would like to suggest to the Commission? Only three things. I was very much disappointed on leaving my former employment that I only got temporary employment, and I was very much disappointed with my salary. I thought I was to get £99 more than I did get. I was six weeks attending the Marine Board before I got any pay.
2765. That is to say, you were appointed and not allowed to go on? I attended there every day for six weeks before I got any employment.
2766. *Mr. Powell.*] It is not the fault of the Marine Board that the appointment was temporary.
2767. *President.*] It means that it was pending the finding of this inquiry? I was very much disappointed at it being temporary after giving up a good ship, and the salary being less than I expected. I was told I was to get £299, and now I only get £200.

2768. *Mr. Powell.*] Have you heard any reason for that? No. I asked Captain Lindeman why the wages were so low, and I asked if I could get the wages for the six weeks, and he told me he did not know. I asked him if I should apply to the Board, and he said I had better not. I have not seen Captain Hixson. I have met him, but I have not spoken to him since I have been on the Marine Board Service. I gave up going to sea, because my wife did not care about it. I am very thankful for the position I have got, but I expected it would be better.

A. Sangster.
18 June, 1897.

2769. *President.*] Do you think you are as fully employed as you might be? If we do all the work there is to do we will be fully employed. If we carry out the Navigation Act thoroughly we will have plenty of work to do. I have never got any instructions since I have been there, only from Captain Newton, the other inspector. I have been sent by Captain Lindeman several times to look at a ship when any complaint has come in, such as inspecting the ship's fore-castle when the seamen have complained.

2770. You are immediately under Captain Lindeman? Yes.

MONDAY, 28 JUNE, 1897.

PRESENT:—

JOSEPH BARLING, Esq., J.P., PRESIDENT,
GEORGE ALEXANDER WILSON, Esq., J.P.
JAMES POWELL, Esq., J.P.

Bruce Baird Nicoll, Merchant and late Steamship Owner, sworn, and examined:—

2771. *President.*] You are a merchant and owner of steamers? I am now out of the shipping trade.

B. B. Nicoll.

2772. But you were a shipowner? Yes, for more than twenty years.

2773. So you are intimately acquainted with the requirements of the northern rivers in respect to the pilots? Yes; I have had practical experience. I can give you a good deal of information as to the working of the Marine Board and the pilots, and the constitution of the Board as it affects shipowners.

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2774. I think we had better give you a free hand in giving us the benefit of your opinions? I have been of the opinion for years, and am sure all shipowners, and persons who have had to do with the Marine Board, are agreed that it is really obsolete and unsatisfactory, and quite unfit for the work and duties it is supposed to carry out. I say that emphatically, because I have had experience to prove it. One reason is that some of the members have business interests connected with shipping. One particularly is engaged in a very large business, supplying ships and steamers with all sorts of requisites from a needle to an anchor, and is also a director of a very large industry established in the port. It seems to me unfit that he should sit in judgment upon cases in which his customers may be interested. There is another gentleman, a marine engineer, a very good and estimable gentleman, but he may also be employed by shipowners and companies in his professional capacity. These gentlemen are very estimable; I say nothing against them, but against the system. Then I could name another gentleman who is interested in coal mines, and is a shipowner, and he really should not sit on the Board. Then, besides those three, there is another who is interested in shipping, and this may possibly come into conflict with his duties on the Board. About the other gentlemen composing the Board, of course, there is nothing to say, because they are out of business, except that they are hopelessly out of touch with the requirements of the present day. This is known not only to me, but to thousands of people in the Colony. This wants remedying very much. Another thing is, that the gentlemen who compose the Board at present are out of date, not up with the times. Some of them went to sea twenty or thirty years ago in old sailing ships, and they really have not got up to date knowledge of the improvements in steam-ships, and in navigation. They are very far behind, and they are totally unfit to adjudicate upon cases coming before them—some of them cases requiring a great deal of experience of a late date. There are also very numerous complaints by the public about the harbour traffic, the harbour regulations, and the obsolete and old fashioned shipping regulations, and there is no doubt, take it all round, that the Marine Board is very unsatisfactory to the shipowners, the seamen, and the community as a whole. It wants altering completely. The elective and nominee system is a mistake altogether. I do not know that you want a Board at all. In England they have a Judge and two nautical assessors. Of course, these men would be removed from all associations, as they would not be shipowners, nor in the employ of shipowners. They would not be men going to sea. They would be totally unbiassed and unprejudiced. They would be men of experience, and capable of assisting the Judge in nautical matters. That system should be adopted here, and it would work very well. I am sure that cases of shipwreck, certificates, and all matters dealt with by the Marine Board would be better dealt with by a Judge and two assessors in this way than by the Board, and with more satisfaction to the public, the shipowners, and the seamen. I have been in Liverpool, England. I judge from the experience of ship-owners and captains in the old country the system gives satisfaction and works harmoniously, and there is not the same friction that there is here. Go where you will, if you speak to a sailor or to an officer, no matter who it may be, there is nothing but complaint against the Marine Board. That has been going on for the last fifteen years to my knowledge. I do not think the Marine Board is necessary at all. If you had this system it would be less expensive, and certainly more satisfactory.

2775. How would you propose that the nautical assessors should be selected? I am sure there are plenty of men who are quite suitable for the position. You could get men who had been to sea for a number of years, a commander of one of the large steamers running out of Sydney, and one who had been employed on the coast for a number of years.

2776. Would you leave the selection of these assessors to the judge? I should leave that to the Government.

2777. *Mr. Wilson.*] I think in New Zealand these assessors are registered;—if it is an engineering question an engineer is selected? Yes. I should recommend that the Government should have the appointment of these gentlemen. I do not think the Judge would be the proper person to appoint them. I do not think he would have the knowledge. I think the Government would have better knowledge.

2778. *Mr. Powell.*] Do you not think a panel should be selected from year to year, nominated by the Government, from which the Judge could select the particular assessors he wanted? You could have a regular panel, like a jury. That would act very well indeed.

- B. B. Nicoll. 2779. They could sit with the Judge as assessors? Yes. That system of selection would be better, as it would give a larger scope.
- 28 June, 1897. 2780. *President.*] If done in that way it would meet the general improvements that took place in shipping? I think that would be a good idea, certainly.
2781. Then let the Judge select them from time to time from the panel? Yes, according to the particular case which might come before him. A case involving engineering knowledge would require an engineer, and if it was a nautical matter a nautical man would be selected.
2782. *Mr. Powell.*] It is very likely the Judge would be in agreement with both sides in the selection of the experts? Yes; I think that would be a wonderful improvement on the present system.
2783. *President.*] Now could you give us any information about the subsidised tugs? I will come to that presently. I am only speaking now about the general disaffection to the Marine Board, and I could give cases, but I do not think it is necessary. I think it is pretty well public opinion that the Marine Board is unsatisfactory.
2784. *Mr. Powell.*] Will you give us your general opinion about the detail working of the Marine Board, whether it could not be as well performed by a chief clerk or a Harbour-master? I was going to say that if you have the Judge and assessors, which would be an excellent thing, I do not think it is necessary to have the cumbersome machinery of the Board. You could make this a branch of the Customs. It is simply a matter of carrying out details, and I think it would be quite sufficient, instead of having a Marine Board, to put it under the Customs or a Harbour-master.
2785. *President.*] Do you mean a general Harbour-master for the whole of the Colony as head of the Branch? Yes; that would act very well.
2786. *Mr. Powell.*] He would supervise the pilots, and lights, and harbours? Yes. The work is merely carrying out the Act. The rest would be dealt with by the Judge and the assessors. I am sure that would meet all requirements. There is one thing I would like to give details of. The Marine Board have a trip once a year to see the lighthouses, and sometimes they do not visit six of the whole lot. Often they cannot land at the bar harbours because the bars are bad. Sometimes the tug will take them over, and they stay an hour or two hours and go away again. That is the whole of the inspection for twelve months. I think there should be one man, an inspector of lighthouses and pilot stations, to go north and south, right along the coast. They want looking to occasionally. I think these places should be visited more than once a year.
2787. They should be visited at uncertain times? Yes. When the Marine Board goes there everything is ready to meet them—everything polished, and the lights right. There should be an inspection throughout the year right from Cape Moreton to Cape Howe. There is no Departmental action by which they are properly inspected. They are left to take their chance for once a year.
2788. Are the leading lights properly attended to on the rivers? When I was in Parliament I managed to get new lights put on some of the rivers. They were inefficiently looked after.
2789. People are paid £36 a year for looking after those lights? I have been on these rivers, and they are very seldom lit at night, and navigation is very dangerous. I know on the north arm of the Richmond River they are never lit. I think it would be a very good thing to light up the rivers at night, and a great improvement.
2790. Then you say generally that the leading lights are not properly attended to now? I am speaking of the inland navigation. I say certainly to my knowledge they are not attended to, and it would be a good thing if they were properly looked after.
2791. *President.*] And you think the appointment of an inspector to periodically visit these places would result in more effective management? There is no control at all at present. The thing is a farce as far as supervision is concerned. It is left to look after itself. Then about the tugboats and the pilots. I believe I lost thousands of pounds through want of control by the pilots. It is a standing evil. The pilots at all these rivers, north and south, where there are subsidised tugs, are generally at loggerheads with the masters of the tugs. The pilot has not the slightest control over the tugboats, and very often the pilot may want to go out and see the depth of water on the bar, and because it is rough the tugmaster will point blank refuse to go out. The result is that vessels may be kept two or three days through not knowing the depth of water on the bar. I used to pay the tugboat at the Richmond about £1,500 a year for towages, and I suppose the North Coast Co. paid as much. That is £3,000, and the subsidy used to be £3,000, yet, with ten sailing vessels and two or three steamers bar-bound at that river the tugmaster would refuse to go and sound the bar with the pilot because he said it was rough. I have also seen ten or twelve vessels waiting to go out of the Richmond, and one or two steamers, and the tugboat has actually gone out and taken two sailing vessels in and taken them right up to Lismore, a distance of 65 miles from the heads. For this they get about £25, and the other vessels would have got out while they were away through the bar being smooth; but the next day a heavy sea has come up, and these vessels would be kept another week with live stock, produce, and passengers on board. The pilot has no control at all. This is a case that has come under my own knowledge.
2792. How long is that ago? That is about four years ago. I do not think there has been any change.
2793. Do you say that similar things happen now? I believe it is the same now. Of course there are so many more steamers and not so many sailing vessels. The Richmond bar is a very uncertain bar. Sometimes a tug is required to guide the steamers out on account of the zigzag channel, and a strong sea running in. It is dangerous to go without a tugboat. They require the tug's power and their own to keep them in the channel. I have had complaints from captains that their steamers have been ready to go out, and the tug has actually gone out and brought vessels in and taken them up the river, and not assisted the steamers out. The captains have often gone to the pilot and said they wished to be towed out, and asked if it was safe. He would say "Yes," but the tug would go out over the bar, and bring a vessel in and take her up the river, and then a sea would come up and they could not get out for a week.
2794. What do you propose as a remedy? If the tugs are to be subsidised they should be under the pilot's control. The best plan would be for the Government to own the tugboats and have them under the control of their own officers. I brought the matter up in the House once or twice, and Sir George Dibbs said it would be too expensive, but I do not think it would be any more expensive than the present system; but if Parliament objects to that the next best thing is to call for tenders under the arrangement that the pilots have the control of the boats.
2795. The Government would then practically charter these vessels? Yes; the pilot is the responsible person.

person in all these bar harbours. He knows the state of the bar better than any other person there. The tug-boat owner could have his own captain, but the pilot should have control of the boat, and take it out when he required. I am sure he would never take any risk, and he is always an experienced man. I am sure that no insurance company would object to insure the boats if the pilots had control, nor do I think it would increase the cost in the tenders. B. B. Nicoll.
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2796. *Mr. Wilson.*] The companies would prefer it probably? Yes; I think so. The pilot knows the channel best. Any gentleman who has had experience in shipping knows that this is the cause of great trouble throughout the North and South Coasts, and I am sure there is often loss of property through this want of control by the pilots.

2797. *Mr. Powell.*] Can you form an idea of the cost of a tug to suit the Richmond? Do you mean, built here or in Scotland or England?

2798. I mean built here? It costs fully 33 per cent. more to build here than in Great Britain.

2799. Suppose they were built here, and the engines and boilers imported? Would you have wooden boats?

2800. Yes? If you built the hull here, and imported the machinery, I think you could build a tug suitable for all the requirements on the Richmond for £8,000. It would have cost a good deal more some time ago.

2801. That would be in all respects suitable? Yes; efficient and suitable. Her horse-power would not be less than 100 to 120 nominal.

2802. Would you require a boat of equal power for the other rivers? No. The largest tug is required for the Richmond. You should build a boat with no special ornamentation, but just suitable for towing. The machinery for that boat could be imported for about £4,000, and the hull should not cost more than from £3,000 to £4,000. Of course she should be coppered. A steel boat would cost about £11,000.

2803. Looking at it from a commercial point of view, and with the knowledge that in eleven years the Government have paid in subsidies £66,000, do you think it would be a good thing for the Government to have their own boats, even at the expense you have named? I think it would be cheaper all round. The cost of the crew would not come to the cost of the subsidy. With the pilot's crew in the boat it would be much cheaper.

2804. The pilot would be master? Yes.

2805. *President.*] Do you think, if the Government were to call for tenders for that service for five years, that it would be worth while for private persons to build tugs? It would not pay them if under ten years. They would have to lay their money out on vessels that might be unsaleable at the end of the contract. It is a risk, and they have to write off about 5 per cent. for depreciation every year. I think that as an inducement to lay out their money it should be ten years.

2806. *Mr. Powell.*] Do you not think that anything in the shape of divided responsibility would be bad? There always will be friction between the pilot and the master of the tug if responsibility is divided.

2807. Would it not be better that the control should be only in the hands of the pilot? I must say that it is the general opinion that it would be better for the pilot to have the control; it would be better in every way. I think the Government should do it even if it were at a small extra cost.

2808. You must not lose sight of the fact that there would be the earnings? Yes; they would have all that.

2809. A moderate sum in charges would go a long way? Yes; it would help expenses. You say £66,000 was paid in eleven years. I think that seeing the pilot and crew would be utilised and only engineers and firemen required, and taking the earning power of the boat into consideration, it should cost no more than now, if not less.

2810. What would be the life of a tug of that kind? The boiler would last ten years, and the hull twenty years. With two boilers she would last twenty years. The machinery would last the whole time with care.

2811. *President.*] You must take in the risk of possible loss during that time? You must insure the vessel, and charge insurance to the cost. The Government are spending so much money on the bars now that the risk will gradually get less and the insurance get less. The Clarence bar is an easy bar now, and the insurance there would be low.

2812. Have the works at the Clarence improved the bar? Very much. On the Clarence and the Richmond they have done a large amount of good. The Richmond is not so dangerous now. The entrance is very much better, and as the breakwater progresses no doubt it will be a splendid and safe bar harbour.

2813. *Mr. Powell.*] I suppose, from your knowledge of the Northern rivers, the shipowners would not object to pay reasonable rates for the service of the Government tug as they do now? Oh, no; it has cost me over £1,500 a year for one river alone, and I must say that the shipowners would be only too glad to pay a reasonable sum for towage. Some of the bars are much better now, and, of course, the steamers do not require to pay so much for towage, as they do not take the tug so often. Sailing vessels must take the tug in and out.

2814. What do you think would be a minimum rate? All the captains trading to these rivers are exempt from pilotage. Would you make that compulsory?

2815. They only need pay for work;—if they want the service the boat is there? In that case you should charge the ordinary scale.

2816. We know what the scale is, but we do not know what they charge for special services? They charged me for towage 1s. a ton each way on our registered tonnage.

2817. That must come pretty heavy? Yes; it was very expensive. One of my boats cost me over £100 a month for towage when the bar was bad.

2818. *President.*] Are they charging that now? I do not know what the scale is. Mr. Fenwick used to charge as much as he could get. The pilot had no control, and there was no remedy. They could put you ashore if they liked.

2819. *Mr. Powell.*] Do you not think a reasonable charge should be made by the Government, and that almost all vessels would avail themselves of it? I am sure they would if it were a reasonable charge—say, 6d. a ton.

2820. With a minimum of 40s.? Yes, certainly. The rate is a matter of arrangement as the bar gets better or worse. Charge what is a fair thing.

2821. *President.*] And a minimum rate for steamers? I think a minimum of £5 would do. Of course, it would be a Government boat, and should not make a profit. 2822.

B. B. Nicoll. 2822. The idea is to make the charges cover every possible risk, without making a profit? Yes, certainly. There is another matter. Some of the pilots own lands, and set the boatmen to work them. At a Northern river the pilot employs the boatmen to dig and hoe and pull corn. I can bring evidence to prove that they have actually been kept until 12 o'clock at night, shelling corn. This has been going on for years. The men complained to the Marine Board.

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2823. Is that same pilot still in charge? Yes. One man who was discharged I know well. There was no complaint against him particularly. I took him to Captain Hixson, and there was some trifling complaint that he had said something to the pilot while in the boat, which he denied. He was discharged simply to make room for the pilot's son.

2824. Is the pilot's son still employed? Yes. Captain Hixson promised to give him future employment. I do not know whether he has got it yet or not. This man was employed until 12 o'clock at night, in the barn, shelling corn. He is a good man. He has a captain's certificate, is thoroughly steady, and does not drink. I can vouch for him as thoroughly reliable. I have seen coops of poultry on board steamers, addressed to the members of the Board, from the pilots. It seems to me that the whole thing is a happy family sort of business. As long as these men keep right with Captain Hixson and the Board it is all right. There seems to be no supervision; they are not bothered about anything. Some of them have been there for a great many years, and are too old. That is a very bad state of affairs. The men in the pilot service have no place to send complaints to; but perhaps you will recommend that these men be given a status. They have no status now.

2825. If it were made a Government Department they would be Civil Servants? These men have no redress at all. They are generally hardworking men, who have been sailors.

2826. If an inspector, such as you propose, were appointed he could look after this? He would remedy this evil of working the men on the land.

2827. And if the pilot were in charge of the steamer there would be plenty of work to occupy the men's time? Yes; this man, I am told, makes a couple of hundred a year out of the land.

Alfred William Meeks, Merchant, and President of the Chamber of Commerce, sworn, and examined:—

A. W. Meeks. 2828. *President.*] I think you are one of the principals of Gibbs, Bright, & Co.? Yes; and President of the Chamber of Commerce.

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2829. We think you can give us some valuable information with reference to this Commission, and we leave you to put it in your own way? Do you wish as to the present constitution of the Marine Board?

2830. Yes? I think the present constitution is wrong in principle. As I understand it, there are seven members, three of whom are elected by owners of locally-registered boats. These locally-owned boats may be mere lighters and small coasting boats, and need not necessarily be vessels of any moment, while the harbour contains a large number of sea-going boats.

2831. The local vessels are about 90,000 tons, and the foreign-going, 1,500,000 tons? And that 1,500,000 tons are practically unrepresented on the Board. The question arises in my mind whether you want a Marine Board at all to carry on the administration of the Department. The administration is really in the hands of the President and Secretary just as the Collector of Customs administers his Department, and the principal reason for having the other gentlemen on the Board is for inquiries about disasters, casualties, and such like. I have for some time been of the opinion (and I must say, after very careful inquiry of very experienced shipping masters, that they bear out my own view of the matter) that it would be far better if we had an inquiry Court—that is to say, a Court with a Judge or Chief Magistrate as Chairman, and two nautical assessors or more as the case might require. Now that we have a Public Service Board, it should be left to them to appoint the assessors, because they would be free of all political influence, and free of all badgering for office which must necessarily occur if the Minister had the appointment. Now, we require to-day, owing to the alteration which has taken place in the construction of steamers and machinery, and the advance in navigation, that these men should be up to date, and the only way to get them is to take advantage of the men who come off the sea from time to time, and appoint them on an assessor's roll from which the Court might be made up. Those are my views with regard to the inquiries. This would overcome all the difficulties of the present Board, which, being elected, must give dissatisfaction to a number of people. You know now the seamen, firemen, and stewards want to be represented on the Board. They do not want it just for the sake of representation, but for the sake of the inquiries. I should oppose an officer of a boat being tried by men who had not the necessary qualification by training, nor the knowledge necessary to obtain a master's certificate. Cases where certificates are handed in to be dealt with, and which may end in more serious charges in case of loss of life by collisions, should be tried only by those who are most competent, and not by stewards, seamen, or firemen. The assessors should not be appointed for a number of years, and the list should be altered at intervals, and advantage taken of any fresh men coming off the sea, so that the roll should be as complete as possible.

2832. To whom would you give the selection of assessors to try any particular case? I have not given that serious thought. I am rather disposed to have a formal panel, and take them in rotation, but if the Judge thought it a special case, I should be disposed to allow him to increase his advisers; he might have four.

2833. Do you think it would be advisable to give the Judge power to nominate his assessors, subject to Executive approval in any particular case? I do not think it would be necessary. The roll would be so good, in my opinion, that as a rule, with the men running in rotation, it would be perfectly fair. I think it is a little awkward to call upon a Judge to select his assessors beyond saying, "I want four for this case." I have no objection to that. If he had to say, "I want Captain So-and-so and Captain So-and-so" it would be putting him in an invidious position, to which he would object. In certain cases it might be right to give the right to challenge to this extent,—that if a captain were engaged in anything connected in any shape or form with one of the companies he could be objected to on that account.

2834. *Mr. Wilson.*] Would you give the parties the right to lodge objections to any particular assessor up to a certain time? Yes; it might be done beforehand. Lists might be sent to those who had to appear, stating that the case would come on on a certain day, and the assessors would be selected from a list enclosed. They should then have the right to write to the Judge and object to any assessor, giving their

their reasons. I do not want to say a word against the present President of the Marine Board. I have a very high opinion of him. I do not think we need a Board at all, as the President and the Secretary really administer the Department. It is really administrative work. A. W. Meeks.
28 June, 1897.

2835. *President.*] Do you know anything about the subsidised tugs on the rivers? No; I do not. Those are my views after residence in three colonies and very close attention to shipping and mercantile matters in two colonies particularly, and I have been President in the Adelaide Chamber of Commerce.

Alfred Settrec, merchant, and owner of sailing ships trading to the northern rivers, sworn, and examined:—

2836. *President.*] How many years have you been connected with the shipping trade to the rivers? About twenty-five years. A. Settrec.
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2837. We think from your long experience in connection with this trade that you may be able to give us valuable information? I have always been of the opinion that the Marine Board is not constituted as it should be. I am a ship-builder as well as a ship-owner. There should be on the Marine Board a ship-builder, or a man who has had some experience of building shipping. I also think there should be an engineer there in the same way.

2838. If one interest is to be represented others will want representation;—what interests do you think should be represented on the Marine Board? I think there should be a ship-builder there, who, as soon as he goes on board a ship, would know her construction and weak points at once. I think also there should be an engineer on the Board; and a seaman should be appointed to look after his portion, because if I, as a ship-builder only, went on board a ship I would not know that portion of it.

2839. You think that all interests that come under the operation of the Board should be represented on it? I really do.

2840. Do you think that by that arrangement you would have a good judicial Court? I really do.

2841. Do you not think that there would be a clashing of interests under such a system? I do not know how you are going to avoid that in any case.

2842. Suppose you had an independent party, say a Judge of the District Court, assisted by two assessors, appointed as a Marine Board Court? I know the general feeling among the shipping is that there should be a mechanic of each sort on the Board. They send men to inspect our ships, and they do not know anything about it.

2843. What you are referring to now is the administration of the Department, the surveying of ships, and so on? Yes.

2844. But what I am referring to is the Court constituted to try a case of accident;—do you think such a Court should be representative in the way you propose? Most decidedly I do; if they are in the right place in one position, it follows that they must be so in every case.

2845. Would it not come to this: separate the judicial functions from the executive functions, in which a knowledge of ship-building might be very necessary;—do you not think a Judge of the District Court, assisted by two nautical assessors, would compose a Court which would obtain the confidence of the whole of the shipping community? In that case I really do not.

2846. Then we come to the executive functions: if we had in the Department a qualified person who would be an engineer, and another a ship-builder, do you not think that would give satisfaction? I believe that would give satisfaction, I really do, in conjunction with practical nautical men. The thing has been mooted here for years and years among us ship-builders. I know we are very dissatisfied sometimes when these people come on board our vessels. I really do not think they know anything about it.

2847. Who is the shipwright now? Mr. McRitchie, but he does not touch our vessels at all.

2848. If there were a shipwright on the panel of assessors it would give you all the satisfaction you require? Yes, for sailing-vessels, but not steamers.

2849. Now take the matter of the subsidised tugs—I shall be glad if you will give us your views;—we want to know whether it is working satisfactorily to the public? I must say in the first instance a lot of dissatisfaction is caused by the boat being stationed at the Bellinger River while there is nothing going in or out of that river. I suppose I get 75 per cent. of what comes from that river, and there is not one cargo a month coming out. There is a tug waiting on that one boat a month, while there is only one tug to do the Nambucca and the Macleay towages.

2850. Are you the agent of the boat running there? No; I am the agent for the mill at the Bellinger.

2851. *Mr. Powell.*] As a matter of fact, there were seventeen sailing-vessels and eighty-four steamers visited the Bellinger last year;—this is a return from the Marine Board, and the cost of the tug is £746? There are the Nambucca and the Macleay with one boat to do the two rivers, which it cannot do, and is the cause of some dissatisfaction.

2852. What do you think is the reason? Considerable delay to vessels waiting at the Macleay sometimes for days for the tug to come from the Nambucca, and the contractor has been threatened more than once for keeping the vessels behind the bar.

2853. *President.*] You are interested in the Bellinger River yourself? Yes; in the timber business.

2854. I suppose these vessels trading to the Bellinger bring other produce than timber? No; very little. The North Coast Company gets nearly all of it but timber and firewood.

2855. Do their steamers go to the Bellinger? Occasionally. I think there should be a tug at the Macleay, and let the other boat do the Nambucca and the Bellinger.

2856. You think the Macleay has sufficient business to employ one boat? I do.

2857. And then the Bellinger and the Nambucca could well be served by one boat? I think that would give satisfaction.

2858. Do you know anything about the management of the tugs themselves;—are you aware whether the present management gives satisfaction? I do not know whether you are aware of it, that I and two others have put a new boat at the Hastings River, simply because we were not satisfied with the treatment we were getting. We have all the tug work there now, because we have most of the trade.

2859. You have all the timber from the river? Yes.

2860. What other produce comes from there? Not much. It comes in the steamers. We were dissatisfied and complained, and no notice was taken, so we built this boat.

- A. Settree. 2861. What complaints did you make? None; but my skipper used to say he wanted to go out, and they would not take him out. They would tell him to wait till morning.
 28 June, 1897. 2862. Are you aware whether the pilot had anything to do with that? He had nothing to do with it.
 2863. Do you know of any case where the pilot advised that the tug could go out and the master refused? I do not.
 2864. Do you know of any friction between the pilots and the masters of the tugs? No.
 2865. You say that the tug-boats will not go out when you want to? Our skippers complained continually about it, and we got the boat, and the tug has done no work since. It is not paying us to keep the vessel there, but we have done it because we are not satisfied with the present arrangements. We get quicker despatch for our vessels.
 2866. How many vessels are you running to Port Macquarie? All of us are now running eight.
 2867. All these eight vessels are now served by your tug? Yes.
 2868. Do you think that if the tug were under the control of the pilot that the cause of dissatisfaction would be largely done away with? I do not. I think it is better in private hands.
 2869. Do you think that the subsidised tugs along the rivers might be withdrawn altogether? No because there is not sufficient to pay the boats without it.
 2870. How do you propose to remedy that then? The present state of things is all right, if there were better supervision and more notice taken of complaints.
 2871. You think the Marine Board do not take sufficient notice of complaints? No.
 2872. You suggest a better administration, and not an alteration of the system? Yes; there is a great soreness about the Macleay and the Bellinger business.
 2873. It is quite open to you to offer your boat to the Government;—you can enter into a contract with the Marine Board at Port Macquarie? This gentleman has it for six months in any case.
 2874. It is open to you to send in a tender when it is made vacant? I see. We are not satisfied with the boat, the "Thistle." She draws too much water for the place, and she cannot take a vessel when she should take her, and then when they attempt to lighten her up to (say) 5 ft. 6 in., she has not sufficient grip of the water. When she has a good grip she tows well, but when she is lightened she has no power. It is not a suitable boat for the place.
 2875. *Mr. Powell.*] As a matter of fact, it appears by this return that there are more vessels entering and leaving Port Macquarie than any other of the northern rivers? I think there are. I think there are no more vessels, but they make better trips. As far as we are concerned, we are quite willing to offer our boat to the Government for so much a year. We cannot run the boat without a subsidy. We put on our own boat because we were dissatisfied with the present arrangements.
 2876. *President*] Then the reason for dissatisfaction is that the boat is unsuitable? Yes; we have put a good boat there with good machinery.
 2877. I suppose it really pays you to keep her there? We are making no money out of it. With a small subsidy we could do it.

Alfred Langley, Merchant and Owner of sailing-vessels trading to the northern rivers, sworn, and examined:—

- A. Langley. 2878. *President.*] We shall be glad of any information you may be able to give us with regard to the Marine Board—first about the constitution, and then about the management? So far as the constitution of the Board is concerned I do not profess to know much about it. As far as we are concerned we have always got satisfaction.
 8 June, 1897. 2279. How many vessels have you trading to these rivers? Five altogether.
 2880. And to what rivers do they trade? Two to the Manning, one to the Nambucca, and two to the Tweed. They go to wherever they can get loading.
 2881. Are you connected with any of the mills on the coast? My brother has a mill on the Manning, and I am his agent.
 2882. Can you give us any information about the tugs? Sometimes they do not take vessels out when the masters think they can go. The captains of the vessels sometimes say they can get out, and the pilot and the master of the tug say they cannot get out. Some people think the tugs should be under the charge of the pilots, but I do not think so.
 2883. Why not? Very often the captain of the tug and the captain of the vessel will make up their minds and take her in or out against the advice of the pilot. They often risk it against the wish of the pilot. If the tug were solely in charge of the pilots the vessels would not, in my opinion, get out so often as they do now.
 2884. Your experience is that the captains of the tugs are more willing to risk things than the pilots? Yes; the crew of the pilot station are very handy, and of great assistance when vessels get ashore. We had a vessel ashore on the Manning recently, and the tug got ashore, too; and if the pilot's crew had not rendered assistance by laying out anchors I do not think we could have got the vessel off.
 2885. So far as your experience goes you do not think any improvement could be made? I do not say that; but we can get along all right when the bars are good. Of course, we cannot get along well now in day tides; but that is because the bars are very bad.
 2886. Can you suggest no improvement in the management of these subsidised tugs? I do not see that they can be improved on now. I think they might go out a little oftener at night. Very often we can get out at night with the vessel, as there is often better water at night than in the day; but we cannot make them take us out. If it were made a part of the contract that they should take us out at night if necessary, and if conditions were favourable, it would be an improvement. (*Vide Appendix 48.*)

George de Fraine, Shipowner and Timber Agent, sworn, and examined:—

- G. de Fraine. 2887. *President.*] To what rivers do you trade? I have five vessels bar-bound at Nambucca now—to the Bellinger, Camden Haven, and the Nambucca.
 28 June, 1897. 2888. Is that the total fleet you are interested in—five vessels? We have nine or ten vessels running constantly for the mills for which we are the agents.

2889. We shall be glad of any information in your possession regarding the management of the subsidised tug-service? I do not understand exactly what you mean. Do you want it managed more cheaply, or what? G. de Fraico.
28 June, 1897.
2890. Is the present system giving satisfaction? I do not see how you could improve on it.
2891. Are you interested in any of the subsidised tugs? I am the owner of one.
2892. Where? At the Camden Haven.
2893. What do you get for that? £19 10s. a month; and I make what I can out of the ships.
2894. Have you any experience of the tug-service on the other rivers? Yes.
2895. You do not think the present system can be improved upon? I do not think so. There is one great objection to the pilots taking the tugs, and that is that if an accident happened to the tug while the pilot was in charge, who is there to go to her assistance? The tug often gets into difficulties, and the pilot has to help her.
2896. You think the pilots are required in addition to the tugs? Yes.
2897. And if the pilots took command of the tugs various interests would suffer, because there would be no one to help the tug if she got into difficulty? Yes; I had charge of a tug myself for ten years on these bars, and I have often been in difficulty with a vessel coming in, and both vessel and tug have gone ashore, and the pilot has rendered assistance.
2898. You think the pilot's crew is absolutely required to render assistance both to the subsidised tugs and to the vessels which the tug may be towing? Yes.
2899. And you can think of no improvement in the management of the tug-service? No; I am interested in no other tug. There is one thing I would suggest,—I think that when calling for tenders for the service, it should be for three or five years.
2900. Do you think three years would be sufficient? No; I think five years would secure a first-class service, and it would be done a good deal cheaper.
2901. A good deal cheaper? Yes; a boat suitable for a bar harbour tug is of no service to earn a living in Sydney, and a man will not build one suitable for that service except he has a contract for a certain time.
2902. You have been on a tug for some years? Yes.
2903. Do you consider that you are under the orders of the pilot? I have always done what the pilot has suggested.
2904. If the pilot said it was safe to go out would you interfere and say, "No, I do not think it is safe"? I worked under one pilot for nine years, and we always worked together. As far as the service has been conducted, I do not think there has been any complaint.
2905. There is not likely to be complaint in your case, because you are the owner or the agent for all the shipping going there? Yes; nearly all.
2906. There is no reason why you should not be a happy family;—there is no divided interest? No.
2907. *Mr. Powell.*] You said that if the time were extended to five years, it would enable persons tendering to supply a more suitable boat? In some instances it would.
2908. A more suitable boat? Yes.
2909. And you think Sydney boats, as a rule, are not suitable? No.
2910. Do you think the boats now employed, taking them all round, are suitable for the work for which they tender? I think they are, because they have been over the bars.
2911. You told us you were receiving £19 10s. a month? Yes.
2912. Is that for 1897? Yes.
2913. Did you tender in 1896? Yes.
2914. What did you receive then? £19 10s.
2915. I do not quite understand that? I think the tenders were called last June.

THURSDAY, 1 JULY, 1897.

PRESENT :—

JOSEPH BARLING, Esq., J.P., PRESIDENT.
GEORGE ALEXANDER WILSON, Esq., J.P.
JAMES POWELL, Esq., J.P.

Cecil West Darley, Engineer-in-Chief for Public Works, sworn and examined :—

2916. *President.*] You are Engineer-in-Chief for Public Works? Yes. C. W. Darley.
1 July, 1897.
2917. The Commission would be glad if you would give them the benefit of your experience in any matters relating to the Marine Board, which you think may be of use in this inquiry;—in your capacity of Engineer-in-Chief you have a long acquaintance with the Department, especially in regard to the harbour works, and have made many visits to all parts of the coast? Under the present Marine Board Act some trouble has arisen in the control of the inland navigable waters. That Act makes it unworkable to properly control those waters. I think the protection of inland navigable waters should be vested in the Public Works Department.
2918. You mean the parts that are not pilot waters? Yes, up the rivers.
2919. *Mr. Wilson.*] Snags get into the stream above Lismore, and there is nobody there who is under the Marine Board, and yet the Marine Board has to be consulted before anything can be done? In the year 1862 an Act was passed, called the Navigable Waters Protection Act. The working of that Act was entrusted to the Public Works Department. It was to regulate the discharge of ballast, and to prevent any obstruction being put into navigable waters. Its working was extremely simple. Any person could lay an information, go to the court, take out a summons, and get summary jurisdiction. Under that Act we frequently had men summoned and fined £10, £20, and £100, for carelessness in discharging ballast or wilfully throwing ballast into Newcastle Harbour, and into harbours on the coast. We very often had officers out at night watching to catch men discharging ballast into places where it was illegal. This Act worked extremely well, and kept a wholesome check upon these people. If a man felled a tree we could summon him at once and have him punished. The Marine Board Act then came into force, and, although the old Act was not repealed, the Supreme Court has decided that the Marine Board

C. W. Darley. Board were made the custodians of the navigable waters. We summoned a man for throwing ballast into the harbour. The point that the Marine Board alone had jurisdiction was raised, it was taken to the Court, and decided against us on those grounds. From that day to this I am not aware of any prosecution for throwing trees or ballast into navigable waters. Mr. Keele has complained very much about this, that we have to maintain an expensive staff to take snags out of the Richmond, the Tweed, and the Clarence, and their tributaries; that the farmers tumble trees down across the rivers and we have to send men up to take them away. We have frequently reported this to the Marine Board, but we have found their system so cumbersome and troublesome that it was not worth the trouble. It is unworkable. A few words should be put in the Act giving the public or the police power to prosecute so that summary jurisdiction can be taken without appeal to the President of the Marine Board. The police frequently write down and report that a tree is across a river and say what it will cost to remove it. They often help us in that way. There is also another difficulty growing up on the Richmond River, and that is the rafting of timber. It is a great source of danger. In the Act there ought to be power to make by-laws to regulate the size of rafts and the manner of handling them, putting them together, and conveying them down the river. Coming down the river a log frequently drops off and it is not worth while going back for it. Going up the Tweed River the other day I saw two or three. They are called "floaters," and are very dangerous; they would sink a steamer. They are 17 or 20 feet long and 2 or 3 feet in diameter. Something ought to be done to regulate that. We have to maintain a staff of men to clear the rivers of obstructions that ought never to be there, and the cost of removing the obstructions ought to fall upon those who cause them.

2920. *President.*] There is another thing—the Marine Board have not the staff at their command to take prompt steps? They have the pilot at the heads, but as a rule he is not a fit man to do it. It is too far, and he could not get up there with only a rowing boat. Regarding the tugboats I think a change could, advantageously to the Government, be made if the Government owned them instead of renting them. Mr. Portus was approached by Captain Hixson as to whether we could do it with our tugs. That is out of the question. We are not using many tugs along the coast now. At most of the rivers we have sand-pump dredges which do not require tugs. The silt is pumped ashore.

2921. That is a mistake. What we wanted to put before you was this: If the Marine Board had the tugs, would they be of any use to you? On the rivers where we have boats they are working about 20 miles up the rivers. It would be in many ways an advantage to us if the Government had their own boats, because we could often make use of them for moving about on the coast and doing things which we are now debarred from doing because it takes too long. For instance, if I want to send an officer to Coff's Harbour it takes something like five or six days to go there and back to attend to a little matter. If the tugboat could be used he could get there and back the same day. Then I must call attention to this, that while, on some of the rivers, there are most active and efficient pilots and men who, if they had charge of the tugs would get good work out of them, there are other places where the pilots have got sun-dried, and the very nature of their occupation, sitting there on the sand waiting for vessels, makes them indolent and lazy. If the pilots were in charge of the tugboats they would have to be energetic. Of course the boat now attending the Macleay, Bellinger, and the Nambucca must be worked with a great amount of energy. That boat should be under the charge of the pilot at one station, and run down to the others when vessels are expected. These ports are all in the one bay, practically. The eight-hour system could not be worked there; they would have to work long hours when necessary. At the Richmond it would work very well; the pilot is very energetic. But the Tweed pilot has seen his best days.

2922. Could you oblige us by giving us a carefully-prepared estimate of the cost of (say) two classes of steamers—one for the Richmond, which requires a much higher-powered steamer, and then another class which would do for the other rivers; simply making them suitable for the work, without fitting them up elaborately. And also an estimate of what it would cost to work these steamers, making an allowance for wear and tear, &c. We have some information on that point, and we want now a carefully-prepared return to show exactly the cost. You should let us know how many men would be required, the amount of fuel, and say 5 per cent. for depreciation? I think it would be 10 per cent. or 15 per cent. (*Vide Appendix 46.*)

2923. Would you want 10 per cent., taking into account the very careful way in which you maintain your tugs? Yes, I think so.

2924. That would mean a new steamer in ten years. You know we have had the "Thetis" for twenty-five years, and it is still a good boat? She has had new boilers and new engines in her.

2925. Is there anything else you can tell us;—anything in connection with the lighthouses? No. I think they are managed very well. We attend to the structural repairs and maintenance. We supply the paint, and the light-keepers paint them themselves, and take a pride in keeping things bright.

2926. Speaking about the pine-log rafts, do you think the Public Works Department should have the power to make regulations, and to see them carried out? I think the Public Works officers could point out the regulations that are necessary. We saw three logs the other day in the Tweed. They are very formidable things to hit. I instructed my officer that at the first opportunity he could possibly spare he was to go up the river with the boat and hook on to them and tow them to his wharf and tie them there, and if anybody claimed them, he was not to let them go until the cost was paid.

2927. Is it not a fact that these logs eventually sink? Yes.

2928. And then become more formidable still? They collect sand and form a bar. A log of that kind is very often the commencement of an island in the river. On the Richmond River we also met a considerable number of them floating about. It is really a danger to river navigation at present.

2929. You would recommend that power be given to the Public Works Department and the police to frame regulations to control the way in which these rafts are made? Yes.

2930. And also to take immediate action in case of trees being felled across the river? Yes. I think you might go so far as to make farmers responsible for the trees on the banks of the river. They ought to be cut down and burned by the owners of the land. In Mr. Keele's last monthly report he said that in half a mile of the river they took out 540 snags.

2931. The meaning of that is that the settlers fell their timber into the river, and the Government have the expense, practically, of clearing their land for them? Yes.

Mr.

Mr. Henry Selfe, Engineer Surveyor to the Marine Board, sworn, and examined:—

2932. *President.*] Are you a salaried officer of the Marine Board? Yes.
2933. You have forwarded us a letter in which you recommend that the Sow and Pigs should be lighted by electric cable from the lighthouse? I did. [*Vide Appendix 49.*]
2934. Will you just elaborate the scheme you proposed? It requires very little detail. You would merely need an armoured cable under the water.
2935. But a tower would be required on the reef? Yes.
2936. What would that cost? It would not cost much.
2937. Have you gone into it at all? I have not gone into the details.
2938. Would it cost £500? About that. If it is wanted done cheaply you could just put in four hardwood posts.
2939. Still, at the most extravagant estimate, it would not exceed £500? Not the tower,
2940. What would you do then? Carry a cable down to the tower. I should imagine you would require to cut a small channel out of the rock so that the wash would not affect it, and leave it in that until it got into 6 or 7 feet depth, where it would be out of the wash, and then it could go straight away. It would have to be an armoured cable inside a lead pipe, with iron round the outside.
2941. Would there not be danger of a failure now and then through no one being in charge? I do not think there would be the slightest danger. Of course it would be possible for a vessel to pick up the cable with her anchor. The east channel is deeper than the west channel, and it is only pilots and exempt masters who come up that channel. It would be easy to put a small light on the shore where the cable lands, so that at night vessels would know not to anchor in a line between the two lights. It is the same at Dawes Point and at Cockatoo, where the water-pipes run across; they have lights up, and a notice cautioning people not to anchor between the two lights.
2942. Supposing the cable were to give way? You might have a cylinder of compressed gas there, to be turned on in case of failure.
2943. Would that be turned on from the shore? No.
2944. Would you want a man on the watch? No. You have the "Captain Cook" there. If that happened the lighthouse people would know at once. Suppose it were out for half an hour, what would it matter. They are all exempt people who come in without a pilot.
2945. *Mr. Powell.*] Would it be in view of the lighthouse where the power was derived? Yes.
2946. *President.*] What experience have you had in electrical matters? None. I am no authority on electrical matters. It has been suggested by my general experience.
2947. Do you know of any place in the world where a light in mid-harbour is managed in that way from the shore? I cannot say that I do. I have not hunted the matter up at all. You need not look for a precedent in these matters. It is strictly a mechanical problem.
2948. We know it is practicable, but in case of accidental failure there might be serious consequences;—you know the electric is very often an uncertain light;—you see the light on Sydney station die down and perhaps go out occasionally, and, although there is no inconvenience there, it would be a serious thing at this light in the harbour? There is more chance of failure in the arc light than with the incandescent light. The arc light could not be used there because it would dazzle the eyes of shipmasters coming up the harbour. You want a subdued light there, so that you could see even a miserable little coaster coming up with an oil light.
2949. *Mr. Wilson.*] The danger of interruption would not be so great where there is simply one light as where there is a large distribution to shops and so on? No. The filament of an incandescent light would last 1,000 hours, whereas the carbon in an arc light must be renewed every day.
2950. *President.*] It might be done in another way, by having a double cable? It would be better to have it in duplicate. I spoke to my brother. Mr. Norman Selfe, and Mr. Fitzmaurice about it, and they saw no difficulty.
2951. *Mr. Wilson.*] Would that apply to other harbour lights? Yes; to all the lights.
2952. *Mr. Powell.*] You could extend it to the Hornby light, too? Yes.
2953. And if any accident happened, the man at the lighthouse would know at once? Yes.
2954. *President.*] And he could send assistance at once to put it right? Yes.
2955. *Mr. Powell.*] From the "Captain Cook"? Yes. It occurred to me once when I went on board the lightship. It took me back to something far beyond my boyhood's days—the old crab-winch and the three-eighths chain and block.
2956. *President.*] It costs £800 per annum? Yes.
2957. One expense will settle the whole thing? Yes; it is a matter that a man wants to go into carefully to get the best way to go about it. I imagine the separate circuit system would be better than the continuous circuit, but these are matters for the electricians to go into.
2958. How many lights would that effect in the harbour—the Sow and Pigs, the Hornby Light, the Pile Light, and the two leading lights on the shore? I think there is another further down.
2959. *Mr. Powell.*] There is one at Shark Island? I am almost sure there is.
2960. *President.*] Is that quite your idea? Yes, it is quite my own idea.
2961. I think you are deserving of great credit in bringing it forward. Is there anything else you would like to say? I have been seventeen years in the Government Service, and am really not as well remunerated as I was in the employment I gave up to come here. I never made less than £400 a year as chief engineer. Now I get £371 a year. Mr. Marshall and I were both chief engineers before we got the appointment, and we got it in competition with a number of others. It takes £6 or £7 a month more to live on shore than on board ship, so I am not getting as good pay as a chief engineer on a mail steamer; and Mr. Marshall is not getting as good as a second engineer. The General Manager of the Union S.S. Co., who is interested in Messrs Briscoe, Drysdale, & Co., sent to me and made me a distinct offer some time ago of a three years' written agreement of £400, £500, and £600 a year, to take charge of the machinery department at Briscoe, Drysdale, & Co. I thought the matter over and consulted with Mr. Cruickshank, who agreed that as the Land Boiler Bill was before the House there was every chance of an improved position. I refused it, as it was a new line to me.
2962. What are your duties? Surveying steamers. If I go on board a steamer and say, "The bottom has got to come out of this boat," there is next to no appeal—the bottom must come out. When the Manly Beach Co. were running against the opposition, I compelled them to spend £6,000. They must do it.

H. Selfe.
1 July, 1897.

H. Selfe. I could not help it. The boats would not have been safe without it. That was the "Fairlight" and "Brighton." These people had every confidence in me. They never appealed against it. The same with the North Coast Co. I had boilers taken out of their boats last year. We have enormous power under the Act. I am the assistant engineer; but, when I survey a steamer I have to do it on my own account, there is no assistance in it. Mr. Marshall receives £24 12s. a month. He was chief engineer on the "Zealandia" before, getting £25 or £26 a month, and found, and where the wear and tear of clothes was nothing to what it is now. We are always crawling about the boilers and ships bilges. Yesterday I was over the "Miowera"; I had five hours of it. I was completely played out.

Captain Francis Hixson, R.N., re-examined:—

- Captain Hixson, R.N.
1 July, 1897.
2963. *Mr. Wilson.*] This is a plan of the Newcastle Harbour (*putting it before Captain Hixson*), and this is the south part. Vessels coming in cannot tell when vessels are going out, nor can vessels going out tell when vessels are coming in. Captain Williams has suggested having a signal, which would cost very little money, to show vessels going out whether other vessels are coming in, and *vice versa*. There is a large building on the point, which shuts off the view; will you tell us what you think of this proposal? I am against the proposal. In the first place, if a collision occurred about here they would try to prove that the signal was wrong, and if it could be proved that it was wrong we should be placed in an awkward position.
2964. Would you be more responsible for the man in charge of the signal than you are for your pilots? Perhaps not. If a man is entering Newcastle Harbour he cannot look about for signals; he has to look after his vessel. There is no such thing known in the British Dominions, and it would be expensive.
2965. The expense would be immaterial? I do not know that. You would require people on the lookout from daylight to dark, and what about thick weather, and at night-time, when navigation is most dangerous?
2966. They have people already there? My impression is that the proposal is a fad, and the generality of nautical men would be against it. I assure you I would guarantee to say that not one man out of ten who bring their vessels into Port Jackson looks to see whether she is signalled in or out. The signal is not put there for the use of vessels; it is put there for business people to see. The master of a vessel has quite enough to do to navigate his ship. Even in the "Orlando" nobody would heed signals on shore; the whole attention of the officers would be directed to the navigation of the vessel.
2967. *Mr. Powell.*] What are the leading lights for? To show the only channel that can be navigated. The master's whole attention is taken in navigating his vessel, and he gets his leading lights in line for that purpose. I assure you that the members of the Marine Board in Sydney laughed at the thing, and so far as I know the members of the Board in Newcastle laughed at it.
2968. They did not seem to laugh at it to us? Captain Cross, the chairman, and Captain Newton, have laughed at it to me.
2969. It was advocated by Captain Brooks? He is not a sailor; he is a carpenter.
2970. *Mr. Wilson.*] Captain Williams said, "The reason why they refused to accede to our request, was that in the event of a collision occurring they would be responsible"? The very point I take. The Marine Board rules for the navigation of the harbour are most excellent, and if these rules are attended to no collision can occur. We have an additional rule in both Sydney and Newcastle reducing the speed, and the true safety of the navigation of both Port Jackson and Newcastle harbours is to go easy and observe the rules.
2971. I do not see that there is any harm in having this signal? No; except that they would try to put the responsibility of accident on the signal.
2972. I am not expressing any opinion at all. It is carrying out very much what is already in existence on the railways? The trains go on railway lines.
2973. This proposal is very similar in principle to the railway signals of in-coming and out-going trains? It would not do a bit of good and it might lead to the Government becoming responsible for a collision. There are already rules, most comprehensive, most excellent, to guide the ship in every possible way, and when one ship sees another they both of them know what to do to keep away from collision. When I say it might not do any harm, I am quite sure that if men look away to seek for signals harm will come of it. The master of a vessel has no business to do anything else but look ahead and see to the navigation of his vessel.
2974. *President.*] You are unquestionably of the opinion that this should be put aside? Certainly.
2975. *Mr. Powell.*] There were plenty of experienced people like yourself there who had ample opportunity to ridicule it, but they did not? No?
2976. I can assure you that it was received with acclamation? You call half a dozen shipmasters without prejudice at all and ask them about it.
2977. *President.*] You think they would endorse your view of the case? I am pretty sure they would. I am quite sure every captain would say he had quite enough to do to navigate his ship, without looking about for signals. If there is any doubt whatever they have steam-whistles to call one another's attention. I would like to call your attention to the immense traffic in Sydney Harbour, and the few collisions that happen. Is not that all due to the rules, and to the careful navigation of the masters?
2978. *Mr. Wilson.*] Is there not something to be said for this particularly narrow channel? I think, sir, the narrower the channel the more necessity for the captain never looking away from his ship's head.
2979. He does not require to look away from the ship's head;—as he looks down he can see if a ship is signalled;—the signal is straight ahead? If the signal is exhibited in a certain place, the man faces it in one instance and backs it in another.
2980. If a man is going towards the signal it is before him each way? They are compelled to whistle going down the harbour. The regulations also provide that the vessels must always hug the shore on their starboard side.
2981. *Mr. Powell.*] I think your evidence goes to show that all signals are useless? To tell a man how to navigate his ship, most certainly. The signals of the present day are ample, and I am sure that this scheme would not do any good, and would very likely do a lot of harm.
2982. *Mr. Wilson.*] The room was full of people, some of them the captains of vessels then in the harbour, and they applauded it? With all respect, I do not care what they did.

2983. *President.*] How often are the pilot stations inspected in the course of the year? We only do it when we go on the regular yearly inspection.
2984. Are the pilots not inspected except then? Unless there is a disturbance, the regular inspection is once a year only.
2985. Are they left to themselves all the other time? Yes; but if there was anything wrong we would soon hear about it.
2986. Have you no inspector whose business it is to visit them periodically? No.
2987. A proposition has been put before us to light the Sow and Pigs by electricity from the lighthouse. Does that commend itself to you? I have never thought the matter over, but the present light does very well. They had an electric light at Dungeness, but they had to do away with it because it was so close to the water, and sent such a glare about that all the masters objected to it. Electric lighthouses are never used except on a high elevation.
2988. *Mr. Wilson.*] Cannot that glare be reduced? Yes. For instance, we have reduced the glare of the electric light at the South Head by putting brown curtains round it on the land side.
2989. *President.*] The lightship costs £800 a year. If you could put a small tower, or even piles there, with a light on top, operated from the lighthouse, would it not save a large expense? It might. We have quite enough to do with the power we have at the Macquarie light to run that light. We have no spare power there.
2990. If it could be done it would be worth while having fresh power? It is an idea. I suppose a tower could be built and a foundation found.
2991. The foundation is there now. £500 would do? I do not think that. It is possible, but I do not know what the cost would be.
2992. *Mr. Powell.*] Would not that do for the Hornby light as well? I think the best thing there would be gas—it is pretty close by.
2993. *President.*] You would want a man there? Yes; I do not think it would do to have a turning light without a man there, because whenever an accident happened there would always be an attempt to prove that the light was wrong.
2994. *Mr. Wilson.*] Supposing the light failed, there would have to be a reserve of gas there that the man could light? Yes. I daresay economies could be effected in some of the lights. I think that would be worth considering. There is one feature in this proposed light—it would be necessary to put it in about 4 fathoms of water, because the ships round it. You could not put it on the rock. It should be in 24 feet of water. I will mention it to the Marine Board; and then there is the matter of sounding the gong in foggy weather. We have Mr. Cruickshank and Mr. Wildridge, and in them as good men as can be found.
2995. *President.*] Perhaps you will consult them, and give us some information? Yes. You know there is a deal of difficulty in the harbour arrangements. It is altogether different from people coming at 9 and going away at 4. These people of ours are on duty all night, Sundays and holidays, rough or fine, so even if the service appears to be extravagant there is reason for it. If this tower is small the man would have to go to and from the shore, and in rough weather it would be difficult. The Sow and Pigs lightship has very rough times indeed in easterly gales. She broke adrift once, and the men had a bad time. I happened to be on the alert, and I got a steamer and towed her into safety. All these nautical matters are attended with more difficulty than ordinary shore matters. The light is the rounding-point, and you must have it right out in 4 fathoms of water, and the tower must be conspicuous, to be seen in thick weather.
2996. Mr. Darley has brought under our notice the cumbersome method of summoning people who fell trees into the rivers, or streams falling into them. When the Navigable Waters Protection Act was in force it was easy to take proceedings, but it is much more difficult now, because you have to specially authorise people to conduct the prosecution, and it is rather difficult to set the thing in motion, and the consequence is that people escape? It is a pity that Act was repealed.
2997. It was not actually repealed? It is obsolete. Our Act answers very well for navigable waters, but it is faulty for that sort of thing.
2998. In fact, you have no staff? No.
2999. Your staff is just concentrated at the heads and the harbours, and so on? Quite so, sir.
3000. So you entirely agree with Mr. Darley in that respect? Yes. I think the other Act was far better than the present one in some respects, and it is a pity that the old one is lying dormant.
3001. You think that, although you might still be the conservators of the navigable waters, powers might be revived under the old Act, so that the Police and the Public Works Department's officers could take action? Yes; I think so.
3002. You quite believe in that? We always authorise both the Police and the Harbours and Rivers Department to prosecute; in fact, we often put them in motion in the first instance. Still it is too cumbersome a plan.
3003. Supposing that it was determined that it was desirable that the Government should own these tugs, would any men other than the pilot's crew be needed to man the steamers? No. I should think the pilot's crew would be sufficient, but you would want an engineer and fireman.
3004. The reason I ask is this, that one of the witnesses here said that, in case of accident, you would want, not only the crew of the steamer, but the crew of the pilot-boat as well? It is very desirable. The practice is, that the tug tows the vessel in, and the pilot is in the channel to tell her to go right or left, as the case may be. I would never advocate the pilot's being put on board the steamer. I told you of a case where the vessel and the tug were stranded, and, but for the pilot's crew, eight lives would have perished.
3005. That would tell as an argument against the pilot manning the tug with his crew? I am very much against it. I have studied the system thoroughly, and I say we are getting rid of the expense as things go, but to attempt to establish the Government as the owners of the tugs would lead to very great cost, and I am pretty sure that if a Government tug towed a vessel ashore, it would lead to the owner suing the Government. You asked me last time whether the Harbours and Rivers Department's vessels would do, but I find they are not suitable. They are only made for harbour work. They are long and narrow, with open hatches, and would not stand the sea on the bar.
3006. What we wanted to know was, if you had the steamers, could the Harbours and Rivers Department use them? Mr. Darley was out of town, and Mr. Portus said, "No, it could not be done," and I asked him to put his ideas in writing. He has given me this letter. [Vide Appendix 45.] 3007.

Captain
Hixson, R.N.
1 July, 1897.

- Captain Hixson, R.N.
1 July, 1897.
3007. What we want to know is, if you had the steamers, whether the Harbours and Rivers Department would not find them useful, and Mr. Darley has told us they would be useful, and he instanced taking an engineer from Trial Bay to Coff's Harbour? We could do that now, by arrangement.
3008. *Mr. Powell.*] Is that in the tug-owner's contract? No; but he is there, and it could be done.
3009. *President.*] If Mr. Darley would communicate with you, you could arrange that for him? Yes.
3010. In connection with the tug that is now stationed at the Bellinger, and the tug stationed at the Macleay and the Nambucca, we have had evidence here that the Macleay is the river that should have the tug to itself, and the other tug should serve the Bellinger and the Nambucca? There is not much in that. I think the Bellinger is the place where there is the majority of the work.
3011. It has been said that the pilot at the Macleay has been employing the men on a 200-acre farm, hoeing, ploughing, and shelling corn? Something of the kind has been reported, but this is news to me. I think they should complain to the Marine Board first, and then, if they get no satisfaction, come here.
3012. Would there be much danger if this proposal for the light at the Sow and Pigs were adopted, of the cable being dragged by vessels? They might let go an anchor on it. That is really a point. If the light is there it must be there always. If it is out an instant it would mean trouble.

William Newton, Inspector and Surveyor of Shipping to the Marine Board, sworn and examined:—

- W. Newton.
1 July, 1897.
3013. *President.*] Under whose immediate orders do you work? For the principal part of the work under nobody, that is for the inspection of shipping; but I get things requiring to be attended to from the office from Captain Lindeman.
3014. Are you not under anyone other than Captain Lindeman and Captain Hixson;—are you an independent officer under them? Yes.
3015. What are your duties? Principally inspecting shipping in everything with the exception of boilers and engines.
3016. Has Captain Sangster to do work similar to yours? Yes.
3017. Is he under you? He is not an assistant, but he does the same work. The only difference is, that I have been longer in the service.
3018. He holds the same relation to you as Mr. Selfe would to Mr. Cruickshank? Yes; with the only difference that he is not gazetted as an assistant.
3019. Are you a captain? Yes, and a shipwright also.
3020. Are you fully occupied? Yes.
3021. Is there anything you would like to tell us with regard to your work, or any suggestion you wish to make? I have thought that more could be done in inspecting shipping. There are a lot of small coasting vessels, and it is full employment to keep going round them. They are all over the harbour. If we were afloat all the time we could do more of them, and do it much better. The launches are not always available; but in any particular case we can always get one.
3022. You think a launch ought to be going about continually with you? There might be a small launch always on the harbour for the use of the inspectors only. When we want to see a vessel at the Pymont wharf, we have to walk right over through the city.
3023. Are there not sufficient launches to enable you to do that? There are so many of us to use them, the engineer-surveyors and the shipwright-surveyor. As a rule there are two and three engaged. The Post Office authorities and other people outside the Department use the launches.
3024. What people outside the Department, other than the Post Office use them? Not much outside the General Post Office. The Stock Department used to use them, but now they have their own.
3025. The Post Office using the launches prevents you doing your work as effectually as you would like? In some cases.
3026. Does that occur often in the week? No.
3027. The objection is not a very great one? No.
3028. If you had a row-boat at your disposal, would not that do? The question would arise whether it would not be a cheaper arrangement to have a launch and one man.
3029. If you had a boat, could you not row yourself about? It would mean rowing all day.
3030. Would you not be engaged an hour in each vessel? Yes.
3031. And the vessels would be pretty close together? Not in all cases.
3032. When you had to go a distance you could get a launch, but would not a row-boat be an advantage to you? It would; but it would take longer to row round to Pymont from the Quay than it would to walk.
3033. You could make several inspections on the way? Yes; but it would take a long time, that is all.
3034. *Mr. Powell.*] Tell us what you mean by inspection? The general inspection of a ship to see whether she is in a seaworthy condition in every sense.
3035. Do you tell me that every vessel that comes into and leaves this port is inspected in that sense? No, sir.
3036. Under what conditions;—is there any special rule or any special time? No.
3037. Does inspection mean a mere casual looking at at any time to see that all is right, and the loadline right? Yes, in some cases; and in other cases more than that. If we have any suspicion that a ship is aged, it would mean condemning it. We have condemned some.
3038. Under what Act do you do it? The Navigation Act.
3039. That gives you permission to go on board of any ship. Are you required by the Board to do this. Do you receive instructions to go on board the "Saucy Jack" or the "Lively Susan" to see that she is in proper order and well found? No; not unless there is a complaint made about the ship.
3040. You appear to have a general roving commission;—you go on board every ship? Yes.
3041. That is not required by this Act. Do you get instructions from the Board to do this? In some particular cases.
3042. But not generally? No; we do not report to the Board in these general cases.
3043. Suppose a vessel is overloaded;—have you to do with that? Yes.
3044. Very well; you know when a vessel is going to Brisbane or to Melbourne? Yes.
3045. You go down and see what her deck cargo is, do you not? Yes.

3046. How long does that take ;—you know in five minutes whether she has too much deck cargo? Yes; but those ships are advertised to go away at 5 in the evening, and—
 3047. They do not go away till 9. But you do not stay till that time? Not always. We go back sometimes. If there is no cargo there that would be deck cargo we do not go back, but if there is timber and fruit, that would be deck cargo, we go back.
 3048. It is ordinary work? Yes.
 3049. Well then, you do not trouble these little schooners trading coastwise, do you? Yes.
 3050. You do not go to see their cargo? No.
 3051. Then what do you go for? To see that they are seaworthy.
 3052. You are not required to do so by the Act? We always have done.
 3053. From whom do you take your instructions? Any instructions we get, we get from the secretary.
 3054. Does he instruct you to go to these small vessels? Not unless there is a complaint made.
 3055. Have you any printed instructions? No.
 3056. When you took that duty, you learned it from the man who was engaged in it? Yes.
 3057. Do you ever see Captain Hixson on these subjects? No; I have seen Captain Hixson on some occasions.
 3058. Only Captain Lindeman? Yes.
 3059. You know nothing about the Board as a Board, except through the secretary? No.
 3060. *Mr. Wilson.*] Are any of the launches used by the Naval Brigade? I do not know.
 3061. Do they ever get the use of your launches when the launches are required for Marine Board business;—have you ever known it to be so? I cannot say that I have. I would not know.
 3062. *Mr. Powell.*] How long have you been an inspector? I was a pilot for three years, and I have been inspecting for seven years. I was on the Richmond River before.

W. Newton.
 1 July, 1897.

SATURDAY, 3 JULY, 1897.

[At Custom-house, Wollongong.]

PRESENT:—

JOSEPH BARLING, Esq., J.P., PRESIDENT.
 JAMES POWELL, Esq., J.P.

Andrew Thompson, Pilot and Harbour-master at Wollongong, sworn and examined:—

3063. *President.*] What position do you occupy? Pilot, harbour-master, head light-keeper, signal-
 master, and everything connected with the port. A. Thompson.
 3064. Have you any assistance? Two men; one by day and one by night. 3 July, 1897.
 3065. What is your salary? £215.
 3066. With quarters? Yes, sir.
 3067. What do your men get? £12 a month.
 3068. *Mr. Powell.*] They are classed as boatmen? Yes.
 3069. *President.*] Do they get any quarters? No, sir.
 3070. What is your particular work? We have a lot of work to do about the shipping that may not be reckoned as work, letting go lines until sometimes up to 12 o'clock at night.
 3071. You act as harbour-master? Yes.
 3072. *Mr. Powell.*] There is nothing here now? This is an exceptional day.
 3073. *President.*] What is the cause of the quietness? I could not say. It has been the same at the jetties along the coast.
 3074. Are you fully employed? When there is shipping here we sometimes work from early morn till late at night.
 3075. Do you require two men here? We do.
 3076. You could not do without them? No. It would be a hard matter—because if there were no man in the lighthouse at night, and bad whether were to come on, and the danger signal was not put up, it might cause loss of property and life.
 3077. Is it an oil light? No. Some twelve or thirteen years ago it was turned to gas. The gas-pipe is in a dangerous place, and bad weather may break the connection; but the oil lamps are standing ready trimmed to be lighted when wanted.
 3078. Then one of the assistants is up all night long? Yes.
 3079. Do ships go out and come in at night? Yes; and the man is there and takes the lines or lets lines go just the same as we do in the day.
 3080. Are there any harbour dues here? Yes; I think it is 5s. for the small vessels.
 3081. *Mr. Powell.*] Who collects that money? The Customs officer. I think the larger ships pay ¼d. per registered ton.
 3082. *President.*] Do you know what the revenue is? I do not know.
 3083. How long have you been in the service? Nine years.
 3084. Is there any improvement in the management of the harbour, in the regulations, that you can suggest? No.
 3085. How often are you inspected here? Once a year, but we were for five years under the Harbour Trust, when we were never inspected by the Marine Board. Before the Harbour Trust came we had not to attend at night-time, but they laid down rules requiring us to attend at night, to take and let go lines for the vessels. It saves a lot of time for them.
 3086. Is it your business to bring vessels in and out? Yes, when they require my assistance.
 3087. Do they pay anything for that? They pay the ordinary pilotage, the same as in Sydney.
 3088. Is that collected by Mr. Potts? Yes.
 3089. *Mr. Powell.*] Is it a large amount? No; the last vessel I took was the "Queen Adelaide," and as she was too large for here I took her to Kembla.
 3090. Are there harbour dues charged for Kembla? No.
 3091. Have you a subsidised tug here? Yes.
 3092. Is she always here? Yes.
 3093. What subsidy is paid? About £28 a month. 3094.

- A. Thompson. 3094. Is she at your disposal? Yes, at any time; when I require to go off to a vessel or to do anything else. I am never refused her.
- 3 July, 1897. 3095. Is steam always up? Yes; they have always from 30 lb. to 40 lb. of steam ready.
3096. If she were required to go out now could she go? She could be ordered out in less than seven minutes.
3097. Is she frequently employed? Not very frequently lately.
3098. Is she frequently required by yourself? No.
3099. Can you tell us any time in the present year that you have had occasion to take out the tug for your own public purposes? Not this year.
3100. Whenever she has gone out this year she has gone out to be privately employed towing in or out? Yes.
3101. So far as the Public Service is concerned she has rendered no benefit or advantage to you except that of being always ready in case of emergency? That is it, sir. At any moment I want her I can get her.
3102. What is the distance to Port Kembla? About 3½ miles by sea.

Edmund Potts, Customs Officer at Wollongong, sworn and examined:—

- E. Potts. 3103. *President.*] Can you give us the revenue that is derived here from tonnage dues, and so on? I have only had the tonnage dues since the 1st of last August. It has been about £168 for seven months.
- 3 July, 1897. 3104. What are the total collections from all sources here? After taking out the tonnage rates there is very little left. We have only had two cases of pilotage in this port for the last two months. When I came here, six years ago, there was a fair revenue, but the Harbour Trust drove it away with all sorts of charges and annoyances. They used to make all over-sea vessels shift for the steamers, to which there was great objection, but now it is first come first served, and when a vessel gets alongside she is not shifted to make way for a steamer. We get very little harbour and light dues here, because most of the coal-vessel owners have agents in Sydney, and they pay the dues there. The rate is 4d. per ton per half-year.

MONDAY, 5 JULY, 1897.

PRESENT:—

JOSEPH BARLING, Esq., J.P., PRESIDENT.
 GEORGE ALEXANDER WILSON, Esq., J.P.
 JAMES POWELL, Esq., J.P.

Thomas Martin Davis, M.L.A., sworn and examined:—

- T. M. Davis, M.L.A. 3105. *President.*] We shall be glad if you will kindly give us any information which may have come under your notice, and which will be of use to us in our inquiry into the Marine Board? Of course you are aware that in two separate Parliaments I have tried to bring about some reformation in the Marine Board, or the closest approach to reformation in its construction that I could get. In the first place it seems to me that its mode of election is altogether faulty. Only one interest, the shipowners, is represented, whereas no other body of the people interested, neither the underwriters, the Chamber of Commerce, nor firemen, nor seamen are represented. To alter that I was going on the Melbourne plan of a representative Marine Board. I carried my Bill in the Assembly, but it was always objected to in our local House of Lords, and the great objection raised against it was one with, no doubt, a great amount of force in the argument, and that objection was that it should always be made a cardinal principle that no British captain should be tried for his certificate by any but his peers. That was really the difficulty, and seemed to be insuperable under a representative Marine Board. In England they have the Vice-Admiralty Courts and local Boards, and wherever a wreck takes place, or wherever a captain's certificate is challenged, the case is always tried by a Judge with two nautical assessors. That meets the Judicial aspect completely, and I think would meet the case here. In fact it would be better—much better. I have had pretty close intimacy with the coastal trade for the last twenty years, and was secretary to the seamen's organisation for five years, and during those five years I had dealings with all the shipowners on the coast. I was also general secretary to the whole Federation of Seamen's Unions of Australasia, so that I had dealings with the shipowners of every colony. It has become almost proverbial that a case of collision in our Courts has become simply a case of hard swearing. It is a question of who can get the most to swear in evidence. One man gets his people to swear that he had the red light on the port bow, and the other swears that it was a green, and that he did not see this and did not see the other, when, as a matter of fact, both of them were then asleep. Not many years ago a case of collision occurred in the harbour, and one vessel belonged to a company which was supplied in ship-chandlery by a member of the Marine Board, while the other got its ship-chandlery stores in New Zealand. Suppose the whole thing hinges on a vote, and that one vote carries it in favor of the local company? Here is a man elected on the Marine Board, and engaged in a business which brings him in tow with a great many of those who elect him. Is it not simply a travesty on justice? What I am saying I have said to Captain Hixson, to John See, and I have said to others, and there is no doubt about it. There was one case of ferry collision brought up in the House time after time, where a man sat on the Board and gave judgment who was a big shareholder in one company, and then, when it was brought to the Supreme Court, the ruling was upset. The whole thing is simply a farce. Our Marine Board is simply a mockery, and if you did no other good, in my opinion you would do good if you simply got rid of it. You could not possibly set up one worse if you tried. There is not one of the Judges that I would not give my cause to sooner than the Marine Board if I had one to give; or if I had a certificate brought into question I would sooner take a Judge's impartial dealing than have it bandied about as a question for vote by people interested. Have two nautical assessors who will give to the Judge a proper nautical outline of what is right and what is wrong; to cross-examine witnesses and bring out the truth, and let both of them sum up, and let the Judge decide on the points of law. The assessors can do the technical work between them

them, and let the Judge do the legal. Now with regard to the executive functions—at Home they have the local Boards of Trade, with representatives of the various bodies. There is a representative of the seamen on about eight or nine of these Boards throughout the United Kingdom. There is one at Glasgow, one at London, one at Liverpool, and one at Hull. I think the local Board should be an honorary one. Let the representatives be elected, and let the position be honorary, the same as the position of alderman. They can have a clerk to do the correspondence and records. Considering that the population here is not very great, I think an executive officer, appointed by the Government, directly responsible to the Government, and not appointed for any term of seven years, to hold office during good behaviour, might do. I do not mean that he should be under any political control from one side or the other, but that he should just carry out his duties in an impartial manner, looking after the interests of life as well as property. In my opinion that would be a long way better than the present system. The present Board are simply a body of men who for various reasons are not fit. Many of them are obsolete, and many of them have not commanded. They had to send the case of the "Austral" Home; it was an unfathomable mystery to them. They had to say that they knew nothing about the ships. When the captain got into the witness-box and explained about the different bulkheads and the boats that passed them, they did not know anything about it. They had the divers and the carpenters up before them, and they had to give it up in despair and send it Home as something too big for them. It was within a mile of the office, and they could go and see it. Captain Hixson gave evidence, that you ought to see, on a Select Committee moved for by Mr. Kelly in the 1894 Session. The evidence is pretty voluminous. Captain Hixson said there was not the slightest doubt that the Board would have to be modernised and brought up to date. There are many things in it you will find very valuable. It would be just as well to compare that evidence with what you have taken here. Captain Hixson said then that the Board was out of date. Say an engineer of fifteen years ago has been living ashore since then, away from his business entirely, do you think you would like to trust him, or yourself with him, on a boat with modern engines, with the latest patents, with a host of auxiliary engines. He would be completely out of touch. I think this proposal would be an immense improvement—a benefit to all classes. I unhesitatingly say it would be much better than the present Board. It will be less expensive and it certainly cannot give less satisfaction. I am certain that it will give far more satisfaction to the general public, and when the general public come to understand that the interests of all taken *in toto* are put in front they will be quite satisfied.

3106. Then you recommend the complete severance of the judicial functions from the executive? Most decidedly.

3107. You think it would meet with the approval of everybody if a judge, with two competent assessors, were made the judicial tribunal? Yes; and if they wanted to they could appeal to the Supreme Court.

3108. And the executive functions should be entrusted to an officer subject to the Treasurer, and holding office during good behaviour; an officer of high repute? Yes; and independent of any influence from one side or the other. I can tell you this: that when the Government were about to appoint an engineer to the Board, the Steamship Owners' Association sent a deputation and passed a resolution asking the Government to appoint Mr. Wildridge. I say nothing against the man's capabilities, but it is not the right thing for the body that has all the representation, the only body that really had direct representation, to go out of their way to use all their influence with Mr. McMillan, who was the Colonial Treasurer at the time, and of whose sympathies they were pretty well assured, to get him to go out of his way to appoint this man; and he did appoint him, there is no doubt about that. I was one of a deputation that brought forward Mr. Dickson, the President of the Engineers' Association, in opposition.

3109. In other words, you have conflicting interests represented on a Judicial Bench where there should be the calmest consideration? Exactly. You have people there with shares in ferry companies, another with a business that affects all the companies. The very case I have cited to you has been quoted to me by ship-owners, and held up to me by them as something simply scandalous and a travesty on justice.

3110. *Mr. Wilson.*] Would you be in favour of an executive Board, entirely nominated? I would not have a Board, I would have an executive officer. If there were a Board at all—that is, a number of persons representing interests, I should certainly go in favour of an elective Board, but make the positions honorary. On the other hand, it is very hard to get people to perform the duties when it is honorary, and the Board might fall through. The executive functions should simply be left in the hands of a trusty officer, just the same as the interests of other great sections of the community are left in the hands of other officers. You have the travelling public completely left in the hands of the Railway Commissioners. Of course we do not want Commissioners, but one trusty officer to do the executive work, and to be responsible to the Treasurer.

3111. *President.*] Which means directly responsible to Parliament, which represents public opinion? Exactly, that is the whole thing. That man will then be practically in direct touch with the public through an indirect channel.

3112. *Mr. Powell.*] Then you suggest going back to the system that prevailed many years ago here when the Superintendent of Pilots and Harbour-master was the principal executive officer of the Department now known as the Marine Board? Yes. The chief executive officer could take up all the functions and be responsible, of course, having certain officers under him. He could very well do the work if the judicial functions were separated.

3113. That is to say, you would make it a branch of the Treasury, as it certainly is now, although the Marine Board intervenes? I would make it a branch of the Treasury as you say.

3114. You propose to eliminate the elective principle altogether from the Navigation Act? Yes, I should take the elective principle altogether away from it. I find the opposition is so strong, and as the Upper House is likely to last a considerable time longer than I care to look forward to, and as they are so strong in their contention (which is a strong argument), that no captain should be tried by any but his peers, I think it is just as well to drop the elective principle altogether, and let the Government take the judicial functions away so that they cannot cavil. They dare not open their mouths in objection, because they have been living in clover.

3115. You have generally advocated the elective principle, and its extension? Yes. I did not want a quasi-representation; I wanted full representation. I wanted the sailors and engineers represented also. I thought the interests of the public would be looked after by the President, nominated by the Government, and also by those who had to travel with them—the sailors, the crew of the ships.

3116. *President.*] If interests are to be represented at all, all interests should be represented? Yes; I said

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said I did not want quasi-representation, but full representation. It is simply a scandal to say that the Marine Board exists, and when one comes to look at the manner in which it is elected it is simply ridiculous. They are paid £2 2s. each a meeting for doing little or nothing. Even when they go a trip once a year to inspect the lighthouses and pilot stations, they cannot keep to themselves as a judicial body to look after the interests of the public, but they allow men who are drawing big subsidies from the Government to travel in the same vessel with them. That does not look well, especially when the vessel is chartered and paid for by the Government. They allow men like Buckle and others to go with them. A person is judged by the company he keeps, and, as a matter of fact, it is the company they keep that causes people to talk. When they have persons travelling with them, who are drawing large sums for services performed, it does not look well.

3117. *Mr. Powell.*] The elective principle, as it now operates, only represents a very small section of the community? Yes.

3118. And the great bulk of the vessels? Are not represented at all. It is only the small locally registered vessels, registered in Sydney, that are represented. When you come to consider that about nine-tenths of the coasting steamships—the intercolonial steamships—that come into this port are registered in other ports besides Sydney, you then come to see that all the interests of these large companies are left without their having a voice in the election of the Marine Board, and if one of their ships happens to touch one of those who are represented on the Board, they have to go back.

3119. *President.*] The tonnage represented is 90,000, and the tonnage unrepresented is 1,500,000? That is more than I have said. I said one-tenth, and it is one-fifteenth.

3120. *Mr. Wilson.*] In recommending that the executive function should be carried out by one officer, have you considered the inevitable growth of the port? Well, the functions need not be carried out by one officer. There is no doubt the port is growing at a very rapid rate. The functions that will pertain to that officer are different to those of a Commissioner of Railways. They have to consider the question of making the different lines pay; they have to consider the question of differential rates, and they have to consider various interests that come into conflict. What would the chief executive officer of the Marine Department have to look after? There are the lighthouses. I reckon he would have time to make two trips a year, and then look over them better, and even quicker, than they are looked over now. They have the lighthouses, then, and they have something that I intend to speak about—something that I think they should not have; they have the pilot crews and the pilot-boats on the rivers, from the Tweed to Gabo Island; they have a few steam-launches in the harbour, and some of the wharfs; they have got the Woolloomooloo wharfs and the Circular Quay wharfs. Captain Jackson has plenty of time left to himself to look after all the wharfage, and the other duties are practically nothing. They have surveyors and engineers to examine vessels for their certificates, and for many years to come the chief executive officer will have less to do than any one of the Railway Commissioners.

3121. Would it not be desirable that an executive officer like that should have a small board to advise him, composed of such men as Captain Edie, who is a Government officer? Why should he not have a Board, the same as the Railway Commissioners have a staff committee at Eveleigh. Let him have an executive Board for advising him—for giving advice all round. Suppose he had Captain Edie, Mr. Cruickshank, and several other well-known men.

3122. An advisory Board? Yes.

3123. There would be an advisory Board, and the president would have executive functions? Most decidedly. That would be better still, because it would strengthen his hands and keep him in touch with every Department. The duties of the chief executive officer would be neither so heavy as those of one of the Railway Commissioners, nor those of one of you gentlemen.

3124. *Mr. Powell.*] Speaking of the division of the functions of the Board, and having a judicial Court, composed of a Judge and two assessors, would not such a Court travel from port to port if necessary. The Marine Board at present confines itself entirely to Sydney and Newcastle. It could deal with collisions on the rivers, for example. The Judge and his assessors could open a Court at any place in the Colony, and at any time? That would be a great advantage, most decidedly. Three people would simply go to the nearest point to the place where the disaster occurred, the best place to obtain evidence. They would be on the spot in no time after an accident, whereas the people now scatter before they can be got to Sydney.

3125. There are collisions on the Murray, and there is no Court to deal with them? Yes.

3126. *President.*] Even then that Court would not have much to do? No; taking the total number throughout the Colony. That last easterly wind drove four ketches ashore in Trial Bay. Of course they simply parted from their anchors and went ashore and were beached. The men scrambled ashore as best they could. They told their story, and it was over in five minutes. We have not had anything like a serious collision for some time.

3127. So the Judge would really not have heavy work to do? No, he would not have heavy work to do. It would give much greater satisfaction, because he would be able to transport his Court right there and then to the spot.

3128. *Mr. Powell.*] As a matter of fact, there are not more than ten or twelve inquiries in the year? Not more.

3129. *President.*] Perhaps it might even be added on to the duties of some of the District Court Judges? Yes; it should be tacked on to the Judge for the district in which the accident happened. It might be down the coast at Bega, or up on the Tweed, the Richmond, or the Clarence. If any accident occurred on the Murray the inquiry could be conducted by the Judge there.

3130. Are there any other matters you would like to mention? The pilots have a crew of five men, drawing from £9 or £10 up to £14 a month. The Government subsidise a steamer wholly and entirely for themselves, paying a very large sum of money. In one case they pay no less than £1,850 a year. That is on the Richmond. As a matter of fact, the pilot is always on the tow-boat, for if there is any sea on, his own boat could not go out at all. The master of the tow-boat is the better pilot of the two, and he takes the steamer out. The pilot only goes on board as a matter of form, and the master of the tug pays no attention to him, but takes the steamer right out, gives the vessel a tow-line and tows her in. Why, the pilot does not go on board the vessel even, he has got to be on board the tow-boat, because if she happened to take a wrong course over the bar nothing in the world would save the vessel. I brought this under the notice of the Committee when I moved for the reduction of the subsidy, and Mr. Young, who

who is an old officer of the P. & O. Co., and was at one time the owner of vessels trading to these rivers, said there was a great deal in the contention of Mr. Davis, and that it was a matter that would no doubt have to receive consideration. They are paying £7,000 a year. If the Government are going to subsidise these boats, why not specify that the captains of these boats shall be certificated pilots, and any one of them could get the certificate for the application, because they are the true pilots. Captain Fenwick went over the bar when no pilot would go, and saved the "Chingtu." Then they say, "Who is to look after the buoys on the bar?" Well, in the very fine weather the pilot goes out, and this is the only practical use the boat's crew is put to. After a gale of wind they go out to sound the bar and see whether the crossing has altered. The pilot will sound the bar and take his bearings, and perhaps alter the bearings ashore. Could not that work be done just as well by the master and crew of the steamer as by the pilot and his crew? The whole thing is a farce. I can understand having the pilots, and boats, and crews where there are no subsidised steamers, but here we have steamers on all the rivers, and the amount of money that is paid to them is quite sufficient for more duty than they are doing. They simply tow in across the bar, and they drop them the moment they get in. The pilot at the heads has simply to pilot them over the bar—he has nothing to do with the river at all. The captains of these steamers should be the pilots. Either that or the Government should own the steamers and their own crews. Either have Government tow-boats, or specify in the tenders that the captains shall be certificated pilots for the place approved of by the Marine Board, and that they shall also look after and maintain at all times in proper position the buoys, and report to the Board, by wire, the loss of any buoy. That would save about £20,000 a year.

3131. *Mr. Wilson.*] You would do the whole business by contract with the owners of the subsidised steamers—you would include the pilotage? Exactly.

3132. *President.*] How about the signals? Oh, keep the signal-master there. You must have him there just the same as the lighthouse-keeper. The pilot has nothing to do with the signal-master. The pilot simply says, "There is danger," and the signal-master puts the signal up. Well, the tug-master would be there—he would be the pilot, the superior officer—and would advise whether to hoist the danger signal or not, and would, in fact, undertake the present duties of the pilots. It is well-known that the worst bar on the coast is the Richmond bar. Do you know that the position of pilot there was practically vacant for three weeks, and that there were any amount of vessels taken in during that time, and who was it did it? The captain of the tow-boat, who is the real pilot. The man who holds the position of pilot has a sinecure. I will tell you another thing: they often get at loggerheads. What do you think the crew do in their spare time? They go catching and curing fish for the pilot. They brush his verandah; they work in his garden; and they go working like a lot of jimmy-ducks round his yard. It is a fact. They go chopping loads of wood for the pilot, and those that will not do that will very soon get shifted out. They are regular little self-governing colonies.

3133. Do you know they are only inspected once a year? Some of them not at all. There is any amount of room for improvement. Get evidence from people who will give you the truth without bias. The Members for these districts have to look after the pilots; they pilot them through at election time. Give this further consideration, and, if you go and get evidence quietly from the master of one of those small craft trading up the rivers they will make it clear that no pilot goes on board of them.

3134. That is pretty clear now? You are satisfied of that. Then these tug-owners get more than a private company would pay for the same class of boat.

3135. *Mr. Wilson.*] I think the pilots admitted that they did not go on board. They said they could be of more use on the tug. "Sometimes," they say, "we can save both the vessel and the tug."

3136. *Mr. Powell.*] The pilots are not called upon to go on board the vessels;—they are mostly commanded by exempt masters, and, therefore, the pilots are not required;—if they take the tug, they take it at their own cost, and they do not want the pilot;—he only gives his services when those services are required and paid for, and we know that they are very seldom required simply because most of the masters are exempt; so there is no reflection on the pilot? I am not reflecting on the pilot, but the system.

3137. The tug does the work? The tug does the work, and the only work done by the pilot's crews is done in the fine weather, and that work could be just as efficiently performed by the crew of the steamer which the Government subsidise.

3138. *Mr. Wilson.*] It would have to be under very heavy bonds or securities, because they would not be under the Government? There are only three or four buoys to look after, and a couple of sticks painted white on a line.

3139. What about the beacons up the river;—who is going to look after them;—the pilot does it now, you know? The steamers could do that too. Up the river they do not often change. The bar is the principal thing. The river has its course set out, and it is very seldom that a change occurs. If there is one department more than another where there is any amount of room for drastic improvement it is this Marine Board. They have been living a very easy existence.

3140. *President.*] Do you think it would be advisable for the Government to supply the tugs themselves, and take up the whole of the services? Yes; they manage other services. They manage to do the dredge service, and to do it very effectively; and they keep other boats for towing out to sea—the "Thetis" and the "Ajax." They could do it just as well, but I do not think they would do it more cheaply.

3141. You think it would be more economical to have these subsidised boats? When the Government goes into a thing they always want to do it a little bit better than anyone else would do it. Of course, the vessels have to be made real special things. The flag of New South Wales would never do to fly over anything of a common kind. I think you would find it more costly.

3142. *Mr. Powell.*] Have you looked at the figures;—if the Government had the boat, the pilot would become the master, the hands would man the vessel, and the whole of that would be saved, and the position would be exactly as you have described—the pilot boat would do all the work? I say it can be done. The same thing would be obtained the other way, as the pilots and their boats' crews would be done away with.

3143. Then you would have to make the masters of the vessels Government officers;—there is no hope for that? Well, very good, that would absorb the pilots. It is easy to specify in the contract that the master of the vessel shall be a Government officer.

3144. *President.*] That has been done in the Public Works Department? Steamers are chartered here now from Home, with Colonial crews on board, but the owner always has his captain aboard. Now, on

U. M. Davis, the other hand, the Government say, "We will put the captain; you will put the crew." That would
M.L.A. get over the difficulty.

5 July, 1897. 3145. *Mr. Wilson.*] How would it do for the Government to simply charter the ship and find the crews and the captain too;—it would save the large capital cost of the steamers? It would. Take the Richmond: I am in a position to know that the "Protector," which was specially built for that bar, cost £11,000. They tried iron boats—the "Francis Hixson," an iron boat, was lost on the bar. The "Protector" has been built of double strength; she is of enormous strength. If you built a boat now you would go to all that expense, whereas if you hired her you could get her at less than the interest on the cost of a new one, because she is older; but she will work for many years.

3146. *President.*] The Government would have to pay the insurance? It is always in the contract to charter that you are to insure the vessel.

3147. *Mr. Wilson.*] You would have to make a contract for five years? Well, Fenwick has always had three or five years' contracts. I think that would be much better than paying the full subsidy rate for crews and steamers. The only thing then is the manning. It does not follow that if you make the vessel a Government boat that you give her a double crew. Find out what she has carried, and see that putting a Government captain on board does not mean doubling the pay.

3148. *President.*] I think you represent a constituency that is specially interested in shipping? Yes.

3149. So that you stand especially as a representative man in the shipping interest? I stand as representing the shipping interest to a greater extent than any other man in the House.

3150. So that, in fact, any opinions expressed by you come with double weight? I have thought it out well, and I have spoken of things that I know are the opinions expressed by my vast section of the seafaring community.

3151. And you are satisfied that in speaking thus you are voicing the opinions of those who have a right to express an opinion on the subject? Certainly; people who know something about it. I have given all these matters due consideration, and I say with regard to the Marine Board and its position in New South Wales that it has been nothing but a farce and a disgrace to the Statute Book, and the pilot stations have been simply self-governing colonies.

FRIDAY, 9 JULY, 1897.

PRESENT:—

JOSEPH BARLING, Esq., J.P., PRESIDENT.
GEORGE ALEXANDER WILSON, Esq., J.P.
JAMES POWELL, Esq., J.P.

Robert Rowan Purdon Hickson, Under Secretary for Public Works, and Commissioner for Roads, sworn, and examined:—

R. R. P. 3152. *President.*] You have had a long experience in connection with marine matters as affecting New
Hickson. South Wales? Yes, on the North Coast; but I know very little of the South Coast.

9 July, 1897. 3153. You have visited nearly every harbour in New South Wales? Every harbour on the North Coast.

3154. In your capacity as late Engineer-in-Chief? Yes; and as Assistant Engineer for Harbours and Rivers.

3155. For how long have you been acquainted with these harbours? For the last sixteen years—since 1881.

3156. And they have been almost daily under your observation in connection with the Harbours and Rivers Department? Yes; with the exception of the time when I was Commissioner for Roads from 1889 to 1895.

3157. We shall be glad if you will now give us the benefit of your experience in Marine Board matters; we will leave you to put it in your own way? The only matter I can speak about is in connection with the pilot and tug service of the ports. I think there is a report of mine to Mr. Moriarty in existence now that I made many years ago. I have always held that there was a very large unnecessary expense in connection with the pilotage and the tug service of those ports. In the first place, at some of the ports—one especially, Lake Macquarie—I do not think there is any occasion to have a pilot service at all. I am very intimately acquainted with Lake Macquarie, having had to go down there about twice a week for many years when the works were in progress. There was a pilot station there then. I presume it is there still. There was a pilot and two boatmen, and the whole pilot retinue, yet the whole traffic of the place was confined to two ketches, the captains of which were both exempt from pilotage. What that man does for the country I could never find out. With regard to the northern rivers, it is of course necessary to have a steamer, but I think the steamer and the pilot service ought to be amalgamated. What takes place with a vessel coming into these ports is this: In nine cases out of ten the pilot cannot get out, and he is inside in a boat waving flags to the vessel coming in, and it is the tug-master that is to all intents and purposes the pilot for the port. My idea is that where the tug-boats are required they should be placed under the charge of the pilot, and have only the one service.

3158. Would you recommend that the Government should subsidise the tugs, or that they should supply the tugs themselves? I think it would better for them to supply the tugs themselves. I am quite satisfied that the service could be kept up at the present cost of the pilot service alone if the pilots had the tugs.

3159. *Mr. Wilson.*] Plus the cost of working the steamer? No, because you would have a less number of hands. There is now a pilot and four men, and you only want three men on the tug.

3160. The engineer would require to be paid more than the man? I do not think you would require to pay him more. I think you could work nearly all those tugs with a captain, an engineer, and a young man on deck—that is three, whereas now you have five.

3161. Could you do that on the Richmond? Yes; I believe you would save money there, as there is a very large subsidy paid at the Richmond.

3162. *President.*] You would also have to take into account the depreciation of the plant? Oh, yes; but that is not very heavy.

3163. Do you think we could hire or charter boats, to be manned by a Government crew? That is practically the same thing. I object to the present system because whenever there is likely to be a bad
bar

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bar or any risk the captains of these subsidised tugs take very good care to be out of the way. It was common rumour on the Richmond that that has been the custom, and that they do not come on the scene until it is almost a case of salvage, so that they can practically levy blackmail on the ships. That is not an uncommon thing. I am quite sure the present system is wrong and expensive.

3164. *Mr. Wilson.*] What you are aiming at is undivided control by the pilot? Yes, either as a Government boat or as a boat hired, but under the pilot's control.

3165. *President.*] We should like to know whether you think it would be a practical arrangement to charter a boat, putting it under the charge of the pilot? Yes.

3166. Have such cases come under your observation in connection with the Harbours and Rivers Department? Yes.

3167. And has it been satisfactory? Yes; so long as the boat is by hire or by ownership directly under the pilot all will be right.

3168. Do you think it would be a good plan to test the thing first by just chartering the boats before the Government undertake the responsibility of providing boats of their own? Perhaps it might. The boats are there, and they might be hired on reasonable terms. It would be worth trying, at all events.

3169. You think that would be a better system than the present? Undoubtedly; I do not think you could have a very much worse system than the present.

3170. Evidence has been given by one or two witnesses that in case of emergency the pilot and crew have been very useful in rendering assistance to the tug when it has got into difficulties? I do not know of a case.

3171. You do not think there is much in that contention? I do not see how it could be, because, under those circumstances, I do not think the pilot could get outside to give assistance.

3172. When they have got on a sandbank the pilot has been of assistance in throwing ropes and so on? That might be.

3173. You do not think the advantage of that would be sufficient to obviate the ill results that flow from the present system? No.

3174. Have you not had considerable experience in the other colonies in these matters? Yes, in South Australia and at home. I was harbour-master as well as engineer to a harbour board for some years, and I had the tug and pilot service under my control for some years.

3175. What place was that? In the north of Ireland.

3176. So that you are particularly qualified to give an opinion on these matters? I think so; I have had a very large experience.

3177. Is there anything else that you would like to tell us that would be of use in this matter? No; I do not know of anything else in connection with the working of the Marine Board except the pilot service and the subsidised tugs.

3178. *Mr. Powell.*] Any system by which the control of the tugs would be placed in the hands of the pilot would receive your recommendation and support? Yes; that is the main thing.

3179. *Mr. Wilson.*] So far as that is concerned, it does not matter whether the tugs are owned by the Government or chartered? No; it is simply a matter of which way is more economical. There is a difficulty in working subsidised tugs with divided control, because there is friction caused by it.

3180. *President.*] Mr. Hickson, you have been giving us some evidence about Lake Macquarie, and I now hand you the official log for the period of three months ending March, 1897, for that port;—will you kindly state what that log discloses? In the month of January, 1897, the arrivals were ten, and I suppose the departures would be the same. There were only three vessels, and between them they went in ten times. In February the same vessels went in twelve times, and in March the arrivals, the same vessels, were nine, and I think you will find that the masters of these vessels were exempt from pilotage, and did not retain the services of a pilot.

3181. *Mr. Powell.*] I dare say you know there is an open jetty there where a large trade is done, and there is no pilot? Yes; that belongs to a private company.

3182. The pilot and tug there cost nearly £900 a year, and that has been going on for twenty years? The pilot has not been stationed there twenty years. I think the pilot was stationed there since I went to Newcastle, about 1882.

3183. That is fifteen years? Yes.

3184. *Mr. Wilson.*] Do you see the "Remarks" there, "Two days clearing up the boat-shed"? Yes; I can tell you a little more about that, too. The Harbours and Rivers Department had to start the works there, and the marking of the channel had to be done by the dredgemen, the pilot's men were too busy to do it, and would not attend to it.

3185. Have you any men there? No; there are no men there now.

3186. The marking of the channel, and that sort of thing, ought to be done by somebody? I do not think so. I do not think there is any change in the channel. It is always in the same place.

3187. *President.*] Do you think that a periodic inspection is all that is required? Yes; the ketch-men do that sort of thing themselves.

3188. *Mr. Wilson.*] "Shifting the buoys in the river";—that ought to be done? I think an inspection now and then from Newcastle would be all that was required.

3189. Could the marking of the channel and the placing of the buoys be done from Newcastle? Quite easily.

3190. *President.*] Perhaps you would kindly consult with Mr. Darley as to the returns he is getting up, so that we might have the benefit of your help also? Yes, certainly.

MONDAY, 12 JULY, 1897.

PRESENT :—

JOSEPH BARLING, Esq., J.P., PRESIDENT,
 GEORGE ALEXANDER WILSON, Esq., J.P.,
 JAMES POWELL, Esq., J.P.

Francis Buckle, sworn and examined :—

- F. Buckle. 3191. *President.*] You are a member of the Water and Sewerage Board of Sydney, and a merchant? I am not a merchant. I am a lighterman and steam-tug proprietor.
- 12 July, 1897. 3192. You have come, at your own request, to give evidence in connection with this inquiry into the Marine Board, and we are very much obliged to you for the trouble you have taken to come? The reason why I came is this—that I have been connected with the rivers for many years, and I know you have had evidence that has been very conflicting, and I thought I could give you a little information which would help you.
3193. We will give you your own course, so that you can put before us what you like, and then we can ask any questions we think necessary? I suppose what you first want to know is a little about the rivers?
3194. We are anxious to get any information we can, so we leave it to you to put it in any way you think best? I have had tugs at as many as five rivers at one time, but I have only three now. Of course, you are aware that those rivers are not so good now as they were, as there are not so many vessels going there; and we have been troubled with bad bars; and at the Nambucca the river has been closed altogether for some time. This is the first time I have known the rivers so bad since I have had anything to do with the tug service, and it is no criterion to go by. The rivers, as a rule, have been good for the last fifteen years, and the cause of the trouble of the last few months is the want of rain.
3195. Will you tell us the three rivers you are connected with? The Bellinger, the Nambucca, the Macleay, and Port Macquarie. I have also had experience with the Tweed and at Wollongong. I know, by hearsay outside, that you are inclined to recommend the taking over of the steamers. It has been so reported by the Marine Board.
3196. I do not think anybody is justified in saying that, Mr. Buckle; but we have evidence in support of that? I went into the figures, and I may tell you that you could get the present steamers for about £18,200, perhaps less. That is including the Richmond River boat as well, and she is the most costly boat of the lot. That is what I reckon the value of the boats.
3197. How many boats would that be? Ten boats.
3198. Can you tell me the names without much trouble? I cannot tell you the names of all, but I can tell you the rivers:—The Tweed River—I do not know the name of the boat—"Terranora"; the Richmond, "Protector"; the Clarence, "Conqueror"; the Bellinger, "Alert"; the Nambucca and Macleay, "Volunteer"; the Hastings, "Thistle"; Camden Haven, "Unique"; Cape Hawke, "Marion Mayfield"; Wollongong, "Carbine"; the Manning, the "John Gollan."
3199. You have missed Lake Macquarie? No; there is no boat there.
3200. And you think those boats can be bought for £18,200? I think so. Can you tell me the subsidies for the lot?
3201. About £7,000 a year? Well, I suppose those ten rivers each average £40 a month in towage earnings, and that is £4,800 a year, and with the £7,000 in subsidies, is £11,800 a year altogether. That is the income of those boats costing £18,200. Of course, if you are going to get new boats they will cost you a great deal more money. The principal expense of those boats is the docking. The cobra is very bad, and if there is a bit of copper knocked off, the cobra pretty soon gets in. The machinery wants looking at about once in three years—it stands very well. The principal thing is the cobra. If a bit of copper comes off she will want to go into dock at once.
3202. There is a dock at the Macleay? Yes. I have always found that when they have come to Sydney to be docked, the engineer says there is very little wants to be done to the engines; but, before they have finished, it costs a lot of money. The Marine Board engineers come on board, and they must have the least thing that is wrong set right to please the Marine Board, and the engineers are very strict. We have to do anything they want. I do not think they go outside their duties, or farther than they ought to go. I think they do just what they think is right, and it is better for the owner that they do that, for they cause many a thing to be done now that the boat would have to come back again in a few months to have done; and, although it seems very hard, I think it is quite right to make a man put his boat in proper order. I know a good deal about the Marine Board. I have gone down in many trips down the coast. It is certainly no pleasure for them. If there was any pleasure it was I who would have it, because they took me to many places I would not have gone to otherwise. I had a free passage, of course, and paid for my food, and went down to see my boats—to see if the engineer found fault with any of the boats. I think it is very judicious for the engineer to go and see these boats, and see that they are kept in proper order, because there may be many times there is something wrong that will run on and ruin the engines. At the time I went, I had five boats on the rivers. I can give you a good deal of information about the Marine Board. I know them all very well, but they are no friends of mine. There was a race here, and boats were cautioned from going to the race. I went, with a few of my friends, on one of my boats, and so did others, but I was the only one summoned, and there is no friendship about that. I know they are all honest men, and, if their own brothers were interested, they would not give a wrong decision.
3203. So far as you can see, you would not suggest any alteration in the present constitution of the Marine Board? I do not think I could suggest any alteration, because if they were not good men I would say so.
3204. You think the Board is well constituted now, and serves the public rightly? It is a very hard case, a Marine Board case. They are not the same as a judge and jury at all. One man gets up and swears it is white, and another gets up and swears it is black, and the Marine Board have to use their judgment to see what is right and what wrong.
3205. Of course these actions are civil, not criminal? Yes. When a captain of a ship comes before the Marine Board it is for an error of judgment. We all err in judgment many times. They do the same,
 and

and have a collision, and one of them is, certainly, wrong—perhaps they are both wrong—but it is a mistake when there is an accident, and there is some one to blame for it, whether it is the captain, or the chief officer, or the second officer, or the third officer. Someone is wrong, there is no doubt of that; they should have kept clear, at least, if they had been keeping a good lookout and things had been done right. The Marine Board have to use their judgment, and their nautical experience, on the evidence they have got. I have often heard the evidence, and it is as I say, one ship swears it is white and the other swears it is black. Both are right—they are never wrong—and it is a hard case to decide which is right, and nobody but a nautical man should sit on that Board, that is my opinion.

F. Buckle.
12 July, 1897.

3206. Of course, as you are aware, in case of any appeal, a Judge really has to settle the case in the end? Yes, and a Judge has many times given a verdict against the Marine Board's finding, but even then the Judge is not a nautical man.

3207. Still, as a matter of fact, it has now to be settled by a Judge in case of any appeal? They can appeal to the Supreme Court, but that is no reason why a Judge is right. Those appeal cases often happen, and very often the verdict has to be altered, but I tell you the Marine Board have got to judge between the two. One or the other is telling lies, and they have to judge from their experience which is right and which is wrong. They have a very hard job—very hard. Every man thinks he is right in a collision case. There is very hard swearing in those cases, and, as you say, it often goes to a Judge, and sometimes the Judge gives a different verdict; but my experience is, that the Marine Board have always done to the best of their judgment.

3208. Do you think your objection could be got over if a Judge of the District Court were appointed and had nautical assessors acting with him? Even then they could appeal to a higher Court just the same, and these men (the Marine Board) sift out everything. They are all old men, and they have worked their way up; they have not come in at the stern window.

3209. Do you not think it would do away with a good many of the objections you seem to have against a court constituted on legal lines if two nautical assessors were associated with such a court? I do not know. Of course, the Judge would be a very good man at taking evidence, but he would really know nothing about the case. He might be a very good man to pick out evidence from the witnesses, and might have a better idea of the man who was telling the truth and the man who was telling lies, but he could not tell anything about a ship.

3210. Would not that difficulty be got over by having trained nautical assessors to get out the technical part regarding the ship, and the Judge to look after the technical points of law? I have always found Captain Hixson a very straight, straightforward man. I think Captain Hixson is a man who has tried to do the very best he could in every possible way.

3211. No one has ever impugned that; that stands out conspicuously? I do not know that you can get a better man than Captain Hixson. I do not think a Judge would be better than Captain Hixson, from the very fact that it is a nautical man that is required for the position. A Judge might be better at picking out the evidence, and about who is telling the truth and who is telling lies, but it really wants a nautical man there. Of course, the Judge is better up in the law than, perhaps, some of the nautical men would be.

3212. Now, with regard to the tugs; I am expressing no opinion whatever, but supposing a three years' arrangement were made, the Government chartering the boats so that they would be entirely at the disposal of the Government;—do you think such a system could be worked? I do not think so. I do not think chartering would ever do any good. I do not think the owners would care about chartering, and I do not think the Government would ever get satisfaction. If there were any accident on the bar the owner would say to the Government, "I want that boat in dock," and while the boat was in dock the bar would be idle.

3213. What is the case now? I have a spare boat. If a boat had to come to Sydney, I would send a spare boat down. I have had a boat in the Clarence dock, and got satisfaction there.

3214. Would not the same resources that are open to you in such a case be open to the Government? Yes.

3215. Mr. Wilson has pointed out to me, would it not be almost casier for the Government to meet an emergency of that sort, because they have boats of their own? Quite right. If the Government had all the ten rivers they could do with a spare boat. If one boat wanted an overhaul in Sydney you could send the spare boat up. You could go through all the ten boats once a year, and then the spare boat could come to Sydney, and be employed in the harbour or laid up.

3216. Would not that work in very well with the boats of the Public Works Department? They have a very large number of boats? Yes.

3217. *Mr. Wilson.*] On the Clarence and Richmond Rivers the Government have boats which would do on an emergency? Yes.

3218. *President.*] Would it be an impossible thing to charter these boats? I would charter mine.

3219. Would you for three years charter your boat at the same rates as now, you taking the possibility of loss? I would have to go into that before answering.

3220. Without trying yourself, just think about it, and say whether you would? We could come to terms. Would you find everything?

3221. Yes; crews and everything? Some rivers you would, and some rivers you would not. There are some of the rivers that do not pay.

3222. Would not that take the difficulty off your hands if the Government took your boats;—do you not think it could be done for the same money that is paid now? There is one thing to be looked at. You have ten boats; you do not want to insure for ten boats. The insurance on those tugs is 10 per cent., which would allow for the loss of one boat a year out of the ten. If I had ten boats, I would not insure one of them; I have only three boats, and so I have to insure.

3223. Does not that show that the Government could do it on very advantageous terms? You would save 10 per cent. on £18,200 every year. It would provide for a new boat every year. If I had ten rivers, I would not insure a boat belonging to me, but with only three it is too much of a risk. I do not know whether you could not do it cheaper by calling for a whole tender in one sum, but the public might turn round and say you were giving a monopoly.

3224. *Mr. Wilson.*] Alternative tenders for the whole or any particular rivers? I might not tender for the lot and I might. If I had the ten boats I would not insure one. The boats must be built to suit the rivers.

- F. Buckle. rivers. They are of very light draught; they are not made for speed; they are made for towing, and they are not good for anything else.
- 12 July, 1897. 3225. *President.*] Does not that all point to the conclusion that it would be advantageous to the Government to take the whole thing into their hands in that way, chartering the vessels? Yes; I think it would. I am speaking against myself, but I will speak the truth.
3226. The Government could charter the whole ten, and do it then under very advantageous terms? You would have to get a driver in each boat, not an engineer, a man with a third-class certificate, because an engineer, if he does any damage, says, "I do not care, I have a certificate; I can go somewhere else and get work."
3227. *Mr. Wilson.*] Would there not be some objection to the Government employing a man who had not a certificate? No; he would have a third-class certificate, a harbour certificate. I had a second-class certificate man once, and he simply ruined the boat. He allowed a small drip to fall down among the ashes, and that drip ate a hole away in the boiler. I had the boat down to Sydney, and got a patch in the boiler, and shortly after she had to come in again, as there was another leak in the front of the boiler that had eaten the boiler away. I took it out, and put another new boiler in. I would not patch it again.
3228. *President.*] The capital cost of the tugs now would be £18,200? That is the estimate.
3229. What would you think would be a fair thing for a plant of that capital sum to be chartered to the Government for? It would be according to the time of the charter.
3230. For three years? Well, you would never get much out of three years' chartering? A five years' charter would be best.
3231. What would you think they should be chartered for at five years' charter? I do not know what time she is wanted. There are the coals to be found, and oils and waste.
3232. The Government to find all labour and material? What about insurance?
3233. Alternative proposals, the Government taking the risk or the owners taking the risk? If you will leave it for a couple of days I will bring it up to you.
3234. We are giving no opinion at all; we are just simply waiting to see which way the weight of evidence goes? I can quite understand that.
3235. *Mr. Wilson.*] I do not know if you could express any opinion as regards the Government owning the steamers as against their chartering them. There are three courses. The present course of subsidising the steamers, you finding the crews and everything; there is the other course of buying the steamers, and the third course of chartering the steamers? I myself never believe in chartering a vessel; I either buy or not at all; still, if you give me time to look into it I might be able to tell you more about the chartering. It never came to my mind, so that I could give no opinion at the present time as to what it would cost to charter. I will consider all this case, because it matters little to the owners whether you charter their boats or whether they run them themselves, so long as they get fair interest on their money.
3236. You think three years too little? Yes. You would get the boats in good order, and, with the exception of the cobra, they would last well. If you have good engineers in them they will last well. A man who neglects his boat ought to be dismissed at once. Let him go at once; he is no good.
3237. If the boats were chartered, the Marine Board's engineer or deputy could periodically overhaul them? Those men know all about it; they know just what the boats want.
3238. *President.*] If you would come again with that information we would be very glad? Yes. If I had ten boats I should not insure one farthing, because you would have a new boat every twelve months; I would put the 10 per cent. away and have the lump sum in hand at the end of the twelve months.
3239. No doubt that would be right. However, you might put it alternatively, as to the Government taking the risk and the owners taking the risk? Yes. I do think that by calling for tenders for the lot you would get more satisfaction, because you would then have one man to look to, and that one man would always have a spare boat, he could not possibly do without. At the Nambucca and the Macleay the people who have the mills and the agents are kicking up an awful row. I have a boat at the Macleay and the Nambucca got blocked. A man came to me and said, "Send the Bellinger boat there." I sent her and she got blocked there, and in the meantime three boats got blocked there at the Bellinger and could not get in. Then there were complaints to the Marine Board, as of course I ought to have got permission from the Marine Board. I was doing what I could to satisfy the people. It cost me more money than I got. I only got 30 shillings for the tow, and it cost more than that for coals and wages and wear and tear of the machinery. I know they are agitating to get another boat there. You see if there is a vessel to go out of the Nambucca this morning she goes out on the top of highwater, and when she gets to the Macleay the tide is down and she cannot get in. To-morrow there comes a high sea, and you cannot get the vessels in. I am going to give it up. Those people who were blocked at the Bellinger were poor people and it was a serious thing to them, and when they did get in they were blocked for a fortnight and could not get out.
3240. *Mr. Powell.*] Do you think it is necessary to continue the boat at the Clarence;—do you think she is wanted there? Well, I had a boat there, and I never made anything out of it.
3241. Do you think she is required there? She is sometimes.
3242. Would you recommend her removal? I would not like to say that. It might be worked with the Richmond River boat; she used to do it before.
3243. They have a boat at the Clarence now—the "Conqueror"? Yes.
3244. Is it necessary to keep that boat there, or have a boat there, or have a boat there in connection with any other river? I think the other river boat would do it very nicely, because they are all large vessels that go there.
3245. Then you think it is necessary to have the boat there? Yes; I think the Richmond River boat should do it.
3246. You think it is necessary for the Clarence that a boat should be there for some time? I do not say she should be there all the time.
3247. You think a boat is necessary? Yes; and I still think the Richmond River boat should do it.
3248. *Mr. Wilson.*] Would she not be prevented from going round? If they were prevented from going round they could not get into the Clarence either. When they cannot get out of the Richmond they cannot get out of the Clarence; and the Richmond River boat does not do much now. It is a very poor river now.
3249. *Mr. Powell.*] That is to say, the earnings are very poor? I know the boat has lain there for months, and has not done a tow.

3250. You would not recommend the taking away of the boat from the Clarence? I do not know what to say there. I have had as much as two months there without a ship. I believe there have been more vessels going there lately. I would not like to say you should not have a boat there, but I do think there is a far better chance of the Richmond River boat doing the Clarence and the Richmond than there is of the Nambucca boat doing the Nambucca and the Macleay, as there is about the same distance between the two places, and there are far more vessels going to the Macleay than to the Richmond. There are three or four boats a-week to the Macleay, and sometimes now there is not one to the Richmond.
3251. In answer to Mr. Barling I think you said that these ten boats were worth about £18,200? Yes.
3252. And that you would go pretty near the same rates in renewing the charters? Yes.
3253. I am speaking now of a possible three or five years' charter;—have you taken into consideration the earnings of the boats, which are about £4,500 a year;—you would not be prepared to forego the earnings;—you would not charter them to the Government for this sum of £6,300 a year, not participating in the earnings;—you would have to add the earnings to the present charter money? If I charter, that money—the Government would do what they liked with it. If you charter that boat you pay all the expenses and you take all the revenues.
3254. *Mr. Wilson.*] You are relieved of the working expenses? Yes. If I charter this boat the Government ought to get the towage money.
3255. *Mr. Powell.*] Take the "Alert." You are receiving as charter under your tender £732 a year; and according to your own showing you earn about £40 a month on the average of the whole number; that would add £480 to the amount, which would be then £1,200 a year;—would you charter to the Government on the basis of the £732 you are now receiving, losing that £480, or would you expect to get more than the £732? Nothing; I think not.
3256. At present the £480 is added to the amount you receive from the Government? Yes.
3257. Then you would make the Government a present of the £400, and would still be content to charter your boat to them for the £700? If you paid the wages and coals.
3258. The wages do not come into this question? I would take far less than that £700.
3259. You are satisfied with the sum of £730; are you putting the wages against the earnings? Yes; do you mean would I take the balance after deducting the wages from the £730?
3260. Would you take a lower sum than you are taking now because of the wages? Yes; but you see the balance is a bad one, and it is a hard job to get a boat to go there at all. I only went for it this time because I had a spare boat. The Government will have to run the risk and not the man who charters his boat. If the Government charters the boat it matters little to the man where you put it; he wants so much for the boat and you do what you like with it. If you get £1 or £120 you pay the same charter money. If you intend to keep all the rivers going with boats some will pay you well and some will not pay you well.
3261. In chartering under the possible conditions of the Government taking your boat, would you expect to put somebody on board to watch your interests? I would not want anybody on board to watch my interests. I would hand her over in good order, and would expect to get her back in good order fair wear and tear excepted.
3262. The subsidies have got very low? Yes; there is something in it or they would not have it.
3263. I suppose it is not all loss? We cannot stand all loss.
3264. You can answer this question or not as you think fit. Is it a fact that you personally have lost a great deal on these charters? I never lost anything on them; I would not run them at a loss. I have made a lot of money with the charters. I have always kept the boats in good order.
3265. You have opposition at Port Macquarie? Yes; I am getting about £31 a month there. The boat went out after that bad weather and hit a wreck of some sort, and got the stern clean knocked out of her. I have made a lot of money at Port Macquarie. Those fellows who have the opposition tug now, one of them has an agency for a mill and another man has vessels sending up for girders, and there is another man who has a bit of timber. There is nothing in it.
3266. *President.*] We shall be glad if you will let us have that information as soon as you can? Do you want me to give what I think of other people's vessels as well as my own?
3267. *Mr. Wilson.*] Suppose you owned those vessels;—you tell us what you would charter them for, you handing the boats over and we doing the rest? Very well.

WEDNESDAY, 14 JULY, 1897.

PRESENT:—

JOSEPH BARLING, Esq., J.P., PRESIDENT.
 GEORGE ALEXANDER WILSON, Esq., J.P.
 JAMES POWELL, Esq., J.P.

Francis Buckle, re-examined:—

3268. *President.*] When you were here last, Mr. Buckle, you kindly promised to give us some further information as to the Government providing tugs of their own, or as to their chartering them? I have carefully considered it, and I can see there are only two courses to pursue. I am afraid that chartering would never suit. There are so many complications in it that you would never get a charter-party to suit both parties. It is different from chartering a ship to go from here to a port and back again, and the only way I can see is for you to keep it as it is, or to have boats of your own. Then, with reference to the question asked by Mr. Powell, I think that the Clarence River could be worked with the Richmond boat. I intended to bring with me a memo. of the amount that I made on the Clarence, but I forgot all about the thing.
3269. You think the one steamer could serve the Richmond and the Clarence? Much better than the Nambucca and the Macleay are served by the one boat, although it makes no odds how well you serve them—there will be complaints always. The people are always dissatisfied. Most of the pilots on the stations have come out of the steamers. The Marine Board always took my good captains from me. They are all good hands. If you have a bad man a ship is no good to you. You must have a good man there to do the work.

3270.

- F. Buckle. 3270. Then you think you cannot recommend chartering? I certainly could not recommend chartering. I know it would be very complicated, and there would be a good deal of disagreement. If anything happened to the ship the Government might say, "That is what you have got to do," and the charterer might say, "You have got to do it," and there would always be wrangling over it.
3271. *Mr. Wilson.*] Could not that be well defined in the contract? I am afraid not. I considered it all yesterday and last night, and I know there would be a lot of trouble with it. Chartering those boats would not do. Chartering a ship is a different thing altogether. He has got his own crew, his own ship, and everything; and he goes backwards and forwards at so much a month. It is very seldom you will find a vessel chartered without a crew, &c.
3272. *President.*] Have you thought whether it was desirable for the Government to own the vessels and carry on the work of towing themselves? That is for you to decide, not for me.
3273. Have you no information on that subject? I know what I would do in the matter. Mr. Powell asked me if I lost money on the boats. I did not keep boats that did not pay. They have always paid me very well, until just now with the opposition I have got at Port Macquarie. Of course, just now the bars have been bad, but that only happens once in twelve years. This is the second time since I have had these rivers that the Nambucca has been bad. It was closed about two years ago for a month, the same as it is now.
3274. Of course, it is well known that it is the want of rain that makes the rivers so bad? If I were there I would do something to it. They are too lazy. It is on the crossing. Here is a headland coming in here; and a bar out here; and this is the river in here; and a sandy spit coming in here. I said, "You get a grappler and put a bit of light chain on it, and have two ship's boats with four men in them each, and let them run this grappler out as far as there [*indicating*], and then let the tug tow it back, and it will loosen the sand and the water would wash it away. It only wants the sand moving and away it will go. They are so lazy, they would lay there all their lifetime sooner than go to work and do this. The last time the bar was blocked Mr. Portus came to me about it—to see what I would charge for the boat. I said, "Look, it is as much to my benefit as it is to the ships', I will charge nothing. If you think it is worth anything you can give it to me." They did nothing. It has never been tried.
3275. I think it has been tried on the Manning? Yes; it was not the crossing that was the matter with the Manning, it was the bar. This is the crossing,—it is all smooth water inside of it. The tug could not get over that crossing, but she could get to the end of it. They should get a grapple and stir the sand up.
3276. You mean a sort of harrow? Yes; that will loosen the sand, and it will be washed away. There were nine boats there lying idle.
3277. Why did not the captains try such a scheme as this? None of them would do it. They have no push—no energy. They go there and come back. All is well if it goes right, and if not the boat lies there.

TUESDAY, 20 JULY, 1897.

PRESENT:—

JOSEPH BARLING, Esq., J.P., PRESIDENT.
GEORGE ALEXANDER WILSON, Esq., J.P.
JAMES POWELL, Esq., J.P.

Angel Cooper Turner, Managing Director of the Illawarra Steam Navigation Co., sworn and examined:—

- A. C. Turner. 3278. *President.*] You are anxious to give us some information which you think will aid us in carrying out our inquiry. We shall be glad if you will give us the views you entertain with the utmost freedom? I will start with the Marine Board. In my opinion, backed up by the opinions of others outside, that is a body that is nearly obsolete now. They are all men whom we think a lot of personally, individually; but collectively we think they are not up to the times, and that we should have a Board constituted somewhat after the lines they have in the old country and in many other countries. Where the certificate of a master or a mate is to be dealt with we think that should be dealt with by two nautical assessors—men experienced in marine matters—presided over by a Stipendiary Magistrate, to assist them on any legal point upon which they might require his assistance. I think, and many others think, that that should take the place of the present Marine Board. We feel that the Marine Board is composed of persons who are all more or less interested in business—some ship-chandlers, some marine surveyors, others on Boards of steamer companies, and such like, which we think must clash with the proper working of the Board, and, therefore, we think that the Marine Board, as it exists now, should be supplanted by a Board such as I have said. Touching the lighthouses—the inspection is almost a farce. The people at all the lighthouses know a month before that there is going to be a picnic, and, of course, everything is got in order for the inspection. It should be done as it is in the other colonies,—the superintending engineer goes round occasionally when he is not expected, and he sees things as they are, and not as they are got ready to be for inspection by the Marine Board. That is a very essential thing, for the lights are things that have to be kept in order, and should be looked after. We think the inspection should not be made in the way it has been made in the past. There would have to be a secretary, of course, to the Pilot Board, which should be a distinct Board from the Marine Board. How that is to be constituted I am not here to say.
3279. Would you see any objection to the gentlemen who form this Pilot Board being officers of the Government? No.
3280. You think that the shipping community would not raise any objection to that? No; certainly not; I think they would rather like it.
3281. If proper men were appointed you think the shipping community would show confidence in them? They would have more confidence in men like that, independent altogether, and having nothing to do with any shipping interest or surveying, or business.
3282. In other words, you would have all the judicial and executive functions completely separated from anything like the commercial work of the Colony? Certainly.
3283. And you think that would tend to more impartial judgments being given, and would gain the confidence of the community? Yes; but of course, we do not impute anything to the present Board—they are like Cæsar's wife, we may presume—but, on principle, we want a Board more apart from business.
3284. I understand your objection is on principle? Yes, on principle. 3285.

3285. You have no objection, personally, to the members of the present Marine Board, but, on principle, to the Board itself? Yes.

3286. Are you aware of how often the Marine Board inspect the pilot stations? They have been in the habit, for the last twenty years, of going round annually. I know so well because they have always chartered one of our steamers to go in. I believe this last year the Government thought they were rather extravagant and stopped it, sending the "Thetis."

3287. You think that if this picnic, as you call it, were used for sending an inspector round there would be better results than at present? There is no doubt about it. The objection that I have heard to that is that at times there are quarrels amongst the men, and the Marine Board go down and settle these little quarrels, which generally originate with their wives. I think a man like Mr. Cruickshank, for instance, is quite as capable of settling such a squabble on the spot as the Marine Board. I do not think it would be half the expense to take the inspector round as it is for the Board.

3288. How many years have you been employed as manager of the Illawarra Steam Navigation Company? I have been manager twenty-two years, and I have been in the Illawarra Company since 1859.

3289. So that there is hardly any person in the Colony who would have more knowledge of the marine matters, the requirements of the Colony, than yourself? I think I ought to know. I think what I have said is in perfect accord with the public feeling outside. Of course, some people would say you must have a Marine Board to issue certificates, but I say, "Not at all." At Home there is the Secretary to the Board of Trade, and here we have the Secretary for Finance and Trade, who, I presume, would have the same responsibility. We have examiners against whom nothing can be said, and if an examiner grants a certificate it is very easy for the Treasury to issue it.

3290. *Mr. Wilson.*] The signing is a mere matter of form? Yes.

3291. *Mr. Powell.*] Capt. Bedford's or Mr. Cruickshank's certificate ought to be enough? Quite enough; they are both very sound. There is one matter I would like to touch upon, and that is the granting of certificates to vessels. In New South Wales they are granted for six months, and that used to be necessary with the old boats that we had which were very rotten in the old days; but now, owing to the competition, an owner cannot allow his boats to get into disrepair. It is to the owner's interest to keep the boat up to good running. We find it rather irksome opening everything up every six months, and we think it is unnecessary. They do not do it in Melbourne, or in New Zealand, or in England. That would ease down the surveyors' work considerably, and therefore another man would not be required in the engineering branch to assist in the work of surveying ships while Mr. Cruickshank was away (say) inspecting the lighthouses.

3292. *Mr. Wilson.*] The surveyor should still have the power to inspect vessels, even though the certificates were issued for twelve months? Yes; but as I said before, the competition is so keen that we cannot afford to let a steamer go back a bit. The present boilers have to be looked after carefully, we cannot afford to let them scale a bit, they would collapse if we did. We would not mind an inch of scale in the old boilers, there was so little pressure.

3293. *Mr. Powell.*] Of course, it is very necessary and desirable, and the Act gives power to examine vessels when the officer thinks fit? In New Zealand, Victoria, and Queensland the Act requires the examination of the vessels every twelve months, I think. I know the A.U.S.N. ships used to go to Melbourne on purpose to get the certificate, because they got it for twelve months.

3294. *President.*] There is an idea abroad that it is so? I think Mr. Cruickshank had the same idea.

3295. Mr. Jackson thought so, too;—however, your idea is, that the interests of the owners are so imperative in that respect that it requires no other restriction than that which obtains in the natural order of things? Just so. The ships themselves are built of steel now, and you have to look after them very carefully, or they will corrode and give way much quicker than the old iron vessels.

3296. Of course, having the steel you get better flotation? You have better flotation, but you have not so much thickness.

3297. You have to make up for the loss of stability in getting better flotation by excessive care? Yes.

3298. Have you any opinion about the pilot service? We have one pilot at Wollongong and a boat's crew, and they are required at Kiama. There is one man looks after the lighthouse. His duties are not very severe.

3299. Have you any opinion as to the principle that is now adopted of subsidising tugs for the pilot service? It is a very good thing for the owners of the boats. We used to have to pay in the olden days, and now the Government are good enough to step in and pay the subsidy, and so reduce the towing expenses. No private individual would do that.

3300. Of course it may be desirable for the Government to do this to develop trade? The ships will go wherever there is trade. Wherever the farmer can get anything out of the soil the boats will go to get it. I have seen vessels behind the Richmond bar six weeks, and the Government never sent us any assistance to get out. We had to wait until there was water enough

A. C.
Turner.

20 July, 1897

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1.

Attorney-General's Department, Sydney, 3 July, 1896.

OPINION OF THE ATTORNEY-GENERAL.

Subject:—Officers of the Marine Board.

It seems to me that the Public Service Act does not apply, and was not intended to apply (see the debates in *Hansard*, 10th December, 1895, in the Legislative Council), to the question of appointments in connection with the Marine Board. The Navigation Act provides that "the Marine Board may recommend for the Governor's approval appointments, &c." The Public Service Act neither expressly or impliedly repeals that Act, and I am therefore of opinion that any appointments under it must be recommended by the Marine Board and submitted to the Governor for his approval. But with the exception of the question of *appointments*, the officers of the Marine Board do come within the scope and control of the Public Service Act.

J. H. WANT,
Attorney General.

Copy of Minute.

Marine Board, 6 October, 1896.

Read the Attorney-General's opinion regarding the affairs of the Board and the Public Service Board, in which he says that the power of recommending appointments still rests with the Board, but that when once appointed they do not come within the scope and control of the Public Service Board.

F. HIXSON.

2.

REFERENCE.—Effect of repeal of 17 and 18 Vic., c. 104, on 35 Vic. No. 7.

THE Navigation Act of 1871, 35 Vic. No. 7, sec. 87, empowers the Marine Board of New South Wales to investigate cases of alleged incompetency and misconduct of or on the part of any master, mate, or engineer, and directs that "such investigation shall be conducted and the results thereof reported in the same manner and with the same powers in and with which formal investigations into wrecks and casualties are directed to be conducted and the results thereof reported under the provisions contained in the eighth part of the Imperial Act seventeenth and eighteenth Victoria chapter one hundred and four."

Sec. 88 empowers the Marine Board to cancel or suspend the certificate of any master, mate, or engineer (sub-sec. 11) "if upon any investigation conducted under the provisions contained in the eighth part of the Imperial Act seventeenth and eighteenth Victoria chapter one hundred and four . . . it is reported that the loss or abandonment of or serious damage to any ship or loss of life has been caused by his wrongful act or default."

Sec. 88, sub-section v, declares the Marine Board "to be a Court for the purposes mentioned in the two hundred and forty-second section of the Imperial Act seventeenth and eighteenth Victoria chapter one hundred and four."

Sec. 89, sub-section III, provides that "no certificate shall be cancelled or suspended . . . in the case of investigations conducted by Justices or a Stipendiary Magistrate unless one assessor at least appointed in manner directed by the four hundred and thirty-fourth section of the Imperial Act seventeenth and eighteenth Victoria chapter one hundred and four expresses his concurrence in the report."

The Imperial "Merchant Shipping Act, 1894," repealed the whole of 17 and 18 Victoria, chapter 104.

The opinion of the Crown Solicitor is desired as to whether the repeal of the Imperial Act, 17 and 18 Vic., c. 104, would affect any action taken or thing done in New South Wales under the provisions of sections 87 and 88 of The Navigation Act, subsequently to the date of such repeal.

Sir,

Crown Solicitor's Office, Sydney, 2 April, 1897.

I have the honor with reference to the question submitted by your communication of 29th ultimo, viz., whether the repeal of the Imperial Act, 17 and 18 Vic., c. 104, would affect any action taken or thing done in New South Wales under the provisions of sections 87 and 88 of the Navigation Act of 1871, subsequent to the date of such repeal, to advise as follows:—

The Imperial Merchant Shipping Act of 1894, which repealed the 17 and 18 Vic., c. 104, does not contain any provision saving or continuing any local enactments passed under the authority of the latter Act, consequently the Navigation Act of 1871, so far as it incorporates the provisions of the 17 and 18 Vic., c. 104, by reference only, is, in my opinion, inoperative, and has been so since the passing of the Act of 1894.

Where, however, the provisions of the earlier Imperial Act have been reproduced in the local enactment, the repeal of the former by the Act of 1894 does not, I think, affect the Navigation Act so far as those particular sections are concerned, nor does it touch those provisions which do not in any way depend on the Imperial Act.

I am of opinion, therefore, that section 87 of the Navigation Act remains in full force and effect, with the exception of that portion relating to the holding of investigations before two Justices or a Stipendiary Magistrate.

It is provided that "such investigation shall be conducted and the results thereof reported in the same manner and with the same powers in and with which formal investigation into wrecks and casualties are directed to be conducted, &c.," under the provisions contained in the 8th part of the Imperial Act, 17 and 18 Vic., c. 104.

The repeal of the Act mentioned has put an end to the machinery thus provided, and no investigation can in my opinion be now held under that portion of section 87.

Section 88, with the exception of sub-section II, is, in my opinion, still operative, as the powers of investigation conferred on the Board are contained in the Act itself independently of the Imperial Act.

If however such powers are insufficient in an investigation under section 88 (v), without the aid of those contained in section 242 of 17 and 18 Vic., c. 104, the sub-section in question must also be treated as inoperative, but it appears to me that such is not the case.

I am therefore of opinion that any action taken by the Marine Board under sections 87 and 88, subsequent to the repeal of 17 and 18 Vic., c. 104, is not affected unless done under the latter portion of section 87 or under section 88 (11).

I take the opportunity of enclosing a copy of an opinion given by me in November, 1895, as to the applicability of the Imperial Merchant Shipping Act of 1894 to this Colony, which may possibly be of some assistance to the members of the Commission.

I have, &c.,
GEO. COLQUHOUN,
Crown Solicitor.

The Secretary, Royal Commission on Marine Board.

OPINION OF CROWN SOLICITOR.

In the matter of the Imperial Merchant Shipping Act of 1894.

1. I am of opinion that the Imperial Merchant Shipping Act of 1894 does repeal the previous Imperial Merchant Shipping Act and relative Acts, so far as this Colony is concerned. The Act of 1894 consolidates all the previously existing Acts, and re-enacts and takes the place of the Acts which it repeals. The repeal of the previous Acts, however, saves and continues any Acts or proceedings under the repealed Acts (secs. 735 (2), 745, 746). The present law in this Colony, therefore, so far as it depends on Imperial legislation, is contained in the Act of 1894; but the whole of this Act is not applicable to New South Wales.

2. Part I, dealing with the registry of ships, is by express words applicable to and in force in this Colony. Sec. 91. Part II deals with "Master and Seamen," and is in force in this Colony with regard to—

(1.) All sea-going ships registered in the United Kingdom, and to the owners, masters, and crews of such ships. Sec. 261.

(2.)

(2.) All sea-going British ships registered out of the United Kingdom, and the owners and masters and crews thereof, so far as regards the provisions relating to the rights of seamen in respect to wages; to the shipping and discharge of seamen in ports abroad; to leaving seamen abroad, and to the relief of seamen in distress in ports abroad; to the provisions, health, and accommodation of seamen; to the power of seamen to make complaints; to the protection of seamen from imposition; and to discipline in all cases except where the ship is within the jurisdiction of the Government of the British possession in which the ship is registered—sec. 261 (*et*)—that is to say, secs. 155-163, 117, 124, 186-189, 190-194, 198-210, 211, 212-219, 220-238. Therefore, as regards ships registered in the United Kingdom, the whole of Part II is in force in this Colony, and applies to such ships in the same manner as it does in England—that is, of course, where it can be applied in this Colony, for the Part contains numerous provisions which cannot possibly apply in New South Wales.

With regard to British sea-going ships registered at places out of the United Kingdom, other than New South Wales, the sections enumerated above (2) apply to such vessels when in New South Wales; but it will be seen that though declared by the Act to be applicable, a good many of these sections can have no practical application in this Colony. Ships registered in New South Wales are governed by the provisions of the local Seamen's Laws Consolidation Act of 1894 whilst they are in New South Wales. (See *ex parte* Johnson 14, N.S.W., L.R., 537).

By sec. 264 the Legislature of any British possession is empowered to apply or adapt to any British ships registered at, trading with, or being at any port in that possession, any provisions of Part II which do not otherwise apply in such possession. The whole of Part II applies in all British possessions to British sea-going ships registered in the United Kingdom; so that this section can have no reference to such ships. It therefore only empowers Colonial Legislatures to extend those provisions of Part II not made applicable by the Act to all registered British ships, whether sea-going or not, which are registered out of the United Kingdom.

Part III deals with passengers and emigrants, and reproduces the Imperial Passengers' Acts. It applies to emigrant ships, as defined in sec. 268, from the British Islands to this Colony (sec. 364), and is in force in this Colony with respect to all ships carrying steerage passengers on a Colonial voyage, as defined by the Act; but the provisions of secs. 309, 310, 320, 321, 322, 323, 324, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 361 do not apply to Colonial voyages; and where the duration of a Colonial voyage, as defined in section 270, determined under section 366, is less than three weeks, the provisions of secs. 291, 303, 304, 305, and 327 do not apply to such voyages; and the provisions contained in secs. 295, 296, 297, 298, except those relating to the issue of water, do not apply to any steerage passenger who has contracted to furnish his own provisions. Sec. 365.

Part IV.—This part of the Act deals with fishing-boats, and by sec. 272 does not, there being no provision for such application, apply to this Colony.

Part V.—This part deals with "Safety," and reproduces the provisions formerly contained in Part 4 of 17 and 18 Vic., c. 104, but does not re-enact sec. 291 of that Act, which provided that Part IV should apply to all British ships. Part V of the 1894 Act, however, applies, except where expressly excluded, to all British ships in this Colony or elsewhere, and the application of each particular section to this Colony must largely depend on the circumstances of each particular case in which it is sought to be applied. It may, however, be said generally that Part V is in force in New South Wales, but the rules made under the authority of the local Navigation Act, 35 Vic. No. 7, are not to be deprived of their effect. Sec. 421-(1).

Part VI deals with "Special Shipping Inquiries and Courts." It takes the place of Part VIII of the Merchant Shipping Act of 1854, 17 and 18 Vic., c. 104, and incorporates some of the provisions of Part III of that Act. This part of the Act contains no application clause, but from the phraseology of sec. 464 it seems that this part only applies in its entirety to the United Kingdom, though by sec. 478 power is given to Colonial Legislatures to legislate with respect to certain matters dealt with in this part. That portion of this act which relates to Naval Courts is in force in this Colony. (Sec. 486.)

Part VII deals with the "Delivery of Goods," and only applies to goods imported into the United Kingdom—sec. 492—and is not in force in New South Wales.

Part VIII deals with the "Liability of Shipowners," and is in force in New South Wales. (Sec. 509.)

Part IX deals with "Wreck and Salvage." Secs. 511, 512, 513, 514, 515, 516, 517 only apply to vessels wrecked, stranded, or in distress at any place on or near the coasts of the United Kingdom (sec. 511), and are not in force in New South Wales.

Secs. 518, 519, 520, 521, 522 relate to "Dealing with Wreck," and only apply to vessels, &c., wrecked, &c., within the United Kingdom, secs. 518, 519, 521 (2), and are not in force in New South Wales.

Secs. 523, 524, 525, 526, 527, 528, and 529 deal with "Unclaimed Wreck." Sec. 523 provides "Her Majesty and Her Royal Successors are entitled to all unclaimed wreck found in any part of Her Majesty's Dominions, except to places where Her Majesty or any of Her Royal Predecessors has granted to any other person the right to that wreck." This section is a legislative recognition of the prerogative right of the Crown to all unclaimed wrecks within the Crown's dominions, which form part of the revenue of the Crown. (See 2 Stephen's Com., 542 *et seq.*)

By section 50 of the Constitution Act, 18 and 19 Vic., c. 54, all the revenues of the Crown within the Colony of New South Wales from whatever source arising, are surrendered to the Government of New South Wales in return for a Civil List. The title of the Government of New South Wales to unclaimed wrecks within the Colony is dependent on the title of the Crown, and I therefore think this section is in force in New South Wales. Secs. 524, 525, 526, 528, 529, are I think inapplicable, and therefore not in force in this Colony.

Secs. 530, 531, 532, 533, 534 relate to the removal of wrecks, and are reproduced from 40 and 41 Vic., c. 16, and 52 and 53 Vic., c. 5, which are confined in their application to the United Kingdom—there being no words to extend their provisions to places outside such kingdom—and, therefore, I think these sections are not in force in New South Wales.

Secs. 535, 536, 537 are not in force in New South Wales.

Secs. 538, 539, 540, 541, 542, relating to "Marine Store Dealers," must, I think, in the absence of any words extending their application to places beyond the United Kingdom, be considered as applying to the United Kingdom only, and therefore not to be in force in New South Wales.

Sec. 543, relating to "Marking of Anchors," is, for the above reason, not in force in New South Wales.

Secs. 544, 545, 546 relate to "Salvage." Sec. 544 is in force in New South Wales. Sec. 546 is expressly confined to the United Kingdom, and is not in force in New South Wales.

Secs. 547-565 seem, from the language of sec. 547, to be applicable to salvage in New South Wales; but the procedure established with regard to claims for salvage appears not to be applicable to places outside the United Kingdom.

Sec. 566 deals with the "Appointment of Receivers of Wreck." Secs. 567, 568 deal with "Fees of Receivers of Wreck." None of these sections are in force in New South Wales. The remaining sections of this part, secs. 569, 570, 571, are not in force in New South Wales.

Part X relates to "Pilotage," and is not in force in New South Wales. (Sec. 572.)

Part XI relates to "Lighthouses," and is mostly confined in its application to the United Kingdom. Secs. 671-675 are, however, in force in New South Wales.

Part XII relates to the "Mercantile Marine Fund," and is not in force in New South Wales.

Part XIII relates to "Legal Proceedings," and, except where otherwise provided, is in force in New South Wales. Sec. 712.

Part XIV contains "Supplemental Provisions." The only section of this part in force in New South Wales are secs. 723, 727, 735, 736, 739, 741, 745, and 746.

3. No portions of the Act require to be applied to this Colony by proclamation. By secs. 366, 367 the Governor of this Colony is empowered by proclamation—

1. To determine the length of a colonial voyage.
2. To fix dietary scales for steerage passengers.
3. To declare what medical stores shall be deemed necessary.
4. To make rules for determining the number of steerage passengers to be carried in emigrant ships proceeding from one colony to another.
5. For determining on what decks, &c., steerage passengers may be carried.
6. To declare that ships intended to pass within the tropics from any Colonial port may convey steerage passengers, being natives of Asia or Africa, after the rate of one for every twelve superficial feet of the passenger decks, &c.

Every such proclamation shall take effect from the issue thereof or such other day as may be named therein. These provisions are similar to those contained in the repealed Passengers Acts, under which proclamations have been issued in this Colony; but, by an oversight, no provision has been made in the 1894 Act to continue or give validity to proclamations issued under the repealed Acts, and I accordingly advise that it is necessary, under the 1894 Act, to issue fresh proclamations.

Sec. 478 empowers Colonial Legislatures to authorise Colonial Courts to inquire, in certain cases, into shipping casualties and the conduct of officers. Similar provisions were contained in the repealed Acts, 17 and 18 Vic., c. 104, and 45 and 46 Vic., c. 76, and under such provisions various sections of the local Navigation Act of 1872, 35 Vic. No. 7, were enacted. The repeal of the previous Imperial Acts referred to has not saved or continued any local enactments passed under the authority of the repealed Imperial Acts, and it is very doubtful whether some of the provisions of the local Navigation Act are not *ultra vires*.

It appears to me that, at all events, sec. 88 (2) of the local Navigation Act should be amended.

15th November, 1895.

GEO. COLQUHOUN,
Crown Solicitor.

3.

RETURN of the number of Inquiries held by the Marine Board at Sydney concerning Wrecks and other Marine Casualties, from 1887 to 1896 (both inclusive), showing the number of Vessels and Total Tonnage for each Year.

Year.	No. of Inquiries.	Total Tonnage.
1887	25	8,343
1888	23	4,632
1889	26	8,660
1890	19	11,532
1891	20	4,579
1892	16	2,332
1893	27	10,152
1894	21	3,462
1895	14	10,376
1896	14	2,924
	205	67,001

4.

RETURN of the number of Inquiries held by the Marine Board at Newcastle concerning Wrecks of Vessels and other Marine Casualties, from 1887 to 1896 (both inclusive), showing the number of Vessels and Total Tonnage for each Year.

Year.	No. of Inquiries.	Total Tonnage.
1887	6	3,709
1888	4	1,647
1889	8	7,789
1890	5	7,221
1891	7	4,911
1892	3	3,777
1893	9	13,199
1894	9	9,955
1895	5	6,064
1896	8	12,256
	64	70,528

5.

RETURN showing the Total Revenue of the Marine Board Department for the year 1883 under the several headings, viz., Pilotage, Harbour and Light Rates, Removal Dues, Fees, Licenses, Charges, &c.

	£	s.	d.
Pilotage	30,508	0	0
Harbour and Light Rates	14,599	0	0
Removal Dues	4,377	0	0
Fees	1,819	2	0
Licenses		13	0
	£51,316	2	0

6.

RETURN of the Total Expenditure of the Marine Board Department for the year 1883, showing the amount paid for Contingent Expenses, the amount of Salaries and Fees paid to Members of the Board, and the amount of Salaries and Allowances paid to each officer (together with his full name, age, and position held) for each station during that year.

	£	s.	d.
Salaries	30,434	8	0
Contingencies	9,038	17	10
Salaries and Fees to Members	1,414	8	0
Fees to Surveyors at Outports	342	7	6
	£41,230	1	4

7.

RETURN showing Names of present Members of Marine Boards, Sydney and Newcastle.

Name.	Appointed by—	Elected by—	Tenure of Office closes.	Stated times of Meeting.	Individual Attendances of Members for year ended 31 December, 1896.	Rates of Remuneration.		Amount of Salaries, Fees, or Allowances received during year ended 31 Dec., 1896.
						Salary. A.	Fees. B.	
SYDNEY.								
Hixson, Francis	Act of Incorporation	Shipowners.	Unlimited.	Every Monday, and otherwise as often as required.	56	£	£ s. d.	£ s. d.
Broomfield, John .....	.....	.....	April, 1899		50	740	.....	.....
Macleay, Archibald .....	.....	.....	„ 1899		56	...	109 4 0	109 4 0
Jenkins, Benjamin .....	.....	.....	„ 1899		55	...	109 4 0	109 4 0
Moodie, R. T.	Act of Incorporation .....	.....	Unlimited.		55	...	109 4 0	109 4 0
O'Sullivan, Terence .....	„ „ .....	.....	„ .....		53	...	109 4 0	109 4 0
Wildridge, John .....	„ „ .....	.....	„ .....	46	...	109 4 0	109 4 0	
NEWCASTLE.								
Cross, Herbert R.	Governor .....	.....	Unlimited.	Every Wednesday, and otherwise as often as required.	61	...	109 4 0	109 4 0
Reid, John .....	„ .....	.....	„ .....		61	...	54 12 0	54 12 0
*Logan, William R. ....	„ .....	.....	„ .....		Nil.	...	54 12 0	Nil.
*Gardner, Frank .....	„ .....	.....	„ .....		„	...	54 12 0	„
*McLean, Duncan John .....	„ .....	.....	„ .....		„	...	54 12 0	„

* Appointed 15 January, 1897.

8.

[SUPPLEMENT to the *New South Wales Government Gazette*, Wednesday, 18 March, 1896.]

The Treasury, New South Wales, 18 March, 1896.

HIS Excellency the Governor, with the advice of the Executive Council, has been pleased to appoint Francis Buckle, Esquire, J.P., to be Returning Officer for the Election of Wardens of the Marine Board, to fill the vacancies which will occur by the operation of the 8th clause of the "Navigation Act of 1871."

G. H. REID.

The Treasury, New South Wales, 18 March, 1896.

THE NAVIGATION ACT OF 1871.

HIS Excellency the Governor, with the advice of the Executive Council, under the authority contained in the 8th clause of the "Navigation Act of 1871," is hereby pleased to fix the place and mode, as per annexed Schedule, of conducting the Election of Wardens to the Marine Board, to fill the vacancies which will occur, by the operation of the said clause, on the first Monday in the month of April now next ensuing.

G. H. REID.

SCHEDULE.

Place and Day of Election to fill up the Vacancies in the Office of Warden of the Marine Board.

1. The election of three Wardens to the Marine Board to fill up the vacancies which will occur by the operation of the 8th clause of the "Navigation Act of 1871," shall take place at the Exchange, Sydney, on Monday, the 6th day of April, 1896.

Returning Officer Appointed by Governor in Council.

2. The Governor, with the advice of the Executive Council, shall appoint a Returning Officer, who shall notify in the *Government Gazette* and in one or more of the daily papers, at least ten days before the day of election, the time and place appointed for holding the said election.

Nomination of Candidates.

3. The election of a candidate to the vacant office of Warden shall be conducted in manner following:—Any two electors duly qualified to vote under the Navigation Act of 1871 may nominate a candidate for election, by delivering to the Returning Officer, seven clear days at least before the day appointed for the election, a document signed by such electors, containing the name in full of the candidate they may wish to nominate, setting forth also the occupation and residence of such candidate, and also similar particulars respecting the two electors so nominating; and the Returning Officer, at least three clear days before the day appointed for the election, shall cause such nominations to be published for general information in one or more of the daily papers.

Proceedings thereupon.

4. At 10 o'clock in the forenoon of the day appointed for the election, and at the place aforesaid, the Returning Officer shall publicly read the names of candidates so nominated, together with the names of their nominators; and if it shall be found that the number of candidates does not exceed the number of Wardens to be elected, the Returning Officer shall thereupon declare such candidates to be duly elected, and shall immediately thereafter certify the same under his hand to the Colonial Treasurer; but if the number of candidates so nominated shall exceed the number to be elected, then a poll shall be taken as hereinafter provided: Provided also that it shall be in the power of any individual so nominated, by a notice in writing signed by him and addressed to the Returning Officer, and delivered to such Returning Officer at any time, being at least one clear day before the day appointed for the election, to withdraw from such candidature.

Election, if contested, to be by Ballot.

5. The election, if contested, shall be by ballot, and the voting at such election shall commence at 11 o'clock in the forenoon, and shall finally close at 4 o'clock in the afternoon of the same day.

Appointment of Polling Clerk.

6. At such election the Returning Officer shall appoint a Polling Clerk for taking the poll.

Substitute for Returning Officer.

7. In case the Returning Officer shall be prevented from attending to any of his duties by illness or other sufficient cause, he may, or in case of his refusal or inability, the Colonial Treasurer shall, by writing under his hand, appoint a substitute to act for such Returning Officer; and such substitute shall thereupon for the time being have all the power and authority of the officer for whom he has been so substituted.

Scrutineers.

8. Every candidate for election, or in his absence any two of the electors by whom he has been nominated, may appoint one person at the polling-place to be a Scrutineer at the election.

Declaration

Declaration by Returning Officer, Poll Clerk, and Scrutineers.

9. The Returning Officer, Poll Clerk, and Scrutineers shall, before acting, make, and subscribe before a Justice of the Peace or a Commissioner of the Supreme Court, or in the case of any Scrutineer, before the Returning Officer, a declaration in the Form A annexed.

Power of Returning Officer to preserve Order, &c.

10. The Returning Officer shall have power and authority to maintain and enforce order and keep the peace during the election or polling, and for that purpose to cause to be arrested and taken before any Justice of the Peace any person reasonably suspected of knowingly and wilfully making a false answer to any of the questions hereinafter mentioned, or of personating or attempting to personate any voter, or of attempting unlawfully to vote more than once, or wilfully entering or remaining in a polling-room or compartment, or who shall cause a disturbance at the election; also to cause any person to be removed who shall obstruct the approaches to the polling-room or shall conduct himself in a disorderly manner. And all constables and peace officers shall aid and assist such Returning Officer in the performance of his duties.

Balloting-room.

11. At the polling-place there shall be provided and set apart a separate ballot-room or compartment into or in which no person may enter or remain except electors while preparing their ballot-papers as hereinafter provided, but no longer; and the Polling Clerk shall cause pencils or pens, ink, and blotting-paper to be placed in the said room or compartment.

Ballot-papers.

12. Before, and in time for the election, the Returning Officer shall cause to be printed or written ballot-papers according to the Form B annexed, and shall, on the morning of the day of poll, have in his possession, and prepared ready for use, so many of such ballot-papers, signed by himself on the back thereof, as shall be fully equal to the whole number of the votes of the electors contained in the list of persons entitled to vote.

Ballot-box.—Mode of Voting.

13. The Returning Officer shall provide for the polling-place a ballot-box, the front of which shall be of glass, and on the top of which there shall be an opening sufficient to receive the ballot-papers folded as hereinafter mentioned. And such box, being previously locked by the Returning Officer with a key which shall be kept by himself, and of which it shall be unlawful for any other person to possess a counterpart, shall be placed upon a table before the Returning Officer. And every elector, on applying in person, if entitled to record one vote, shall receive one of the ballot-papers signed as aforesaid; and if entitled to record two or more votes, shall receive a corresponding number of the ballot-papers as aforesaid; and shall in the ballot-room aforesaid, without leaving the same, strike through the names of all persons named in such ballot-paper or ballot-papers, as the case may be, except the name of each person for whom he intends to vote, and shall then fold up the paper or papers so as to conceal the interior and disclose only the Returning Officer's name so signed upon the back, and shall then return to the polling-table, and there openly in the presence of the Returning Officer, Poll Clerk, and Scrutineers present, deposit such ballot-paper or ballot-papers in the ballot-box: Provided that in the case of any elector who if blind or cannot read, the Returning Officer shall, in the presence of such of the Scrutineers as may then be in attendance, strike through upon such ballot-paper the names of all persons so nominated, except such as the elector shall declare his intention of voting for: Provided also, that before any ballot-paper shall be deposited in the box, the Returning Officer or Poll Clerk shall, upon a certified copy of the list of persons entitled to vote write his initials against the name of the person then voting, which initials shall be *prima facie* evidence of the identity of such voter with the person whose name shall be so initialed on such list, and of the fact of his having voted at such election: Provided further, that if any elector entitled to two or more votes fail to record all his votes on his first application, it shall not be lawful for him to vote a second time.

What Votes Void.

14. If any elector shall suffer to remain upon his ballot-paper a greater number of names not struck out than the number of Wardens to be elected, the vote given on and by such paper shall be void and of no effect.

When Returning Officer to Vote.

15. Except as hereinafter provided, the Returning Officer shall not vote: Provided that in the event of any two or more candidates of whom one or more is to be elected being found to have obtained an equal number of votes, the Returning Officer shall have a casting vote, and shall state in writing which of such candidates shall be declared to be duly elected.

Questions to Voters.

16. No inquiry shall be permitted to be put to any person applying to vote, except by the Returning Officer at the request of a Scrutineer; and such inquiry shall be limited to the questions following:—

(1.) Are you the person whose name appears as A.B. on the list of persons entitled to vote for the election of Wardens of the Marine Board?

(2.) Have you already voted at the present election?

No person who shall refuse to answer such questions, or who shall fail to answer the first of such questions in the affirmative and the second in the negative, shall be permitted to vote at such election.

Ascertainment and Declaration of the Poll.

17. The Returning Officer, immediately after the close of the poll, shall, in the presence of the Poll Clerk and such of the Scrutineers as may then be in attendance, open the ballot-box and examine the voting-papers, and thereby ascertain the result of the election; and he shall then publicly announce the state of the poll, and immediately thereafter shall officially declare in writing, under his hand, addressed to the Colonial Treasurer, the names of the candidates who have been duly elected: Provided if from any sufficient cause it should be found impossible to examine the ballot-papers and ascertain the result of the election on the same day that the poll has been taken, the Returning Officer may adjourn such examination until some hour on the next following day: And such ballot-box and ballot-papers shall remain until the time of such examination in the custody of the Returning Officer, or in such custody as he may appoint, but shall be further secured by the seals of the Returning Officer and any one of the Scrutineers then present.

Ballot-papers to be transmitted to the Colonial Treasurer.

18. The Returning Officer shall forthwith, after the declaration of the result of the poll, seal up all the ballot-papers and any other documents connected with the election in one or more parcels as may be found convenient, and shall cause the same to be delivered to the Colonial Treasurer, to be by him safely and secretly kept for six months after such delivery, at the expiration of which time the said Colonial Treasurer shall cause such ballot-papers and documents to be destroyed.

A.

Declaration of Office for Returning Officer, Scrutineer, Poll Clerk.

I, A.B., duly appointed Returning Officer (or Scrutineer, or Poll Clerk) at this election, do hereby solemnly declare that I will faithfully act and assist in such office, and will not attempt to ascertain for whom any elector shall vote, nor by any word or action directly or indirectly aid in discovering the same, unless in answer to any question which I may be legally bound to answer, or in compliance with the provisions of the Navigation Act of 1871.

B.

Ballot-paper.

Election of Wardens, on the _____ of 189 .
List of Candidates for Election.
Names in full. | Addresses.

MARINE Board Department, 1896-7.

Surname and Christian Name of Officer.	Age last Birthday.	Date of Appointment.	Manner of Appointment.	Length of Service to 28th February, 1897.	Break in Service, From, To	Position held.	Amount of Annual Salary.	Allowances, Fees, or other Emoluments.	Total amount of Salary and Emoluments	Description in detail of Duties performed.
Hixson, Francis	64	20/9/61	By Navigation Act of 1871.	y. m. 35 6	Nil	President	£ 740	£ 225	£ 965	Presides at Board Meetings, and otherwise performs the multifarious duties in connection with the Navigation Laws of the Colony; Head of the Department.
Lindeman, George Sidney	52	1/3/75	Recommended by Marine Board.	22 0	"	Secretary	470		470	See Appendix "A."
Rule, Francis	30	15/1/80	"	11 1	"	Accountant	200		200	Accountant and Pay Clerk; Receiver of Revenue for the Department.
Cruckshank, William D.	57	13 5/74	"	22 9	"	Engineer Surveyor, and Examiner.	600		600	Examiner for Engineers' Certificates
Bedford, John Henderson	55	1/1, 81	"	16 2	"	Examiner in navigation, seamanship, and pilotage.	380		380	Examiner for the issue of certificates to masters, mates, and pilots.
Lawrence, John Rees	73	21/10/84	"	32 4	"	Clerk to Harbour-master and Telegraph Operator	288		288	See Appendix "B."
O'Connor, Herbert	26	17/5/87	"	9 9	"	Clerk	150		150	See Appendix "A."
Parsonage, John	52	1/1/62	"	34 2	"	Messenger	150		150	Messenger.
Monro, John	18	17/12/95	"	1 2	"	"	75		75	"
Selge, Henry	50	1/6/81	"	15 9	"	Assistant Engineer and Surveyor.	371		371	First Assistant Engineer Surveyor for supervising the overhaul and repairs of steamships requiring passenger certificates.
Marshall, Alexander D.	54	24/3/85	"	11 11	"	"	308		308	Second Assistant ditto.
McKintie, William	63	14/6/86	"	10 8	"	Shipwright Surveyor	320		320	Shipwright Surveyor, to perform the duties required under the Navigation Laws.
Newton, William	40	1/5/87	"	9 10	"	Inspector and Surveyor.	263		263	Inspector of Shipping, to prevent overloading, and otherwise carry out the duties required by the Navigation Laws.
Sangster, Alexander	29	6/1/97	"	1 26 days	"	Water Bailiff and Inspector.	200		200	Water Bailiff and Inspector for detecting breaches of the Navigation Laws.
Pettit, Henry	66	1/6/77	"	19 0	"	Harbour master, Sydney.	371		371	Performs the duties required by the Navigation Acts, and takes turn with his assistants in removing ships about the harbour.
Bracegirdle, Frederick	64	8/12/84	"	12 2	"	Assistant Harbour-master, Sydney.	320		320	Assistant to Harbour-master of Sydney in carrying out the requirements of the Navigation laws; takes turn in the removal of ships.
Thompson, Thomas Robinson	40	1/6/85	"	11 9	"	"	281		281	"
Newton, Henry	54	1/10/73	"	23 5	"	Harbour-master, Newcastle.	416	100*	516	Performs the duties required by the Navigation Act as Harbour-master, Newcastle, and administers the department there.
Melville, George	60	1/3/73	"	23 7	"	Assistant Harbour-master and Inspector, Newcastle.	371	60 v.q.	421	Performs the various duties connected with the office of Assistant Harbour master, Newcastle.
Bertram, Augustus	62	1/10/77	"	19 6	"	Inspector and Surveyor, Newcastle.	308		308	Inspector of Shipping, and Surveyor to prevent overloading and other breaches of the Navigation Act.
Veitch, John Hardie	30	1/5 94	"	2 10	"	Secretary, Local Marine Board Newcastle	300		300	Secretary to the Local Board at Newcastle, and performs the clerical duty of the Harbour Department.
Creer, Joseph	70	1/11/73	"	23 4	"	Master, Pilot-steamer, "Captain Cook."	416	46/16	462/16	Master of pilot steamer, and Officer-in-charge at the Heads of Port Jackson
Fotheringhame, James	40	1/8 89	"	7 7	"	1st Mate, pilot-steamer	175	46/16	221/16	Mate of pilot-steamer; holds license as pilot to act if required.
Anderson, John	28	1/5/96	"	0 10	"	2nd "	150	46/16	196/16	2nd Mate of pilot-steamer.
Broderick, Edward	55	1/2/77	"	20 1	"	1st Engineer, "	272	46/16	318/16	Has charge of engine-room and keeps his watch.
Irwin, Harrison Balfour	47	1/3/82	"	15 0	"	2nd "	200	46/16	246/16	Keeps watch when the Chief Engineer is off duty.
Avelar, George	46	1/10/85	"	11 5	"	Fireman	143		143	Fireman, pilot-steamer, "Captain Cook."
Nuth, James	28	1/6/91	"	5 9	"	"	125		125	"
Morgan, Alexander	34	1/3 91	"	6 0	"	"	123		123	"
O'Connor, Edward	37	1/5 93	"	3 10	"	"	120		120	"
Harrington, John	35	1/1/91	"	6 2	"	Seaman	123		123	Seaman, pilot steamer "Captain Cook."
Cobb, George	33	6/12/94	"	2 3	"	"	96		96	"
Moncreiff, John	31	1/6/95	"	1 9	"	"	96		96	"
Scollay, William	28	1/1/96	"	1 2	"	"	96		96	"
Streeton, Edward	29	1/4/96	"	0 11	"	"	96		96	"
Darley, Charles	27	9/5/96	"	0 9	"	"	96		96	"
Humphries, Patrick	52	15/11/75	"	21 3	"	Boatman	143	12x	155	Coxswain of pilot steam tender 12 hours out of the 24.
Dunn, Frederick	52	16/11/75	"	21 3	"	"	143		143	"
Dunn, Edward	25	1/1/89	"	8 2	"	"	121		121	Engineer of pilot steam tender 12 hours out of the 24.
Dunn, Henry James	22	1/11/96	"	"	"	"	96		96	"
De Fraser, Henry	52	15/9/73	"	23 5	"	Lookout man	143	6x, 12†	161	Lookout-man half the night at South Head.
Francis, Joseph	66	1/12/75	"	21 3	"	"	143	12†	155	"
Orton, Herbert	26	1/5/89	"	7 7	"	Cook	143		143	Cook and providore, pilot steamer "Captain Cook."
Jack, Andrew William	68	20/3/70	"	26 6	"	Sea pilot, Sydney	308		308	Sea pilot for the port of Sydney, pilots ships to sea, brings them into port, and takes his turn on board the pilot steamer as required.
Chudleigh, Herbert	49	1/7/86	"	10 8	"	"	398		398	"
Tyler, William	43	1/5/87	"	9 10	"	"	398		398	"
Morris, Frederick W.	43	1/6/88	"	8 9	"	"	398		398	"
Place, George	47	1/6/88	"	8 10	"	"	250		250	"
Hacking, Alexander	54	1/11/81	"	15 4	"	Sea pilot, Newcastle.	353	60 v.q.	403	Sea pilot for the port of Newcastle, pilots ships to sea, brings them into port, and moves them about the harbour and wharfs as required.
Cunning, Fergus	39	9/2 88	"	9 0	"	"	353	50 v.q.	403	"
Wood, William Dow	43	1/9/88	"	8 6	"	"	353	40 v.q.	393	"
Sweet, John Leonard	36	1/9/91	"	5 6	"	"	218	50 v.q.	268	"
Warner, Ernest Woodley	39	1/1/92	"	6 2	"	"	200	50 v.q.	250	"
Stevenson, Alexander	33	1/5/94	"	2 10	"	"	200	50 v.q.	250	"
Morris, James Edward	29	1/12/96	"	0 3	"	"	200	42*	242	"

* In lieu of quarters.

v. q. Value of quarters.

x Life-boat, Sydney.

† Leading lights, Port Jackson.

‡ Allowed at the rate of 18s. each per week when on duty in pilot steamer.

Surname and Christian Name of Officer.	Age last birthday.	Date of Appointment.	Manner of Appointment.	Length of Service to 28th February, 1897.		Break in Service, From " to "	Position held.	Amount of Annual Salary.	Allowances, Fees, or other Emoluments.	Total amount of Salary and Emoluments.	Description in detail of Duties performed.
				y.	m.						
Murray, William Scott	36	1/8/82	Recommended by Marine Board.	4	7	Nil.	Pilot Manning River	£ 160	25 v.q.	£ 185	Duties similar to other pilots on rivers.
Whitnall, George	70	1/3/71	"	26	0	"	Boatman, Manning River.	126	18 v.q.	188	Duties similar to other boatmen.
Adams, John	58	1/10/79	"	17	5	"	"	126	18 v.q.	144	"
Muir, Henry W.	39	13/8/84	"	12	6	"	"	126	18 v.q.	144	"
Nicholson, William	42	1/8/87	"	9	7	"	"	116	18 v.q.	134	"
Burless, William V.	39	1/8/80	"	7	7	"	"	116	18 v.q.	134	"
Jamieson, John A.	56	1/5/79	"	17	10	"	Pilot, Macleay River	240/10	25 v.q.	265/10	Duties similar to other pilots on rivers.
Fischer, John	43	1/3/85	"	12	0	"	Boatman, Macleay River.	126	18 v.q.	144	Duties similar to other boatmen.
Sanders, William G.	40	10/9/92	"	4	5	"	"	100	18 v.q.	124	"
Jamieson, Robert J.	27	1/9/94	"	2	0	"	"	96	18 v.q.	114	"
Bastian, James	19	1/8/90	"	0	7	"	"	96	18 v.q.	114	"
M'Auley, Henry	51	27/1/83	"	14	1	"	Pilot, Clarence River	240/10	25 v.q.	265/10	Duties similar to other pilots.
M'Auley, Charles	49	20/7/78	"	18	7	"	Boatman, "	126	18 v.q.	144	Duties similar to other boatmen.
Quinn, John	40	1/12/85	"	11	3	"	"	126	18 v.q.	144	"
Freoburn, George	36	1/9/87	"	9	6	"	"	125	18 v.q.	144	"
Carr, James	37	1/9/90	"	6	6	"	"	106	18 v.q.	124	"
Law, James	26	25/8/94	"	2	6	"	"	96	18 v.q.	114	"
Fraser, Robert Adie	47	1/3/80	"	7	0	"	Pilot, Richmond River	180	25 v.q.	205	Duties similar to other pilots.
Saunders, John	35	1/12/80	"	10	3	"	Boatman, "	126	18 v.q.	144	Duties similar to other boatmen.
Parker, John T.	57	1/10/83	"	13	5	"	"	126	18 v.q.	144	"
Graham, William James	41	5/1/84	"	13	1	"	"	126	18 v.q.	144	"
Johnson, Julius Laurence	31	1/8/80	"	7	7	"	"	116	18 v.q.	134	"
Cheyne, George	37	1/10/90	"	6	5	"	"	106	18 v.q.	124	"
Bryant, William Thomas	42	1/12/90	"	6	3	"	"	106	18 v.q.	124	"
Sutherland, Angus	57	28/3/84	"	12	11	"	Pilot, Moruya	240/10	25 v.q.	265/10	Duties similar to other pilots.
Constable, James	51	3/3/81	"	15	11	"	Boatman, Moruya	126	18 v.q.	144	Duties similar to other boatmen.
Royce, Wallace	30	11/8/84	"	12	6	"	"	126	18 v.q.	144	"
Bishop, Thomas	61	4/2/81	"	16	0	"	Pilot, Shoalhaven	240/10	25 v.q.	265/10	Pilot in charge of station. Brings vessels in and takes them to sea as required. Overlooks life-saving apparatus. Buoy and marks channel as required.
Armstrong, William	53	1/2/73	"	24	1	"	Boatman, "	126	18 v.q.	144	Keeps watch, mans pilot's boat, and performs the multifarious duties required on the river.
Leverton, Eugene	42	1/4/79	"	17	11	"	"	126	18 v.q.	144	"
Forbes, George	56	1/9/84	"	12	6	"	"	126	18 v.q.	144	"
Mouatt, Peter	30	1/1/87	"	10	2	1886. 1 Aug. 8 Oct.	"	120	18 v.q.	144	"
Whaites, William John	52	18/5/74	"	22	9	Nil.	Pilot, Nambucca	240/10	25 v.q.	265/10	Pilot in charge of station. Brings vessels in and takes them to sea as required. Overlooks buoys and marks channels as required.
Koster, Bernard	45	31/5/84	"	12	9	"	Boatman, "	126	18 v.q.	144	Keeps watch, mans pilot's boat, and performs the multifarious duties required on the river.
Hielby, George H.	50	1/4/86	"	10	11	"	"	126	18 v.q.	144	"
Newton, Peter Scott	34	1/8/82	"	4	7	"	Pilot, Pwofold Bay	100	25 v.q.	135	Duties similar to those of other pilots.
Davidson, Archibald G.	32	2/10/78	"	18	5	"	Boatman, "	120	18 v.q.	144	Duties similar to those of other boatmen.
Thomson, Alexander	42	1/7/78	"	18	8	"	"	126	18 v.q.	144	"
Fisher, John	64	1/1/79	"	18	2	"	"	126	18 v.q.	144	"
Scott, John	32	13/3/89	"	7	11	"	"	110	18 v.q.	134	"
Boyd, Thomas	64	20/1/82	"	15	1	"	Pilot, Lake Macquarie	240/10	25 v.q.	265/10	Duties similar to those of other pilots.
Dedman, Erland Joseph	39	1/6/85	"	11	9	"	Boatman, "	126	18 v.q.	144	Duties similar to those of other boatmen.
Pobje, Henry Thomas	34	1/12/85	"	11	8	"	"	126	18 v.q.	144	"
Kendall, Amor Hicks	52	6/6/83	"	13	8	"	Pilot, Cape Hawke	240/10	25 v.q.	265/10	Duties similar to other pilots.
Hocking, John	51	18/6/83	"	13	8	"	Boatman, "	126	18 v.q.	144	Duties similar to other boatmen.
Benson, Charles	32	1/2/80	"	8	1	"	"	116	18 v.q.	134	"
Leonard, John	61	10/7/78	"	18	7	"	Pilot, Camden Haven	240/10	25 v.q.	265/10	Duties similar to other pilots.
Pain, Jonathan	45	20/7/78	"	18	7	"	Boatman, "	126	18 v.q.	144	Duties similar to other boatmen.
Thorpe, Ole	50	1/9/87	"	10	1	"	"	126	18 v.q.	144	"
Haird, John	39	1/7/86	"	0	8	"	Pilot, Port Macquarie	150	25 v.q.	175	Duties, similar to other pilots.
Haney, John	49	1/4/75	"	21	11	"	Boatman, "	126	18 v.q.	144	Duties, similar to other boatmen.
Robinson, Thomas	53	1/5/69	"	27	10	"	"	126	18 v.q.	163	"
Smith, Thomas	49	1/7/84	"	12	8	"	"	126	18 v.q.	144	"
Leask, William	59	1/8/84	"	12	7	"	"	126	18 v.q.	144	"
Sheppard, George	39	1/6/86	"	11	9	"	"	126	18 v.q.	144	"
Radclyffe, Thomas	40	1/8/92	"	4	7	"	Pilot, Bellinger River	160	25 v.q.	185	Duties, similar to other pilots.
Pettitt, James	47	1/1/82	"	35	2	"	Boatman, "	126	18 v.q.	144	Duties, similar to other boatmen.
Atherton, Charles	26	1/8/92	"	4	7	"	"	101	18 v.q.	119	"
Lindman, Albert Charles	26	1/4/95	"	1	11	"	"	96	6†	120	"
Mann, William Edward	27	12/5/95	"	1	9	"	"	96	18 v.q.	114	"
McGregor, William	60	17/6/70	"	26	8	"	Pilot, Tweed River	240/10	25 v.q.	265/10	Duties, similar to other pilots.
Arnold, William	59	1/1/96	"	21	9	"	Boatman, "	126	18 v.q.	144	Duties, similar to other boatmen.
Powell, William H.	54	4/5/75	"	21	9	"	"	126	18 v.q.	144	"
Thomson, Alexander B.	35	7/8/79	"	18	7	"	"	126	18 v.q.	144	"
Rixon, Andrew	46	1/12/84	"	12	3	"	"	126	18 v.q.	144	"
Shepherdson, Herbert	38	1/9/90	"	6	6	"	"	106	18 v.q.	124	"
Fraser, William	37	1/9/85	"	11	6	"	Pilot-in-charge, Kiama	236	30 v.q.	266	Lightkeeper and Pilot in charge of port and moorings.
Thomson, Andrew	48	1/12/95	"	1	3	"	Pilot, Wollongong	215	25 v.q.	240	Pilot in charge of station. Brings vessels in and takes them to sea as required. Overlooks lighthouse and life-saving apparatus, buoys, &c.
Abernathy, Walter Alexander	56	1/12/95	"	1	3	"	Boatman, Wollongong	144	....	144	Keeps watch, mans pilot's boat, and performs the multifarious duties required at the port.
Williams, Matts	46	1/12/95	"	1	3	"	"	144	....	144	"
Puckeridge, John	44	14/9/72	"	24	5	"	Boatswain, Sydney	189	30 v.q.	220	Officer in charge of steam launches and boats at the Government boat-shed.
Dobson, William	56	1/10/69	"	37	5	"	Boatman, "	144	....	144	Keeps watch, to be ready for the performance of any duty required of him in steam-launches or boats belonging to the Government.
Conolly, Michael	31	25/6/86	"	10	8	"	"	144	....	144	"
Christopherson, Charles	47	1/4/79	"	17	11	"	"	143	....	143	"
Balloy, John	41	1/9/77	"	19	0	"	"	143	....	143	"
Keough, John	47	1/8/77	"	19	7	"	"	143	....	143	"
Kelly, Charles	44	1/1/82	"	16	2	"	"	143	....	143	"
Keast, William	35	1/6/87	"	9	9	"	"	143	....	143	"
Robinson, Alexander	55	10/9/77	"	19	5	"	"	143	....	143	"

v.q. Value of quarters. † Telephone operator at Crowdy Head. * Signalman, Tacking Point. ‡ Solitary Island tender.

Surname and Christian Name of Officer.	Age last Birthday.	Date of Appointment.	Manner of Appointment.	Length of Service to 28th February, 1897.	Break in Service, From 1 to 1	Position held.	Amount of Annual Salary.	Allowances, Fees, or other Emoluments.	Total amount of Salary and Emoluments.	Description in detail of Duties performed.
Nelson, Telex	40	31/12/96	Recommended by Marine Board.	11 2	Nil.	Boatman, Sydney....	143	...	143	Keeps watch, to be ready for the performance of any duty required of him in steam-launches or boats belonging to the Government.
Kennedy, John	34	1/1/88	"	9 2	"	"	143	...	143	"
Baxter, William E.	42	1/2/87	"	10 1	"	"	143	...	143	"
Creland, George	34	4/3/86	"	10 11	"	"	143	...	143	"
Dunn, Frederick	27	1/4/87	"	9 11	"	"	143	...	143	"
Gedrold, Robert	41	1/1/89	"	8 2	"	"	133	...	133	"
Fert, Robert	27	1/8/89	"	7 7	"	"	133	...	133	"
Bailey, John William	46	1/8/92	"	4 7	"	"	138	...	138	"
Martin, John	34	1/5/92	"	4 10	"	"	101	...	101	"
Plukes, Harry	32	18/4/94	"	2 10	"	"	96	...	96	"
Williams, James	47	1/6/73	"	23 9	"	Messenger, Newcastle	130	24 30 v. q.	154	Messenger, Newcastle, charge of lead in light tower.
Gov, Ramsey	56	1/1/76	"	21 2	"	Carpenter,	167	24 18 v. q.	191	Builds and repairs boats, charge of light towers, Newcastle.
Smith, Robert	53	1/10/73	"	22 6	"	Boatman,	144	...	144	Keeps watch and performs duties in boat in connection with the pilot service of the port.
Sparks, William	54	1/7/06	"	20 8	"	"	154	124 18 v. q.	172	Engineer of steam-launch "Barrossa."
Brown, James	55	1/2/82	"	15 1	"	"	154	18 v. q.	172	Keeps watch and performs duties in boat in connection with the pilot service of the port.
Barber, William	63	1/8/70	"	26 7	"	"	126	124 18 v. q.	156	Keeps watch and performs duties in boat in connection with the pilot service of the port.
Martin, Henry	55	1/6/73	"	23 9	"	"	126	124 18 v. q.	156	"
Henderson, John	45	1/4/82	"	14 11	"	"	126	124 18 v. q.	156	"
Reid, William	51	1/6/82	"	14 9	"	"	126	124 18 v. q.	156	"
Nicolson, William George	54	1/6/82	"	14 9	"	"	126	124 18 v. q.	156	"
Jamieson, Robert	53	1/2/83	"	14 1	"	"	126	124 18 v. q.	156	"
McLeod, Donald	40	1/4/83	"	13 11	"	"	126	124 18 v. q.	156	"
Costa, Antonio	40	17/5/83	"	13 9	"	"	126	124 18 v. q.	156	"
Lososon, Vito	40	17/5/83	"	13 8	"	"	126	124 18 v. q.	156	"
Zoppi, Ferdinand	41	1 8/83	"	13 7	"	"	126	124 18 v. q.	156	"
Magrath, Edward	36	1/2/84	"	13 1	"	"	126	124 18 v. q.	156	"
Gov, Robert	44	1/1/85	"	12 2	"	"	126	124 18 v. q.	156	"
Martyn, Francis	39	1/9/85	"	11 6	"	"	126	124 18 v. q.	156	"
Adams, William George	35	1/7/80	"	10 8	"	"	126	124 18 v. q.	156	"
Fraser, William	37	1/4/87	"	9 11	"	"	126	124 18 v. q.	156	"
Talk, Alexander	23	1/5/87	"	9 10	"	"	126	124 18 v. q.	156	"
McKinnon, Allan	40	1/2/88	"	14 1	"	"	126	18 v. q.	194	Keeps watch and performs duties in boat in connection with the pilot service of the port.
Gibson, John Godfried	35	1/12/88	"	8 3	"	"	121	604 124 18 v. q.	151	"
Fraser, George	38	1/8/90	"	6 7	"	"	120	124 18 v. q.	150	"
McLeod, Robert	34	1/12/80	"	7 2	"	"	118	124 18 v. q.	146	"
Wood, Stephen	37	1/1/89	"	8 2	"	"	110	124 18 v. q.	146	"
McLeod, Kenneth	35	1/8/90	"	6 7	"	"	106	124 18 v. q.	136	"
Hoyle, John Duncan	63	1/11/76	"	20 4	"	Person in charge of moorings, &c., Shell-harbour.	50	...	50	In charge of port and moorings.
Christie, Henry	62	1/4/88	"	8 11	"	Person in charge of moorings, &c., Ger-rington.	25	...	25	"
Hall, Richard Thomas	63	1/3/06	"	31 0	"	Principal keeper, Mac-quarie Light-house.	177	124 50 v. q.	229	Responsible for cleanliness and efficiency of light-house, divides night watches with assistant keepers. Keeps night watches and assists in maintaining the establishment in proper order.
Silva, Frederick	36	1/2/88	"	9 1	"	1st assistant, Mac-quarie Light-house.	157	124 20 v. q.	169	"
Johnson, Richard	46	9/8/82	"	14 6	"	2nd assistant, Mac-quarie Light-house.	120	124 18 v. q.	162	"
Patterson, Hugh Stirling	45	1/6/83	"	13 9	"	1st engineer, Mac-quarie Light-house.	263	80 v. q.	293	Engineer in charge of electric light and engine-room. To divide watches with and otherwise assist Engineer-in-charge.
Thomas, William Henry	62	1/6/83	"	13 9	"	Assistant engineer, Macquarie Light-house.	150	90 v. q.	180	"
May, William	70	25/4/71	"	25 10	"	Principal keeper, Hornby Light-house.	245	90 v. q.	296	Duties similar to other principal keepers.
Johnson, Alfred	33	22/6/84	"	12 6	"	1st assessor, Hornby Light-house.	148	30 v. q.	178	Duties similar to other assistant light-keepers.
Quinn, James	37	1/7/85	"	11 6	"	2nd assistant, Hornby Light-house.	150	80 v. q.	160	"
Leddra, Joseph	64	9/12/79	"	17 2	"	Superintendent, Light-ship "Bramble," Sydney.	245	24 50 v. q.	319	In charge of light-ship, &c., &c.
Leddra, Joseph Harmer	29	1/2/85	"	11 7	"	1st assistant, Light-ship "Bramble," Sydney.	127	124	130	Keeps watch, and carry out other necessary duties.
Temple, John	46	1/4/86	"	10 11	"	2nd assessor, Light-ship "Bramble," Sydney	120	...	120	"

v. q. Value of quarters.

* Leading lights, Newcastle.

Life-boat, Newcastle.

† Leading lights, Port Jackson

Surname and Christian Name of Officer.	Age last Birthday.	Date of Appointment.	Manner of Appointment	Length of Service to 28th February, 1897.	Break in Service, From 1 to 1	Position held.	Amount of Annual Salary.	Allowances, Fees, and other Emoluments.	Total amount of Salary and Emoluments.	Description in detail of Duties performed.
Walt, Peter	29	1/4/92		5 m.	Nil	Assistant-keeper, light-ship, Sydney.	£ 118	15	£ 133	Keep watch and carry out other necessary duties.
Heresce, Oscar James	30	7/4/94	Recommended by Marine Board.	2 10	"	"	96	12*	108	"
Cobb, Frank	44	1/5/69	"	7 10	"	Lightkeeper, Fort Denison	133	30 v. q.	163	Responsible for cleanliness and efficiency of lighthouse.
Johnson, James	60	1/1/57	"	40 2	"	Principal keeper, Nobbys lighthouse, Newcastle.	226	60 v. q.	286	Duties similar to other principal keepers.
Gardiner, William	60	1/10/73	"	23 5	"	1st assistant, Nobbys lighthouse, Newcastle.	157	24†	211	Duties similar to other assistant keepers.
McDonald, Donald	63	21/3/94	"	32 11	"	2nd assistant, Nobbys lighthouse, Newcastle.	130	24†	174	"
Warren, Josiah Lambert	35	1/11/92	"	4 4	"	Lightkeeper, lightship, Newcastle.	130	....	120	Responsible for cleanliness and efficiency of lightship.
Ross, James	23	1/9/96	"	0 6	"	Lightkeeper, pile-light, Newcastle.	130	....	120	To light up, keep clean, and superintend pile-light at Newcastle.
Skeldon, John	60	9/12/79	"	17 2	"	Principal keeper, lighthouse, Green Cape.	245	50 v. q.	295	Duties similar to other principal keepers.
Whelan, Yvahan	41	13/5/65	"	11 9	"	1st assistant, light-house, Green Cape.	157	30 v. q.	187	Duties similar to other assistant keepers.
McKinnon, Jacobus	40	1/2/93	"	4 0	"	2nd assistant, light-house, Green Cape.	90	30 v. q.	126	"
Severe, William John	66	14/7/61	"	15 7	"	Principal keeper, lighthouse, Broken Bay.	177	50 v. q.	227	Duties similar to other principal keepers.
Newman, Isaac	47	7/8/61	"	15 6	"	1st assistant, light-house, Broken Bay.	134	30 v. q.	164	Duties similar to other assistant keepers.
Smith, William	33	1/11/88	"	8 4	"	2nd assistant, light-house, Broken Bay.	120	30 v. q.	150	"
Crossingham, Robert	49	1/7/83	"	13 8	"	Principal keeper, lighthouse, Cape Light-house.	187	60 v. q.	237	Duties similar to other principal keepers.
Vanderford, James Henry	36	19/3/80	"	7 11	"	1st assistant, Smoky Cape lighthouse.	134	30 v. q.	164	Duties similar to other assistant keepers.
McCarthy, Jeremiah	41	16/4/83	"	3 10	"	2nd assistant, Smoky Cape lighthouse.	106	30 v. q.	136	"
Burgess, John	61	9/9/79	"	17 5	"	Principal keeper, Montague Island.	245	60 v. q.	295	Duties similar to other principal keepers.
Francis, Emanuel	35	1/1/83	"	12 2	"	1st assistant, Montague Island.	120	30 v. q.	150	Duties similar to other assistant keepers.
Thorley, Thomas	30	1/6/82	"	4 10	"	2nd assistant, Montague Island.	118	30 v. q.	148	"
Lambourne, Henry E.	44	2/11/83	"	13 3	"	Lightkeeper, Nelson's Bay.	134	30 v. q.	164	Responsible for cleanliness and efficiency of lighthouse.
Gambell, William	68	25/2/72	"	24 11	"	Lightkeeper, Ullasaula.	168	30 v. q.	198	"
Skeldon, John, junior	40	1/8/85	"	11 7	"	Principal keeper, Solitary Island lighthouse.	157	50 v. q.	207	Responsible for cleanliness and efficiency of lighthouse. Divides night watches with assistant keepers.
Warren, William	30	1/8/92	"	4 7	"	1st assistant, Solitary Island lighthouse.	120	30 v. q.	150	Keeps night watches, and assists in maintaining the establishment in proper order.
Hansen Henry	39	1/8/93	"	3 7	"	2nd assistant, Solitary Island lighthouse.	96	30 v. q.	126	"
Watson, Daniel	51	1/10/75	"	21 5	"	Principal keeper, Seal Rocks lighthouse.	245	60 v. q.	295	Duties similar to other principal keepers.
Williams, William	55	1/12/67	"	20 3	"	1st assistant, Seal Rocks lighthouse.	127	30 v. q.	157	Duties similar to other assistant keepers.
Williams, William H.	46	1/10/86	"	11 5	"	2nd assistant, Seal Rocks lighthouse.	130	30 v. q.	160	"
Parker, William	63	20/6/69	"	27 8	"	Principal keeper, lighthouse, Cape St. George.	197	50 v. q.	247	Duties similar to other principal keepers.
Simpson, William	60	15/1/82	"	14 3	"	1st assistant, Cape St. George lighthouse.	130	30 v. q.	163	Duties similar to other assistant keepers.
Daley, Arthur	19	16/11/95	"	1 3	"	2nd assistant, Cape St. George lighthouse.	96	30 v. q.	126	"
Priest, George Charles	66	1/8/90	"	16 7	"	Principal keeper, lighthouse, Point Stephens.	177	25† v. q.	223	Duties similar to other principal keepers.
McNally, John	34	1/1/91	"	6 2	"	1st assistant, Point Stephens lighthouse.	127	30 v. q.	157	Duties similar to other assistant keepers.
Glover, Francis Joseph	28	1/3/91	"	6 0	"	2nd assistant, Point Stephens lighthouse.	106	30 v. q.	136	"
Moffitt, George James	54	8/5/88	"	38 0	"	Signal-master, Fort Phillip, Sydney.	244†/2†	50 v. q.	294†/2†	Receives and sends telegrams and otherwise performs the duties in connection with signal station, Fort Phillip.
Williams, Samuel	71	1/1/61	"	46 2	"	Assistant signal-master, Fort Phillip, Sydney.	130	30 v. q.	160	Keeps signals and carries messages, &c.
Francis, Joseph	40	1/2/78	"	19 1	"	Signal-master, South Head.	176	50 v. q.	225	Receives and sends telegrams, and otherwise performs the duties in connection with signal station, South Head.
Olson, Arthur Ernest	22	23/9/93	"	3 5	"	Junior operator, South Head.	100	30 v. q.	130	Assists principal in keeping a lookout and performing the duties of the signal station.
Crapp, John	51	1/9/79	"	17 6	"	Signal-master, Newcastle.	175	....	175	Keeps lookout at Newcastle, signals arrival of shipping, sends pilots out, and keeps telephonic communication with Harbour Office.
Bradshaw, George	41	1/4/87	"	9 11	"	Night lookout-man, Newcastle.	144	12†	156	Keeps lookout and performs duties required at night.
Hickey, Maurice	47	1/10/84	"	12 5	"	Night lookout-man, Newcastle.	131	....	131	"
Challinor, M.	46	26/6/88	"	8 0	"	Cleaner of Marine Board Office, Sydney.	108	....	108	"

v. q. Value of quarters.

* Leading lights, Port Jackson.

† Leading lights, Newcastle.

‡ Dismissed, 18/3/97.

r. o. Telegraph operator, Point Stephens

APPENDIX A.

Work carried out by Secretary and in his office.

- Takes down depositions at inquiries, and reads correspondence to the Board.
 Writes up minutes and special minutes.
 Receives reports, letters, and telegrams from out-stations, and deals with same under direction.
 Opens general correspondence, and has same registered for Board.
 Drafts some, and writes all, letters.
 Attends with President daily, and carries out instructions received.
 Examines all applicants' papers for necessary service, &c., for masters; issues mates', engineers', pilotage, and other certificates and licenses, under the Navigation Acts.
 Drafts and writes reports of all inquiries into shipwrecks and other casualties, circulates same, and sends duplicate proceedings, including evidence, to the Board of Trade, and to other colonies interested.
 Supervises, signs, and forwards to Board of Trade all wreck and other casualty returns.
 Supervises and initials all vouchers of expense incurred in Department; receives declarations and reports from surveyors and inspectors, and instructs them, under direction, generally; also master of pilot steamer and other officers when necessary.
 Receives all requisitions for stores, stationery, &c., &c., from home and out stations, supervises and corrects same, and forwards to the Treasury.
 Signs and forwards all requisitions for the printing office.
 Attends to people who daily visit the office on shipping business.
 Receives and deals with all notices for survey of steamers for docking, passenger, emigration, and load-line certificates, and for the adjustment of compasses.
 Makes out all returns asked for, including alphabetical list of steam certificates half-yearly, alphabetical list of masters, mates, &c., half-yearly, alphabetical list of steamers trading to New South Wales ports.
 Makes out certificates to passing applicants, steam certificates, and all licenses and other certificates under the Acts.
 Attends the Board on their annual tour of inspection of lighthouses, &c.; also local visits of inspection to South Head lighthouse, Macquarie lighthouse, lightship, Fort Denison, South Head signal stations, and pilot steamer.
 Attends two telephones: No. 1, for city generally; No. 2, through which the business at the boatshed and signal stations is regulated.
 Indexes all books.

10.

AGES of Marine Board Officers, 1896.

Age.		Age.		Age.	
20	3	41	7	61	3
21	1	42	5	62	2
22	1	43	6	63	7
25	1	44	5	64	4
26	5	45	1	65	1
27	5	46	10	66	4
28	7	47	7	68	2
29	4	48	2	69	2
30	3	49	4	70	1
31	3	50	2	71	1
32	4	51	9	73	1
33	4	52	7	76	1
34	8	53	4		
35	9	54	8		
36	12	55	5		
37	4	56	5		
38	2	57	4		
39	12	58	1		
40	11	59	4		
		60	3		
	99		90		29
Total.....					227

OFFICERS, aged 60 and over, employed by the Marine Board, 1896.

Name.	Position.	Age.	Salary.	Allowance Value.
Whitnall, G.*	Boatman, Manning River.....	76	£ 126	£ 42
Lawrence, J. R.*	Clerk, Sydney.....	73	288	.....
Williams, S.*	Assistant Signalman, Sydney	71	120	30
Creer, J.	Master, "Captain Cook".....	70	416	Rations.
May, W.*	Lightkeeper, Sydney.....	69	245	50
Skelton, J.*	Lightkeeper, Green Cape.....	69	245	50
Jack, A. W.	Pilot, Sydney	68	398	Rations.
Gambell, W.*	Lightkeeper, Ulladulla	68	158	30
Pettit, H.	Harbour-master, Sydney	66	371	.....
Steele, W. J.	Lightkeeper, Broken Bay.....	66	177	50
Francis, J.	Look-out man, "Captain Cook"	66	143	12
Melville, G.	Assistant Harbour-master, Newcastle	66	371	50
Pain, J.*	Boatman, Camden Haven	65	126	18
Boyd, T.	Pilot, Lake Macquarie	64	240	25
Leddra, J.	Superintendent, Lightship, Sydney	64	245	74
Hixson, F.	President	64	740	225
Bracegirdle, F.	Assistant Harbour-master, Sydney	64	326	.....
M'Ritchie, —	Shipwright Surveyor, Sydney.....	63	326	.....
Hall, R. T.	Lightkeeper, Sydney.....	63	177	62
Parker, W.	Lightkeeper, Cape St. George.....	63	197	50
Fisher, J.	Boatman, Twofold Bay.....	63	126	18
Hoy, J. D.	Charge of Port, Shellharbour	63	50	.....
Barker, W.	Boatman, Newcastle	63	126	30
M'Donald, D.	Assistant Lightkeeper, Newcastle	63	120	54
Bertram, A.	Inspector, Newcastle	62	308	.....
Christie, H.	Charge of Port, Gerringong.....	62	25	.....
Bishop, T.	Pilot, Shoalhaven	61	240	25
Leonard, J.	Pilot, Camden Haven	61	240	25
Burgess, J.	Lightkeeper, Montague Island	61	245	50
Simpson, W.	Assistant Lightkeeper, Cape St. George	60	120	30
M'Gregor, —	Pilot, Tweed River	60	240	25
Johnson, J.	Lightkeeper, Newcastle	60	236	74
Total		32	£7,511	£1,099

Total Salaries and Allowances..... £8,610.

* Marine Board recommend to retire 31 January.

PILOT Steamer "Captain Cook."

Cost (evidence, Captain Hixson), 18th December, 1894, £23,000.

Salaries, 1896.

	Age.	£		Age.	£
Master	70	416	Boatmen—		
Mate	40	175	1 at £155	62	} 515
2nd Mate	28	150	1 at 143	62	
Engineer	55	272	1 at 121	25	
2nd Engineer	47	200	1 at 96	22	
Firemen—			Look-out men—		
1 at £143	46	} 511	1 at £161	52	} 316
1 at 125	28		1 at 155	66	
1 at 123	34		Cook and Providore	26	143
1 at 120	37				£3,301
Scamen—			Pilots—		
1 at £123	35	} 603	4 at £398	68	} 1,842
	33		1 at 250	49	
	31			43	
	28			43	
5 at 96	29			47	
	27			£5,143	

Officers and pilots allowed rations, 18s. per week each.

Name.	Position.	Age.	Salary and Allowances.	Name.	Position.	Age.	Salary and Allowances.
<i>Office and Management.</i>							
Hixson, F.	President	64	£ 965	Veitch, J. H.	Secretary and Inspector, Newcastle.	36	£ 300
Lindeman, G. S.	Secretary	51	470	Williams, J.	Messenger and Office-keeper, Newcastle.	54	184
Rule, F.	Accountant	30	200	Gibson, A. E.	Operator and Clerk, South Head.	21	130
O'Connor, H.	Clerk	26	150	Challinor, M.	Office Cleaner, South Head.	...	108
Lawrence, J. R.	Clerk to Harbour-master.	73	288				
Parsonage, J.	Messenger	52	150				
Moore, J.	"	18	75				
<i>Skilled Officers.</i>							
Cruickshank, W. D.	Engineer Surveyor	57	560	Anderson, J.	2nd Mate, "Captain Cook."	28	150
Selke, H.	Assistant Engineer Surveyor.	55	371	Broderick, J.	Engineer	55	272
Marshall, A. D.	"	53	308	Irwin H. B.	2nd Engineer	47	200
M'Ritchie, W.	Shipwright Surveyor	63	326	Patterson, H. S.	Engineer, Sydney Light	48	293
Bedford, J. H.	Examiner Seamanship...	59	380	Thomas, W. H.	Assistant Engineer, Sydney Light.	51	180
Creer, J.	Master, "Captain Cook"	70	416	Gow, R.	Carpenter, Newcastle	56	209
Fotheringham, J.	Mate	40	175				
<i>Harbour Work.</i>							
Pettit, H.	Harbour-master	66	371	Newton, H.	Harbour-master, Newcastle.	54	516
Bracegirdle, F.	Assistant Harbour-master.	64	326	Melville, G.	Assistant Harbour-master, Newcastle.	66	421
Thompson, T. R.	"	40	281	Bertram, A.	Inspector and Surveyor, Newcastle.	62	308
Newton, W.	Inspector and Surveyor	39	263				
Sangster, A.	Water Bailiff	29	200				

Name.	Position.	Age.	Salary and Allowances.	Name.	Position.	Age.	Salary and Allowances.
<i>Signals.</i>							
Moffitt, G. J.	Signal-master, Sydney ..	54	294	Francis, J.	Signal-master, South Head.	40	225
Williams, S.	Assistant Signal-master, Sydney.	71	150	Crapp, J.	Signal-master, Newcastle	51	175
<i>Other Labour.</i>							
Avelar, G.	Fireman, "Captain Cook"	46	143	Orton, H.	Cook and Providore, "Captain Cook."	26	143
Nuth, J.	" "	28	125	Bradshaw, —	Look-out man, Signal Station, Newcastle.	41	156
Morgan, A.	" "	34	123	Hickey, M.	Look-out man, Signal Station, Newcastle.	47	131
O'Connor, E.	" "	37	120	Hoy, J. D.	In charge of moorings, Shellharbour.	63	50
Harrington, J.	Seaman	35	123	Christie, H.	In charge of moorings, Gerringong.	62	25
Cobb, G.	" "	33	96				
Monereiff, J.	" "	31	96				
Scolley, W.	" "	28	96				
Stretton, E.	" "	29	96				
Darley, C.	" "	27	96				
DeFraser, H.	Look-out man	52	161				
Francis, J.	" "	66	155				

<i>Pilots.</i>											
Station.	Name.	Age.	Salary.	Allowance.	Total.	Station.	Name.	Age.	Salary.	Allowance.	Total.
Sydney	Zack	68	£ 398			Macleay	Jamieson	56	£ 240	25	265
	Chudleigh	49	398				Murray	36	160	49	209
	Tyler	43	398			Port Macquarie	Baird	39	150	25	175
	Morris	43	398			Kiama	Fraser	37	236	30	266
	Place	47	250			Twofold Bay	Newton	34	160	25	185
Newcastle	Hacking	54	353	50	403	Shoalhaven	Bishop	61	240	25	265
	Cumming	39	353	50	403	Bellinger	Radcliffe	40	160	25	185
	Wood	43	353	40	393	Wollongong	Thompson	48	215	25	240
	Sweet	36	218	50	268	Moruya	Sutherland	67	240	25	265
	Warner	39	209	50	259	Camden Haven	Leonard	61	240	25	265
	Stevenson	38	200	50	250	Lake Macquarie	Boyd	64	240	25	265
	Morris	29	200	60	260	Nambucca	Whaites	52	240	25	265
Tweed	M'Gregor	60	240	25	265	Cape Hawke	Kendall	52	240	25	265
Richmond	Frazer	47	180	25	205						
Clarence	M'Auley	51	240	25	265						
Total, Salaries and Allowances										£	7,928

28 Pilots.

2 at £403, with allowance included.	1 at £250, and rations not valued.
4 at 398, and rations not valued.	1 at 250, with allowance included.
1 at 393, with allowance included.	1 at 240, " "
1 at 263, " "	1 at 209, " "
1 at 266, " "	1 at 205, " "
9 at 265, " "	2 at 185, " "
1 at 260, " "	1 at 175, " "
1 at 259, " "	

<i>Lightkeepers.</i>							
Station.		Age.	Salary and Allowances.	Station.		Age.	Salary and Allowances.
Sydney Light	Keeper	63	£ 239	Broken Bay	Keeper	66	£ 227
	Assistant	36	199		Assistant	46	164
	"	46	162		"	33	150
Hornby Light	Keeper	69	295	Port Stephens	Keeper	56	253
	Assistant	33	178		Assistant	34	157
	"	37	150		"	28	136
Light-ship	Keeper	64	319	Nelson's Bay	Keeper	44	164
	Assistant	29	139		"		
	"	46	130	Seal Rocks	"	51	295
	"	28	120		Assistant	55	187
	"	30	108		"	46	150
Fort Denison	Keeper	44	163	Solitary Island	Keeper	40	207
Newcastle	"	60	286		Assistant	35	150
	Assistant	59	211		"	39	126
	"	63	174	Smoky Cape	Keeper	40	237
Light-ship	Keeper	35	120		Assistant	36	164
Pile Light	"	28	120		"	41	136
Green Cape	"	69	295	Cape St. George	Keeper	63	237
	Assistant	41	187		Assistant	60	150
	"	40	126		"	19	126
Montague Island	Keeper	61	295	Ulladulla	Keeper	68	188
	Assistant	35	150		"		
	"	30	148				

17 Lightkeepers.				26 Assistants.			
£	£	Ages.		£	£	Ages.	
2 at 120	1 at 286	1 at 28	1 at 64	1 at 108	1 at 162	1 at 19	1 at 39
1 at 163	4 at 295	1 at 35	1 at 66	1 at 120	2 at 164	2 at 28	1 at 40
1 at 164	1 at 319	2 at 40	1 at 68	3 at 126	1 at 174	1 at 29	2 at 41
1 at 188		2 at 44	2 at 69	1 at 130	1 at 178	2 at 30	4 at 46
1 at 207		1 at 51		2 at 136	2 at 187	2 at 33	1 at 55
1 at 227		1 at 56		1 at 139	1 at 199	1 at 34	1 at 59
2 at 237		1 at 60		1 at 148	1 at 211	2 at 35	1 at 60
1 at 239		1 at 61		6 at 150		2 at 36	1 at 63
1 at 253		2 at 63		1 at 157		1 at 37	

Boatmen.

		Salary.		Allow- ance.	Total.			Salary and Allowance.			
		£	£					£	£	£	£
Sydney	Boatswain ..	199	30	229	Clarence.....	Boatmen ...	3 at £144	432	...	...
	Boatmen ...	2 at £144	288	...		Boatman ...	1 at	124	...	...
	„	11 at £143	1,573	...		„	1 at	114	...	...
	Boatman ...	1 at	138	...		„	1 at	144	...	...
	„	1 at	134	...		„	1 at	124	...	...
	Boatmen ...	2 at £133	266	...		„	2 at £114	228	...	...
"Captain Cook," Pilot Steamer.	Boatman ...	1 at	96	...	Manning	Boatman ...	1 at	168	...	...
	„	1 at	143	12	155	„	2 at £144	288	...	...
	„	1 at	143	...		„	2 at £134	268	...	...
	„	1 at	121	...		Port Macquarie..	Boatman ...	1 at	168
	„	1 at	96	...		„	4 at £144	576	...	...
Newcastle	„	1 at	104	...	Twofold Bay....	„	3 at £144	432	...	...
	„	1 at	184	...	„	1 at	134	...	...	...
	„	1 at	172	...	Shoalhaven	Boatmen ...	4 at £144	576	...	...
	„	1 at	169	...	Bellinger	Boatman ...	1 at	144	...	...
	Boatmen ...	15 at £156	2,340	...	„	1 at	119	...	...	...
	Boatman ...	1 at	151	...	„	1 at	120	...	...	...
	„	1 at	150	...	„	1 at	114	...	...	...
	Boatmen ...	2 at £146	292	...	„	1 at	114	...	...	...
	Boatman ...	1 at	136	...	Wollongong	Boatmen ...	2 at £144	288	...	...
	„	1 at	144	...	Moruya	„	2 at £144	288	...	...
Tweed	Boatmen ...	4 at £144	576	...	Camden Haven...	„	2 at £144	288	...	...
	Boatman ...	1 at	124	...	Lake Macquarie..	„	2 at £144	288	...	...
Richmond	Boatmen ...	3 at £144	432	...	Nambucca	„	2 at £144	288	...	...
	Boatman ...	1 at	134	...	Cape Hawke.....	Boatman ...	1 at	144	...	...
	Boatmen ...	2 at £124	248	...	„	1 at	134	...	...	...

£14,676

102 Boatmen.

£	£	£	Ages.	£	£	£
2 at 96	12 at 143	1 at 184	1 at 19	5 at 35	1 at 45	2 at 56
4 at 114	39 at 144	1 at 194	1 at 22	6 at 36	4 at 46	1 at 57
1 at 119	2 at 146	1 at 229	1 at 25	2 at 37	3 at 47	1 at 58
1 at 120	1 at 150		3 at 26	1 at 38	2 at 49	2 at 59
1 at 121	1 at 151		4 at 27	7 at 39	3 at 50	2 at 63
5 at 124	1 at 155		1 at 28	4 at 40	3 at 51	1 at 65
2 at 133	15 at 156		2 at 31	4 at 41	3 at 52	1 at 76
6 at 134	2 at 168		4 at 32	5 at 42	3 at 53	
1 at 136	1 at 169		1 at 33	3 at 43	5 at 54	
1 at 138	1 at 172		5 at 34	3 at 44	2 at 65	

Summary.

	Salaries.	Fees.	Contingencies.	Tug Subsidies.	Total.
Sydney	16,188	656	2,630	.....	19,474
Newcastle.....	7,954	329	720	.....	9,003
Tweed	850	.....	25	849	1,724
Richmond	886	.....	387	1,770	3,043
Clarence	820	.....	273	750	1,843
Macleay	664	.....	160	282	1,106
Manning	770	.....	130	400	1,300
Port Macquarie ..	780	.....	84	348	1,212
Kiama	236	.....	52	.....	288
Twofold Bay	654	.....	23	.....	677
Shoalhaven	744	.....	11	.....	755
Bellinger	579	.....	51	732	1,362
Wollongong	503	.....	36	336	875
Moruya	492	.....	5	.....	497
Camden Haven	492	.....	6	234	732
Lake Macquarie	492	.....	.....	.....	492
Nambucca	492	.....	18	282	792
Cape Hawke	482	.....	20	400	902
Shellharbour	50	.....	.....	.....	50
Gerringong	25	.....	.....	.....	25
Green Cape	498	.....	83	.....	581
Montague Island.....	483	.....	51	.....	534
Broken Bay	431	.....	43	.....	474
Port Stephens	436	.....	51	.....	487
Seat Rocks	522	.....	72	.....	594
Solitary Island	373	.....	14	.....	387
Smoky Cape.....	427	.....	45	.....	472
Cape St. George	413	.....	45	.....	458
Nelson's Bay	134	.....	20	.....	154
Ulladulla	158	.....	32	.....	190

11.

MARINE BOARD.—Rules and Regulations.

The Treasury, New South Wales, 13 August, 1885.

HIS Excellency the Governor, with the advice of the Executive Council, has approved of the following Rules and Regulations setting forth, in conformity with the provisions of the 7th section of the "Civil Service Act, 1884," the conditions of employment in the Marine Board Department (applicable to all persons except officers classified under the said Act).

H. E. COHEN.

Rules and Regulations setting forth, in conformity with the provisions of the 7th section of the "Civil Service Act of 1884," the conditions of admission, examination, promotion, classification, salaries, and retiring allowances in the Marine Board Department.

Applicable to all Persons, except Officers classified under the said Act.

No person will hereafter be admitted to the Marine Board Department over thirty-five years of age, nor unless he is in vigorous bodily health and free from colour-blindness or other defective eyesight. The

The candidate must produce testimonials of sobriety and fitness for the particular office he applies for, and in the case of pilots and other seafaring persons, he must submit certificates of a grade not lower than the position he seeks.

When vacancies occur in the Department, promotion will depend on length of service, good conduct, and the qualifications necessary to fill such vacancies.

Any person who shall absent himself from duty must, not later than the following day, report in writing the cause of his absence. If such absence be caused by sickness, and extends beyond two days, he must apply for sick leave, and forward a medical certificate. Sick leave can only be granted for a limited period.

A conviction of drunkenness, neglect of duty, or disobedience of orders by the Marine Board, will subject the offender to dismissal.

The employees under these Regulations shall also be subject to the provisions of Part III of the "Civil Service Act, 1884."

Nothing hereinafter contained shall apply to those persons who are only partially employed in the service of the Marine Board.

Pilots, light-keepers, inspectors, mates, boatswains, signal-masters, engineers, and electric operators shall be entitled, without diminution of salary, to two weeks' leave of absence in each year, at such time as may be deemed most convenient; and if they shall not take such leave in any year they shall be entitled to it in any subsequent year, in addition to the leave for such year, but no such accumulated leave shall exceed six weeks. In cases of illness or other pressing necessity, leave of absence may be granted by the Governor, on the recommendation of the Marine Board, approved by the Minister, to any official for a period not exceeding three months, on full or any less salary as may be deemed fit, and such leave may be renewed on the same or any other terms; but in all cases of illness the request for leave, or for renewal thereof, shall be accompanied by a satisfactory medical certificate. In cases of pressing necessity, the circumstances must be stated in writing; and if such leave shall extend to one month, such officer shall forfeit his right to his next ordinary annual leave or any portion thereof, as above provided.

On special application, leave of absence may be granted by the Governor, on the recommendation of the Marine Board, approved by the Minister, to any official above-named of twenty years' service, for a period of twelve months on half salary, or six months on full salary, or to any official of ten years' service, for a period not exceeding six months on half salary, or three months on full salary; or, in case of pressing necessity, to any official whatever, but such last-mentioned leave may be deducted from the leave hereinbefore provided.

Leave of absence for the period of two weeks in each year may be granted any employee other than those above-mentioned, at such time as may be found most convenient.

A deduction of 4 per cent, per annum will be made from the salaries of all persons employed in the service of this Department, to entitle them to the allowances and gratuities provided under Parts 5 and 6 of the Civil Service Act.

Time served in one branch of the Department will be allowed in cases of transfer to any other branch.

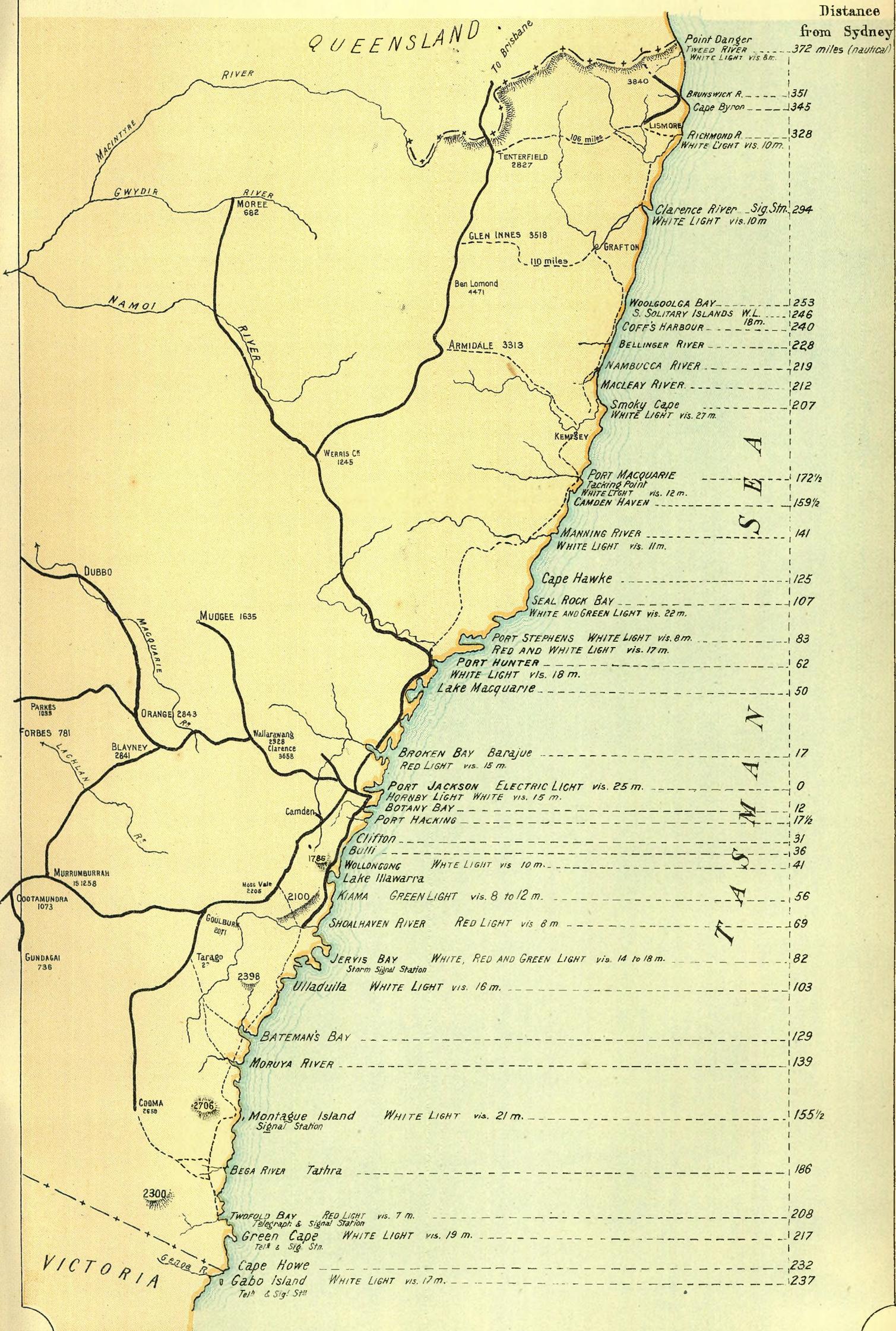
The following shall be the scale of classification and remuneration of the different grades in the service of the Marine Board:—Maximum salaries to be obtained by yearly increments, as set forth under their respective heads, until the highest rate shall have been obtained, provided that where the full increment would exceed the maximum, only such proportion shall be added as will bring the salary up to the said maximum.

The right to receive any annual increment shall depend on the good and diligent conduct of the person concerned, and shall only be granted on the recommendation of the head of his Department.

Minimum Salary.	Maximum Salary.	Value of Quarters, Fuel, and Light.	Total Amount of Salary and Allowances. Maximum obtainable.	Annual Increment.	Minimum Salary.	Maximum Salary.	Value of Quarters, Fuel, and Light.	Total Amount of Salary and Allowances. Maximum obtainable.	Annual Increment.
1st-class Pilots.					Boatswain, Government Boatshed.				
£ 200	£ 400	£ 50*	£ 450	£ 10	£ 150	£ 200	£ 30	£ 230	£ 7
2nd-class Pilots.					Boatmen—Sydney and Outports, including Coxswains, Drivers, and Lookout-men :—				
150	250	25	275	10	96	126†	18	144	5
Principal Light-keepers.					Signal masters.				
157	250	50	300	10	175	250	50	300	7
1st Assistant Light-keepers and Principal Light-keepers in Subordinate Lights.					Operating Clerk, South Head.				
120	157	30	187	7	100	150	30	180	5
2nd Assistant Light-keepers.					Assistant Signal-masters.				
96	120	30	150	5	96	120	30	150	5
Inspectors.					Messengers.				
200	350	Nil	350	10	75	150	Nil	150	5
Mates.					Carpenters, &c.				
175	225	Nil	225	10	152	180	Nil	180	5
2nd Mates.					Coxswain and Engineer, Harbour Steamer, Newcastle.				
150	175	Nil	175	5	108	152	18	170	5
Chief Engineers.					Engineer, Electric Light.				
200	280	Nil	280	10	220	270	30	300	10
2nd Engineers.					Assistant Engineer, Electric Light.				
150	200	Nil	200	10	110	150	30	180	5
Firemen.					In the case of Pilots, Light-keepers, Boatmen, and others, whose quarters are assessed as a portion of their salaries, the following is the scale that has been adopted :—				
120	144	Nil	144	5	First-class Pilots £50 per annum.				
Pilot and Lightship establishment, stationed at the Heads of Port Jackson, including seamen, boatmen, lookout-men, cook and providore, and crew of the Lightship :—					Second-class Pilots 25 "				
93	144	Nil	144	5	Principal Light-keepers 50 "				
Mate of Lightship.					Signal-masters 50 "				
120	150	Nil	150	7	Assistant Light-keepers, Assistant Signal-masters, Engine-men of Electric Light, Operating Clerk, South Head, and Coxswain, Government Boatshed 30 "				
					Boatmen 18 "				

* First-class pilots not provided with quarters will receive a minimum salary of £250, and a maximum of £450 per annum.
 † Where quarters are not provided the maximum salary of this class will be £144 per annum.

COAST CHART OF NEW SOUTH WALES



Distance
from Sydney

Point Danger TWEED RIVER WHITE LIGHT vis. 8m.	372 miles (nautical)
Brunswick R.	351
Cape Byron	345
LISMORE	
RICHMOND R. WHITE LIGHT vis. 10m.	328
Clarence River Sig. Str.	294
WHITE LIGHT vis. 10m	
Woolgoolga Bay	253
S. Solitary Islands W.L.	246
COFF'S HARBOUR 18m.	240
BELLINGER RIVER	228
NAMBUCCA RIVER	219
MACLEAY RIVER	212
Smoky Cape WHITE LIGHT vis. 27m.	207
PORT MACQUARIE Tacking Point WHITE LIGHT vis. 12m.	172½
CAMDEN HAVEN	159½
MANNING RIVER WHITE LIGHT vis. 11m.	141
Cape Hawke	125
SEAL ROCK BAY WHITE AND GREEN LIGHT vis. 22m.	107
PORT STEPHENS WHITE LIGHT vis. 8m. RED AND WHITE LIGHT vis. 17m.	83
PORT HUNTER WHITE LIGHT vis. 18m.	62
Lake Macquarie	50
BROKEN BAY Barajue RED LIGHT vis. 15m.	17
PORT JACKSON ELECTRIC LIGHT vis. 25m. HORNBY LIGHT WHITE vis. 15m.	0
BOTANY BAY	12
PORT HACKING	17½
Clifton	31
Bulli	36
WOLLONGONG WHITE LIGHT vis. 10m.	41
Lake Illawarra	
KIAMA GREEN LIGHT vis. 8 to 12m.	56
SHOALHAVEN RIVER RED LIGHT vis. 8m.	69
JERVIS BAY WHITE, RED AND GREEN LIGHT vis. 14 to 18m. Storm Signal Station	82
Ulladulla WHITE LIGHT vis. 16m.	103
BATEMAN'S BAY	129
MORUYA RIVER	139
Montague Island Signal Station WHITE LIGHT vis. 21m.	155½
BEGA RIVER Tathra	186
TWOFOLD BAY RED LIGHT vis. 7m. Telegraph & Signal Station	208
Green Cape WHITE LIGHT vis. 19m. Tel. & Sig. Str.	217
Cape Howe	232
Gabo Island WHITE LIGHT vis. 17m. Tel. & Sig. Str.	237

13.

LIST of Home and Out-stations.

Pingall Head.	Barranjoey.
Tweed.	Macquarie Lighthouse.
Brunswick (no station now).	Hornby Lighthouse.
Richmond (pilot and lighthouse).	Pilot steamer.
Clarence (pilot and lighthouse).	Lightship.
Solitary Island.	Signal station, South Head.
Bellinger.	Fort Phillip.
Nambucca.	Fort Denison.
Macleay.	Wollongong (pilot and lighthouse).
Trial Bay.	Kiama.
Smoky Cape.	Shellharbour.
Port Macquarie.	Gerrington.
Tacking Point.	Shoalhaven (pilot and lighthouse).
Camden Haven.	Montague Island.
Crowdy Head.	Ullalulla.
Manning.	Moruya.
Cape Hawke.	Twofold Bay (pilot and lighthouse).
Seal Rocks.	Green Cape.
Point Stephens.	Richmond River (8 leading light-keepers).
Nelson's Bay.	Clarence River (4 leading light-keepers).
Newcastle.	Macleay River (5 leading light-keepers).
Lake Macquarie.	

14.

The Treasury, New South Wales, 18 November, 1875.

STEAM PILOT SERVICE OF PORT JACKSON.

It having been determined that the present system of performing the Sea Pilot Service of Port Jackson, in whaleboats, shall be discontinued on the last day of the present month, and that a Steam Pilot Service shall be substituted therefor, which shall be commenced on the first proximo.—His Excellency the Governor, with the advice of the Executive Council, has been pleased to approve of the following Regulations for the conduct of the said Steam Pilot Service,—which Regulations have been made by the Marine Board of New South Wales, under the provisions of the Navigation Act of 1871.

JOHN ROBERTSON.

Office of the Marine Board of New South Wales, Sydney, 11 October, 1875.

REGULATIONS FOR THE STEAM PILOT SERVICE OF PORT JACKSON.

General.

On and after the 1st December next the present system of performing the Sea Pilot Service of Port Jackson in whaleboats will be discontinued, and a Steam Pilot Service introduced.

Under this arrangement the pilots will become salaried officers, and they will be required to perform their duties in conducting ships in and out of the port, &c., in rotation, or as they may be specially appointed.

Pilots.

Two pilots will be stationed on board the steamer for outside service, and the remainder will be retained in Watson's Bay for the up-harbour work, the look-out at South Head, and the relief of pilots shipped from the steamer.

When a pilot is shipped, the pilot on turn at Watson's Bay is to take his station on board the steamer with all reasonable despatch.

A pilot having taken charge of a vessel must not leave until she is safely anchored, or given a proper offing, as the case may be, without the written permission of the master, or the usual pilot's certificate.

All vessels must, as heretofore (except those having powder, which are to be taken to Neutral Bay), be brought up as near to Sydney as practicable; and they will not be considered out of Sea Pilot's waters until anchored above a line between "Careening Point" and "Garden Island."

Pilots are bound to the strictest observance of, and will be responsible for carrying out, the Quarantine and other existing laws and regulations.

Pilot Steamer.

The steam pilot vessel will be under the entire control of the master, who will use his utmost endeavours to intercept all vessels requiring pilots at a reasonable distance from the Heads; he will also be a licensed pilot, in order that he may act in that capacity if necessary.

In thick weather, when signals cannot be seen from the look-out station, the steamer is to take up a position outside the Heads best adapted, in the opinion of the master, for intercepting ships that may require pilots.

In clear weather, when signals can be seen, the steamer is to be kept at her buoy near the South Reef, with fires banked, ready to proceed on signal from look-out station.

The responsibility of the steamer's movements will rest with the master, who will be expected to use his judgment for the efficiency of the service, and always take care to lower the boat in a convenient position for shipping pilots.

In the event of the weather being too bad to lower a boat outside, the pilot steamer is to lead the vessel inside, and ship the pilot when practicable.

In addition to shipping, the steamer and her crew will have to perform the duty of landing pilots from outward-bound vessels, and also of bringing reliefs off.

A constant look-out is to be kept on board the steamer; any laxity in this respect will render the person charged with the duty liable to instant dismissal.

After having shipped a pilot the steamer will proceed in for a relief, unless there should be still another ship requiring to be served in the offing, when she will provide the second pilot before coming in for the relief.

In the event of one pilot only being shipped during the night, the relief can be taken on board the steamer on the following morning. If the second pilot is shipped the relief is to be made as soon as circumstances will admit.

A log containing full particulars of the movements of the vessel, the state of the weather, the hour and minute at which pilots are shipped, and that at which reliefs come on board, is to be kept by the mate under the direction of the master, who will forward a copy weekly to this office.

The steamer is not to come above the line of George's Head and the Bottle and Glass without permission from the office, unless she should be towing.

Special regulations for towing will be issued for the guidance of the master of the steamer.

In the case of a vessel requiring a pilot coming in without being intercepted, or any other important event occurring, the master of the steamer is to send a written report of the circumstance to this office.

Look-out Station, South Head.

A constant look-out is to be kept at the Signal Station. From sunrise to sunset the establishment will be under the charge of the signal-master, and from sunset to sunrise under that of the pilot on watch. These officers will be held responsible for the proper performance of the duties of the station.

A complete log of all important occurrences is to be kept, noting the times when signals from ships are first seen, the times at which the signals to proceed are made, and the times and bearings and estimated distances at which pilots are shipped. The times at which the steamer leaves and returns to her buoy are also to be recorded, and the movements of the up-harbour steam launch or boat are to be noted.

The

The usual telegram is still to be forwarded, showing the position in which pilots are shipped; any unusual movement on the part of the steamer is also to be reported.

When a pilot is shipped, notification is immediately to be sent to his relief, in order that he may be ready to take his station on board the steamer. Notification by signal or otherwise is also to be made to the coxswain of the up-harbour boat or steam launch.

Up-harbour Boat or Steam Launch.

The coxswain of the up-harbour boat or steam launch will be held responsible for the efficient performance of this duty. He will take care to ascertain by signal or otherwise when his services are required. Whilst engaged conveying a pilot to or from a ship, he will be under his direction. When the pilot has left the boat, it will be the duty of the coxswain, unless he should still be required for up-harbour service, to return with all despatch to his station at Watson's Bay.

In the event of the pilot steamer being unable to perform her duty from absence or otherwise, the up-harbour boat or steam launch will temporarily perform the duty of the outside service.

No. SEA PILOT'S CERTIFICATE.

Any complaint against the Pilot is required to be lodged in writing at the office of the Marine Board within seven days of the occurrence.

I certify that Mr. _____ piloted the
the Harbour of Port Jackson, and performed his duty to my satisfaction.

Draught
Tonnage

Bearings in the position where the Pilot boarded to be taken by the Master... } North Head.
Macquarie Lighthouse.
Hornby Lighthouse.

I further certify that he has delivered a copy of the Port Regulations, and that there is **NO GUNPOWDER** on board.

Date

Master

15.

RETURN of Steamers and Launches belonging to the Marine Board, showing the primary cost of each vessel and the cost of maintaining the service in which they are employed.

Name.	Primary Cost.	Cost of Maintenance.	
	£	£	
"Captain Cook"	22,715	3,515	
"Carrington"	1,350	716	
"Premier"	4,000	477	
"Nea"	Not known.	570	Built by Public Works Department.
"Gladys"	1,100	393	
"Sol"	750	350	
"Pinnacle"	Not known.	274	Turned over from H.M.C.S. Wolverine. Stationed at Newcastle.
"Barrossa"	1,123	344	
		£6,639	

16a.

A.

RETURN showing the amounts collected at Sydney for each year from 1887 to 1896 (both inclusive).

Year.	Pilotage Rates, Sydney.	Pilotage Rates—Out Ports— Collected at Sydney.	Removal Dues.	Harbour and Light Rates.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1887	15,218 13 3	158 1 8	2,143 10 0	9,862 11 0
1888	20,723 1 2	172 7 8	2,704 15 0	12,655 17 2
1889	21,271 9 4	124 10 0	2,772 10 0	11,937 4 0
1890	18,649 6 0	90 2 0	1,952 5 0	11,495 4 0
1891	23,382 8 2	88 3 4	2,137 5 0	14,001 18 8
1892	21,667 8 8	192 2 0	1,571 7 0	13,119 16 4
1893	18,108 0 8	110 5 0	1,163 0 0	12,278 1 4
1894	14,193 10 4	141 17 8	1,338 15 0	13,329 6 4
1895	13,188 18 4	25 11 8	1,390 10 0	14,103 9 8
1896	12,886 0 10	90 9 0	1,865 5 0	14,835 5 4

H.M. Customs, Sydney, 22nd March, 1897.

16b.

B.

RETURN showing the amounts collected at Newcastle for each year from 1887 to 1896 (both inclusive).

Year.	Pilotage Rates.	Removal Dues.	Harbour and Light Rates.
	£ s. d.	£ s. d.	£ s. d.
1887	12,858 16 2	2,148 5 0	4,952 11 8
1888	15,249 10 4	2,760 0 0	6,649 11 4
1889	17,418 19 4	3,684 10 0	7,492 4 0
1890	12,913 18 4	2,013 5 0	5,756 5 8
1891	16,744 2 4	3,255 10 0	6,244 4 8
1892	16,428 0 0	2,902 15 0	7,356 11 0
1893	10,806 3 0	1,881 0 0	5,029 11 8
1894	17,017 1 4	3,454 10 0	7,835 1 8
1895	17,930 15 4	3,651 0 0	8,486 7 4
1896	18,650 1 8	3,829 10 0	8,392 13 0

H.M. Customs, Sydney, 22nd March, 1897.

131

16c.

C.

RETURN showing the amounts collected at Outports (not including Newcastle) for each year from 1887 to 1896 (both inclusive).

Year.	Pilotage Rates.	Removal Dues.	Harbour and Light Rates.
	£ s. d.		£ s. d.
1887.....	392 3 4	Nil	66 11 4
1888.....	652 9 4	"	110 12 4
1889.....	562 8 0	"	110 2 0
1890.....	605 3 8	"	99 5 8
1891.....	397 0 0	"	85 7 8
1892.....	138 8 4	"	134 0 4
1893.....	110 8 2	"	22 19 8
1894.....	48 15 4	"	48 1 4
1895.....	116 3 8	"	89 10 8
1896.....	95 8 4	"	181 0 0

H.M. Customs, Sydney, 22nd March, 1897.

17.

A RETURN showing the time occupied by each of the Inquiries held by the Marine Board during the last five years.

Date.	Casualty.	Time occupied.	Remarks.
1892.		Sittings.	
February	" Parnell," wrecked	2	
February	" Endeavour," wrecked	2	
April	" Champion," wrecked	2	
May	" Queen," missing	2	
May	" Union," wrecked	3	
June	" Grace Lynn," wrecked	2	
June	" Millie" and " Waratah," collision	3	
July	" Lilian" and " Kangaroo," collision.....	3	
July	" Mystery," foundered	2	
August	" William and Alexander," wrecked.....	1	
September	" Friendship," wrecked	2	
November	" Marvel," foundered	2	
November	Charge of misconduct against master of " Port Glasgow"	4	
December	" Wellington," stranding.....	1	
1893.			
January	" Peerless," wrecked	2	
February	" Agnes Rose," missing	2	
February	" Kelloc" and " Ringarooma," collision	3	
February	" Shelbourne," foundered	2	
February	" Jessie," wrecked.....	2	
February	" Daphne," wrecked	1	
February	" Tweed," wrecked	2	
March	" Sandfly," wrecked	2	
March	" Hebe," wrecked	1	
March	" White Cloud," wrecked	2	
March	" Mary Warner," stranding	2	
March	" Buster," wrecked	1	
March	" Just in Time," abandonment	1	
May	" Warrembee" and " Balmain," collision.....	4	
June	" Bunya" and " Tamar," collision	4	
June	" Sancy Jack," abandonment	2	
July	" Sydaey" and " Oakland," collision	3	
July	" Hilda," wrecked.....	2	
August	Charge of misconduct against master of s. " Leichhardt".....	4	
September	" Gervan," wrecked	2	
September	" Cairo," wrecked	2	
October	" Result," wrecked	3	
October	" Bound to Win," capsized	1	
November	" Victory," abandonment.....	2	
November	" Age," striking	2	
November	" Samoa," wrecked	1	
1894.			
January	" Eileen Donan," wrecked	2	
February	" Sea Foam," wrecked	2	
March	" Mabel White," abandonment	2	
April	" Lily" and " Conqueror," collision	5	
April	" Tuggerah," foundered	2	
April	" Caladonia," abandonment	2	
May	" Titania" and " Koonawarra," collision	10	
May	" Forest Queen"	1	
May	" Mary Warner," foundered	2	
May	" Greyhound," foundered	2	
July	" Leipoa" and " Eagle," collision	3	
October	Burning of the " Waldeman" boiler	2	
October	" Echo," wrecked	2	
October	" Trident," wrecked	1	
October	" Trio," missing.....	2	
October	" Rob Roy," missing	2	
November	" Ruby," abandonment	2	
December	" Jones Brothers" and " Dauntless," collision	2	
December	" Gwydir," wrecked	2	
December	" Thistle," wrecked	1	

Date.	Casualty.	Time occupied.	Remarks.
1895.			
January	"Emma Matilda"	Sittings. 1	
January	"Barrabool" and "Vailele," collision	3	
January	"Awhina" and "Princess," collision	7	
February	"Margaret Jane," wrecked	2	
March	"Candidate," stranded	2	
May	"Nineveh," striking	2	
June	"Amy Moir" and "City of Grafton," collision	2	
June	"Cammeray" and "Sydney," collision	3	
August	"Prosperity," coal explosion	2	
August	"Catterthun," wrecked	7	
September	"Norman," wrecked	2	
September	"Zeno," abandonment	1	
September	"Gem," foundered	3	
October	"Alameda" and "Indrani," collision	6	
December	"Ruby," foundered	1	
1896.			
January	"Leveret" and "Gamecock," collision	7	7/1/96, 8/1/96, 13/1/96 (formal), 20/1/96 (formal).
January	"Aldinga," wrecked	2	28/1/96, 3/2/96 (formal).
February	"Wollumbin," stranding	3	10/2/96 (formal).
March	"Orara," wrecked	2	23/3/96 (formal).
April	"Petrel," wrecked	2	7/4/96, 13/4/96 (formal).
May	"Harrington," wrecked	2	11/5/96.
May	"Byron," foundered	2	
June	"Karoola," wrecked	3	1/6/96, 8/6/96, 15/6/96.
June	"Condong," wrecked	3	15/6/96, 22/6/96.
June	"Amy," striking	1	
August	"Anghian," burning of boiler	2	31/8/96, 7/9/96.
September	"Chindera," wrecked	3	28/9/96, 6/10/96, 12/10/96
November	"Dayspring," wrecked	2	16/11/96.
December	"Totie," wrecked	2	7/12/96, 14/12/96.
December	"Manly" and "Merksworth," collision	3 in Dec 1 in Jan., 1897	22, 23, 25 December.
December	"Carrick," foundered	1 in Dec. 1 in Jan., 1897	29 December.

18.

E.

Royal Commission on Marine Board, 23rd April, 1897.

BOOKS KEPT.

Minute Books,	Docking Register,	
Special Minute Books,	Emigration Book,	
Letter Copy Books,	Notice of Survey Register.	
Daily Register,	Wreck, Collision, Prosecution Book,	
Resolution Book,	Port and Harbour Regulations, Sydney,	} To amend from time to time.
Steam Register,	Regulations for Examination of Candidates,	
Watermen's Register,	Regulations for Surveyors,	
Sailing Boat Register,	Alphabetical List of all Certificates.	

20.

EXHIBIT H.

Royal Commission on Marine Board, 27th April, 1897.

DUTIES of Mr. D. Cruickshank, Chief Engineer, Surveyor, and Examiner, &c.

Has the general supervision of the steam marine of New South Wales.

Examiner in Engineering for five grades of certificates, which are recognised all over British Empire as being equal in value to those issued by Board of Trade in London.

Have to check all drawings of new machinery—engines, boilers, ships, &c. Have to calculate all stresses and strains on the various parts, issue certificates for all new work, which has also to be supervised and tested.

Survey from 500 to 600 steamers yearly, besides machinery in public institutions; also Government ferries, buoys, moorings, &c. A large percentage of the out-door work is done by my two assistants, Messrs. Selie and Marshall, two highly-trained experienced engineers, whose work and responsibility are poorly paid, especially Mr. Marshall, his salary being less than some of the chief engineers of the steamers he surveys.

Personally have a large technical correspondence, and do most of this at home. All abstract questions in general and marine engineering in this and the other Colonies are usually referred to this office, and I draw up all rules and formula which govern local engineering practice. Surveying modern steamers is hard, dirty work, carrying large responsibilities, and requiring considerable knowledge and experience, while the machinery, engines, boilers, electric-lighting, hydraulic, refrigerating, ventilating, and other appliances are much more complex than in former years. The Act gives surveyors very large powers, but this is safe-guarded by the number and character of the examinations he must pass to qualify for the position. The examination of vessels in dock entails a lot of work, embracing hulls, screws, shafting, holds, tanks, bunkers, &c. In cases of break-downs, flaws in engines, boilers, ship collisions, sea-worthiness, extent of repairs, &c., many calculations, sound judgment, and considerable tact is required, and during my twenty-three years of office, have fortunately earned the entire confidence of the shipping people, and during all that time no decision of mine has been questioned.

To show my position is authoritative, have been called in many times by different Ministers, the decision of most important engineering questions being left entirely in my hands. Also by the past and present Railway Commissioners, in cases where fatal accidents have occurred, and where special knowledge and experience was required. During the great strike of '90 was unanimously chosen as Chairman of Conference by ship-owners and engineers: formulated agreement which lasted six years, and all disputes during that time I have settled, my decision being final. Was also asked to fill same position during late strike, and it was my personal action and influence which practically settled the strike. Have been President of the Engineering Association of New South Wales several times, and have published several works on engineering, which have been favourably received throughout Australia and in the Old Country.

Attached is extract from letter, which shows how Board of Trade Surveyors are treated and paid in the Old Country.

EXTRACT from a letter received by Wm. Cruickshank from Robert Major, Engineer Surveyor to the Board of Trade, in the Port of Cardiff, England.

In answer to a letter sent to him in May, 1895, Mr. Major supplied the following, dated September, 1895:—

“Now about the information you require re staff of the English Board of Trade. The heads of our Department are given in Whittaker's almanac, with salaries appended, and also the names of the staff are given, but not their services.

The following is the scale of pay, classes, &c:—There are three classes of surveyors. At entry a third-class engineer surveyor is started with £200, rising by yearly increments of £10 to £300, when it ceases to advance until he gets promotion into second-class, which usually takes about fourteen years. A second-class surveyor gets £315 first year, and increases by yearly increments of £15 to £400, when he stops until promoted to first-class, which generally takes place about eight to ten years. A first-class surveyor's salary rises by £20 increments to £500, which is the highest pay for a surveyor in this class. The Surveyor-in-Chief (Mr. Trail) has £800, and £300 per annum for testing chain cables, &c. The Principal Surveyor (Mr. Moore) for tonnage, £700; Surveyor for iron ships (Whensard), £600; the Chief Examiner of Engineers (McFarlane Gray), £500. There is a principal officer at each district, of which there are nine in the United Kingdom, each receiving £700 or £600, according to the importance of their district. Four of the principal officers are engineers, the other five are nautical men.

First, second, and third-class surveyors are entitled to twenty-eight days leave of absence each year, besides all bank holidays. Each member of the Department is entitled to a pension, in accordance with the Civil Service scale, which allows a sixth of the salary received at the date of superannuation for each full year's service, so that a man retiring at 60, which is the minimum age at which he can retire with twenty years service, will be entitled to one-third of his salary.

We have altogether seventy surveyors, and four are first-class, seventeen second-class, the remainder being third-class.

The examinations we have to pass are rather stiff, and are getting worse. I think altogether I had five to pass before finally being made a Board of Trade Surveyor.

Mr. Trail (Chief Engineer Surveyor) is retiring from the Service shortly, about the end of the year, also McFarlane Gray, the Chief Examiner, and, I believe, the Principal for tonnage.

The Board have resolved quite recently to enforce the age limit for superannuation, which is sixty-five years. This was much wanted, because of promotion being almost stagnated.”

EXHIBIT I.

Royal Commission on Marine Board, 27th April, 1897.

List of Persons who are entitled to Vote at the Election of Wardens, in accordance with the Navigation Acts, 35 Victoria No. 7, 36 Victoria No. 30, and 43 Victoria No. 13.

Name.	Residence.	No. of Votes.
Adams, George	Sydney, New South Wales	2
Adelaide Steamship Co. (Limited)	Adelaide, South Australia	10
Allan, James	Balmain, New South Wales	1
Amess, John James	Sydney,	1
Amess, Samuel Stuart	”	1
Amess, William	”	1
Andresen, Albert Molkin	Balmain,	1
Austin, Henry	Sydney,	3
Australian Bone-dust and Fertiliser Co. (Limited)	”	4
Australasian United Steam Navigation Co. (Limited)	Austin Friars, London	10
Balmain New Ferry Co. (Limited)	Sydney, New South Wales	1
Balmain Steam Ferry Co. (Limited)	”	4
Beattie, Henry	Balmain,	2
Bellambi Coal Co. (Limited)	Melbourne, Victoria	4
Bland, Elliott	Brisbane, Queensland	4
Bond, Sydney Bonner	Sydney, New South Wales	1
Booth, John	Balmain,	1
Bowring, William	Wentworth,	1
Breckenridge, John	Cape Hawke,	1
Broomfield, John	Sydney,	4
Brown, Alexander (the younger)	Newcastle,	4
Brown, George	Randwick,	1
Brown, John	Newcastle,	3
Brown, John Humphreys	Echuca, Victoria	1
Brown, Solomon	Newcastle, New South Wales	3
Brown, William Villiers	Townsville, Queensland	2
Buckle, Francis	Pymont, New South Wales	3
Burns, Alexander	Balmain,	3
Burns, Philp, & Co. (Limited)	Sydney,	9
Byrnes, Bernard	”	5
Cain, Nicholas	Port Macquarie,	1
Callen, Peter	Newcastle,	1
Campbell, Colin Angus	Balmain,	2
Campbell, John McKnight	Glasgow, Scotland	4
Chapman, Isaac	Sydney, New South Wales	1
Chester, Thomas	”	1
Clark, James	Brisbane, Queensland	2
Cockertine, Walter Herbert	Kingston, Hull	5
Colonial Sugar Refining Co. (Limited)	Sydney, New South Wales	1
Corrigan, Bartholomew Martin	”	3
Cowlshaw, Catherine Chamber	”	1
Cowlshaw, Mahlon Clarke	”	3
Cowlshaw, Thomas, junior	”	1
Cuthbertson, Herbert	Newcastle,	3
Dalton, John	”	5
Dangar, Frederick Holkham	London, Middlesex	6
Davis, Rock	Brisbane Water, New South Wales	2
De Fraine, George	Laurieton,	1
De Fraine, Hannah Charlotte Isabella	”	1

Name.	Residence.	No. of Votes.
"Doverdale" Steamship Co. (Limited)	Bristol, England	6
Dunn, John	St. Peter's, New South Wales	1
Eichmann, John	Nambucca, "	1
Ellis, James Cole	Sydney, "	5
Fenwick, Thomas	Ballina, "	3
Flood & Co. (Limited)	Sydney, "	1
Forsyth, Henry Skinner	"	5
Franki, James Peter	Balmain, "	4
Freeman, Thomas Henry	Echuca, Victoria	1
Fry, Thomas Angel	Auckland, New Zealand	1
Fuller, George Lawrence	Shellharbour, New South Wales	2
Gainford, William Richard	Sydney, "	2
Goodall, Thomas Merton	"	3
Guy, Francis	"	1
Hawkesbury Steam Navigation Co. (Limited)	Pyrmont, "	1
Hawkins, Joseph Edward	Lower Portland, "	1
Heesh, Albert	Balmain, "	1
Henderson, Henry William	"	2
Henderson, John	Sydney, "	3
Hibbard, John, senior	Newcastle, "	1
Hoeben, Henry Ralph	Port Macquarie, "	1
Illawarra Steam Navigation Co. (Incorporated)	Sydney, "	2
Jenkins, Benjamin	"	5
Johnson, William	North Sydney, "	3
Johnston, Thomas	Sydney, "	1
Joubert, Numa Augustus	Noumea, New Caledonia *	2
Keane, Patrick	Hunter's Hill, New South Wales	1
Kenrick, Cranmer	Sydney, "	2
King George's Sound Coal Co. (Limited)	Newcastle, "	3
"Kirklands" Steamship Co. (Limited)	Albany, Western Australia	4
Kirkwood, Robert Cooper	Glasgow, Scotland	5
Knox, Edward William	Macleay River, New South Wales	1
Knox, Thomas Forster	Sydney, "	4
Laidley, William George	"	1
Lamb, John de Villiers	"	2
Lamb, Robert Spence	"	1
Lane, Edward	"	1
Langley, Alfred	"	1
Langley, Robert Henry	"	1
Little, Robert	Edinburgh, Scotland	3
Littlejohn, George Stanley	Sydney, New South Wales	1
Lynch, David	"	1
Melllwright, McEacharn, & Co. (Limited)	Melbourne, Victoria	5
Melnes, James	Glasgow, Scotland	3
McKenzie, James	"	3
McLean, Archibald	Sydney, New South Wales	2
McSweeney, Justin	Newtown, "	2
Mason, George Francis	Sydney, "	1
Messell, Charles Frederick	Pyrmont, "	1
Metcalfe, Charles Theophilus	Sydney, "	1
Metropolitan Coal Co. of Sydney (Limited)	"	4
Mitchell, William	Stammore, "	1
Montefiore, Octavius Levi	Sydney, "	2
Moore, Frederick Henry	"	3
Mort's Dock and Engineering Co. (Limited)	Balmain, "	1
Mount Kembla Coal and Oil Co. (Limited)	London, Middlesex	3
Mount Pleasant Coal and Iron Mining Co. (Limited)	Sydney, New South Wales	1
Murray, Alexander Sinclair	"	1
Newcastle Shipping Co. (Limited)	Newcastle, "	2
Newcastle and Hunter River Steamship Co. (Limited)	Sydney, "	8
Newcastle-Wallsend Coal Co. (Limited)	"	3
Nicol, George Turnbull	Devonport, New Zealand	5
Nicoll, George Wallace	Sydney, New South Wales	1
North Coast Steam Navigation Co. (Limited)	"	10
North Shore Steam Ferry Co. (Limited)	"	5
Osborne, Frank	London, Middlesex	1
Parbury, Charles	Sydney, New South Wales	1
Parramatta River Steamers and Tramway Co. (Limited)	"	3
Paul, John	"	1
Penboss, John	Botany, "	2
Permevan, Wright, & Co. (Limited)	Melbourne, Victoria	2
Port Jackson Co-operative Steamship Co. (Limited)	Sydney, New South Wales	1
Port Jackson Steamship Co. Limited	"	4
Power, George Scott	Balmain, "	2
Price, Frederick William	Sydney, "	1
Queensland Pearlshell Fishery Co. (Limited)	"	1
Rae, William	"	2
Reddell, John Alfred	Albany Island, Queensland	1
Rich, Edward	Sydney, New South Wales	2
Robertson, George John	Summer Hill, "	4
Robison, William	Sydney, "	1
Russell, James	Newcastle, "	2
Samuel, Sir Saul	London, Middlesex	7
Saunders, John	Balmain, New South Wales	1
See, On	Sydney, "	2
Settree, Alfred William Robert	Balmain, "	1
Sheehy, Daniel	Woolloomooloo, "	1
Shellharbour Steam Navigation Co. (Limited)	Shellharbour, "	1
Smith, Alexander Lindsay	Matakohe, New Zealand	1
Sneddon, Andrew	Newcastle, New South Wales	2
Stafford, Edwin	Wellington, New Zealand	2
Steamship "Craiglee" (Limited)	George's Square, London	5

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Name.	Residence.	No. of Votes.
Stuart, Alexander.....	Sydney, New South Wales	4
Swanson, John Aaron	" "	2
Sydney Stevedoring and Wool Dumping Co. (Limited)	" "	1
Taylor, Allen	Annandale, "	2
Tulloch, Lawrence	Sydney, "	1
Union Bank of Australia (Limited)	Melbourne, Victoria	1
Vickery, Ebenezer	Sydney, New South Wales	1
Wallace, James.....	" "	2
Wallarah Coal Co. (Limited)	East India Avenue, London.....	6
Warburton, Charles George	Pymont, New South Wales	6
Waterhouse, Gustavus John	Sydney, "	1
White, Robert Hoddle Driborg.....	" "	1
William Howard Smith and Sons (Limited)	Melbourne, Victoria	6
Williams, David Joseph	Newcastle, New South Wales.....	3
Williams River Steam Navigation Co. (Limited)	Clarence Town, "	1
Williamson, Robert	Sydney, "	1
Wright, John.....	Cape Hawke, "	1
Yeager, William Tudor	Richmond River, "	3

Custom House, Sydney, New South Wales, 27th January, 1897.

N. LOCKYER,
Collector of Customs.

23.

EXHIBIT J.

Royal Commission on Marine Board, 27th April, 1897.

RETURN of Vessels Registered at Sydney and Newcastle on 31st December, 1896.

	No.	Tonnage.	Average tons.
Steamers	493	61,175	124
Sailing vessels	472	51,493	109
Total	965	112,668	...
Including—	Tons.		
36 lighters	4,828		
39 yachts.....	637		
303 sailing vessels under 80 tons	7,461		
300 steam " "	9,643		
		22,569	
Tons		90,099	

VESSELS (British and Foreign) entered in New South Wales during 1895.

3,121 vessels—2,929,758 tons. Average tons, 938.7.

Custom House, Sydney, New South Wales, 22nd April, 1897.

N. LOCKYER,
Registrar of Shipping.

24.

EXHIBIT K.

Royal Commission on Marine Board, 27th April, 1897.

VESSELS Registered at Sydney and Newcastle, 31st December, 1896.

Votes.	1	2	3	4	5	6	7	8	9	10	Total.
Resident in the Colony.....	65	24	18	10	6	1	...	1	1	1	127
Non-resident	7	5	4	4	5	4	1	...	...	2	32
Total.....	72	29	22	14	11	5	1	1	1	3	159

Custom House, Sydney, New South Wales, 21st April, 1897.

N. LOCKYER,
Registrar of Shipping.

EXHIBIT M.

Royal Commission on Marine Board, 27th April, 1897.

List of Vessels registered at Sydney, New South Wales, in the names of John Broomfield, Benjamin Jenkins, and Archibald M'Lean, Wardens of the Marine Board.

Name of Warden.	Name of Ship.	Tonnage.	Shares.	Tonnage owned.
		tons.		tons.
John Broomfield	"Tinonee," s.s.	200	64/64ths.	200
	"Argo"	984	32/64ths.	492
	"Alice"	7		
	"Annie"	6		
	"Barb"	7		
	"Beatrice"	11		
	"Cambria"	11		
	"Eleanor"	13		
	"Gertrude"	12		
	"Henrietta"	11	Joint owner of 64/64ths shares with John de V. Lamb.	100
	"Wai Weer"	29		
	"Ida"	12		
	"Johnny and Annie"	9		
	"Kafca"	11		
	"Magic"	7		
	"Martha"	8		
"Marjorie"	11			
"Rosa"	8			
"Two Brothers"	16			
"Xarifa"	11			
			Qualification .	792
Benjamin Jenkins	"Argo"	984	32/64ths.	492
			Qualification ...	492
Archibald M'Lean	"Tamar," s.s.	308	22/64ths.	106
	"Timaru," s.s.	279	21/64ths.	92
	"Western," s.s.	246	22/64ths.	85
			Qualification ...	283

The "Tinonee" is registered as a steamer, the "Argo" as a barque, but the Tide Surveyor has now reported that they are hulks in Sydney Harbour. The small vessels are pearling traders at Thursday Island, Queensland, and the steamers "Tamar," "Timaru," and "Western" are colliers trading on this coast.

EXHIBIT L.

Royal Commission on Marine Board, 27th April, 1897.

John Broomfield	"JO" Pearling Fleet	200 tons	=	100 tons.	J. Broomfield.							
John de V. Lamb					32/64ths "Argo"	984	"	492	"			
John Broomfield					Owner, s.s. "Tinonee"	200	"	200	"			
	Total			792	"							
Benjamin Jenkins	32/64ths "Argo"	984 tons	=	492	"							
Archibald M'Lean	22/64ths "Tamar"	308	"	=	104	"						
							21/64ths "Timaru"	279	"	=	93	"
							21/64ths "Western"	246	"	=	82	"
	Total			279	"							

1st April, 1897.

WILLIAM HARE

On board the "Captain Cook," 5th April, 1897.

Two representatives of firemen were called and asked if there was anything they wished to say, and replied:—

Firemen on the coast get overtime for any work they do after hours, and they only work eight hours, with sixteen hours off—the very opposite to what we do. We get no allowance for overtime, and yet do the additional work. On the coast they get eight hours a day and sixteen off, and whatever other work they do they are paid overtime for.

By Mr. WILSON: That is only in port? Yes.

By Mr. POWELL: Here there are no fixed hours? Yes.

You knew that when you took it? Yes.

By Mr. WILSON: The fireman in a sea-going vessel has, of course, to keep pretty well hard at it? Yes.

You have pretty long spells here, in which there is not very much to do;—there are two or three of you here, and you are really not very hard pressed for work? At times.

If you were at sea, you would have times when you would be hard at it? Four hours at a time.

There are long spells here when you are not very heavily worked? Yes.

[The Commission then adjourned at about 1.20 p.m.]

STATEMENTS made at Newcastle by Pilot Sweet and Pilot Morris on 30th April, 1897.

Present:—G. A. WILSON, Esq., J.P.; Jas. POWELL, Esq., J.P.

Mr. WILSON: You wish to make a statement?

Pilot SWEET: Yes. I joined the pilot service at a salary of £200 a year, with a yearly increment of £10. I received increments for 1892 and 1893, which makes my salary at present £218 a year; 10 per cent. is deducted. We have written to the Marine Board as regards our salaries, and have also had an interview with the Premier. He promised that the matter would be rectified. I was given to understand by both the Secretary and the harbour-master that there would be a yearly increase of £10, otherwise I would not have accepted the position. I left a much larger salary to join the service here, but I did not join for the £200. It was for the increase.

Mr. WILSON: The arrangement when you joined was that you should receive a salary of £200 a year, and an increment of £10 a year until the salary reached £400, which was the maximum?

Pilot SWEET: Yes, that was the agreement.

Mr. WILSON: You further say that if you had known that your salary would not have been increased, you would not have taken the appointment, as you were doing better outside?

Pilot SWEET: Yes. Our hours are very long on account of the tide and so much shifting of ships. This increases our work, and keeps us going early and late. We work on all Sundays and on all holidays. We have the fourteen days only off in the year. We mention this as an additional reason for receiving an increase of salary. I do not object to the work in itself, but merely wish to show that, the work being hard and the hours long, we should be better paid. The salaries of the pilots at Newcastle, even the big salaries, are less than the salaries paid to pilots in other parts of the world. In Sydney there are inside and outside men, while in Newcastle the pilots are both. Six of us do the inward and outward work, and all removals in the harbour. That keeps us going pretty well all the time. The whale boats make our calling a very dangerous one, and they are very hard on our clothing. We get wet through very often, night and day. We very often go out at night. Fifty per cent. of the shipping that comes to Newcastle enters during the night.

Mr. WILSON: What is your opinion as regards the present pilot service?

Pilot SWEET: There certainly should be a more modern system.

Mr. WILSON: Do you think a good steam-boat would lead to the saving of life and property?

Pilot SWEET: Yes.

Mr. WILSON: Is there any case of a boatman or pilot losing his life in connection with the service here?

Pilot SWEET: Not in my time. Pilots have been capsized several times during the last five years and picked up by butchers' boats, &c. There is always a lot of boats about when a ship is coming in.

Mr. POWELL: Cannot your boats live as well as the butchers' boats?

Pilot SWEET: Our boats are heavy and cannot live so well as the butchers' boats. But we go out in weather as rough as an open boat could live in.

Mr. WILSON: You hold a master's certificate?

Pilot SWEET: Yes, a foreign-going one. All the pilots hold certificates. You cannot get the position unless you hold a foreign-going certificate.

Mr. WILSON: The pilot at £218 does the same work as the man getting £353?

Pilot SWEET: Yes, there is no difference whatever in the work. The earnings for 1894 and 1895 were over £3,000 for each man, in some cases nearly £4,000.

Mr. POWELL: The harbour work increases your duties?

Pilot SWEET: Yes; very much. Every ship has to make about five shifts. She first goes up to the ballast jetties, then to the cranes, then back to finish ballasting, then to the cranes again, and then to her buoy. This increases our work very much.

Mr. POWELL: The ballast jetties are beyond the dyke?

Pilot SWEET: Yes, they are a continuation of the dyke.

Pilot MORRIS: Last year I answered an advertisement for a position as pilot. I was given to understand that the salary after the first year would be over £300 a year. I was getting at the time outside £22 a month, with board and lodging. Captain Newton informed me that my salary would be £300 after the first of the year. I left Melbourne, was appointed, and went to the expense of shifting over here. When I came here I went for four days with other pilots. I then took my own ships and have kept my turn ever since.

Mr. WILSON: Was there any salary mentioned in the advertisement?

Pilot MORRIS: No salary was mentioned in the advertisement. I naturally thought that the pilots here would be on something like the same footing as obtain in Melbourne and elsewhere. The salaries in Melbourne range up to £700, £800, and £900 a year. The position of pilot is looked upon there as one of the plums of the service. I never thought the hours would be so long as they are. I have kept a note in my note-book of the number of hours worked during the last few weeks. One week I worked 100 hours, another 94½ hours, and another 74½ hours. There has been a rush during the last five months, and as winter is coming on it is likely to be worse. I am quite willing to work as many hours as I can. We have a larger number of ships coming here than go to Sydney.

Mr. WILSON: If the Sydney pilots do the sea work only, and you with the same number of pilots do the sea work and the harbour work too, you must necessarily either have a staff too small or else Sydney has a staff too large?

Pilot MORRIS: Yes. Six of us attend to the work here, and one attends to the ballast jetties.

Mr. POWELL: Sydney has five pilots.

Mr. WILSON: So Newcastle has the larger staff.

Pilot MORRIS: Yes.

Mr. POWELL: Are you aware that Sydney pilots frequently take vessels up to the wharfs?

Pilot MORRIS: No; I was not aware of that. Here the oldest pilot is constantly engaged at the ballast jetties. Several times since I have been here I have come down the harbour after being afloat all day.

Mr. WILSON: What were you doing during those eighteen hours referred to in your note-book?

Pilot MORRIS: I went afloat that day at 2 or 3 o'clock in the morning, and it was late in the night when I got home.

Mr. POWELL: Does the assistant harbour-master remove ships?

Pilot SWEET: Occasionally, when there is no pilot available.

Mr. POWELL: From a return I have just looked up, it appears that there are eight in the pilot service at Sydney, and the same number in the pilot service at Newcastle, including the harbour-master.

Mr. WILSON: There are no means of altering the long hours unless you have an enormous staff?

Pilot SWEET: Yes, I am ready to admit that.

Mr. POWELL: If you go out in the pilot steam-boat you will not do harbour work, as that would be done by the harbour pilots. In Sydney there are two pilots on the steamer and four in the harbour.

Pilot SWEET: We have no idea yet how things will be worked. We hope the boat will soon come. We are very anxious for her to come. The night before last one of the pilots was out from 12 o'clock till 6 o'clock in an open boat on a heavy sea.

Mr. POWELL: I think that is unnecessary exposure.

Pilot SWEET: Another thing—masters very often themselves shift their vessels in this harbour in fine weather; but if the weather be a little rough, or if there be the slightest danger, they send for the pilots.

STATEMENTS made by Boatmen Adams, M'Kinnon, and M'Leod, attached to the Pilot Service (Newcastle), on 3rd May, 1897.

Present:—G. A. WILSON, Esq., J.P.; JAMES POWELL, Esq., J.P.

By Mr. WILSON: You wish to make a statement?

Boatman ADAMS: Yes; we wish to speak about our salaries and other things. I, myself, am on the higher wage. We have very long hours, but we are not afraid of work. In view of our very laborious work and the long hours we have to put in, we ask that we may all be placed on the same footing—that is, that we be given the maximum salary, £144 a year and our quarters free. At present £18 a year is deducted from our salaries for rent and fuel.

Mr.

- Mr. WILSON: You wish to be paid £144 a year and to be allowed quarters?
- Boatman ADAMS: Yes.
- Mr. WILSON: Do you draw the £18 in money, or do you get quarters?
- Boatman ADAMS: We have quarters, such as they are.
- Mr. WILSON: What is your own particular grievance, Mr. Adams?
- Mr. ADAMS: In Sydney they are supplied with uniforms, over boots, &c., but we get nothing of that sort here, which means more expense to us.
- Mr. WILSON: Do private employers supply clothing in similar cases?
- Mr. ADAMS: In some cases, and they give the same wages that we get.
- Mr. WILSON: Do you three represent the whole of the men in the shed?
- Mr. ADAMS: Yes.
- Mr. WILSON: The chief matter so far is the hours, and then come the uniforms and the question of the wages?
- Mr. ADAMS: Yes.
- Mr. WILSON: You say you get no uniform whatever?
- Mr. ADAMS: We get nothing.
- Mr. WILSON: What leave do you receive?
- Mr. ADAMS: We are granted fourteen days during the year, provided we are not sick. From the 1st January to the 31st December we have to be at call, except those fourteen days. If we get sick, and this is not unlikely, seeing that we are often out hours after hours in an open boat and wet through, the time is taken off our leave. With the exception of the fourteen days in the year, we work Sundays, Saturdays, and holidays, day and night, whenever required. If we get leave for fourteen days, and go to Sydney or Melbourne, we are required to leave our address, and are given to understand that we must catch the first train we possibly can if we are required.
- Mr. WILSON: Supposing you are sick for a fortnight, what pay do you get?
- Mr. ADAMS: The pay goes on until the fourteen days expire; after that a man is put in our place, and we get no annual leave. I would also like to bring under your notice our irregular meal hours, but I am ready to admit that this is a matter which, owing to the peculiar nature of our work, cannot be entirely overcome.
- Mr. WILSON: If you had a steam pilot-boat would that mend matters?
- Mr. ADAMS: No; a steam-boat would not improve matters, as it would not affect the harbour work. A vessel calls for a pilot. We leave for it just before dinner—say at a quarter to 1. The vessel, however, does not get a tug until about 4 or 5 o'clock, and we have to wait till then.
- Mr. POWELL: Why could not the pilot make his own laws, and if a ship is not ready for him go elsewhere?
- Mr. ADAMS: The ship is ready, but the pilot does not know whether the tug will be there immediately or not for some time.
- Mr. POWELL: I cannot see, in view of those circumstances, how the matter can be remedied.
- Mr. M'LEOD: When I joined the Service I was promised an increase of salary as I went on. I am at present receiving £106 a year and an allowance valued at £18.
- Mr. WILSON: You contend that you are doing the same work as the men getting £126 a year?
- Mr. M'LEOD: Yes. I joined the service in 1889. I was promised increases of £5 a year, but after receiving two increases—one for 1891 and one for 1892—all increases were stopped. There have been men come into the service since I have come in who are getting more wages than I am. They were on the light-ship, but they joined that ship the year after I joined, so their service is not so long as mine. Another man, Kenneth M'Leod, who is on the pilot station, has been in the service for ten years, and is getting less than I am. He came into the boats from the light-ship at a reduced salary, but the men who have come from there since, viz., George Fraser and James Ross, have brought their light-ship pay with them. Kenneth M'Leod was not reduced for any offence, and he volunteered to join the boats because he was promised increases in his salary.
- Mr. WILSON: The question of your pay we have got in other cases. We have now taken note of the light-ship transfers, and the matter will be looked into by the full Commission on our return to Sydney.
- Mr. A. M'KINNON, Coxswain to the Lifeboat: I would also ask that the £18 deducted from our salaries for allowance be given to us.
- Mr. WILSON: If a steamer was provided the service it would lighten your work a good deal?
- Mr. M'KINNON: Yes; and there is many a time when a steamer can go out and a boat could not.
- Mr. ADAMS: It would not alter the inside work. The boats' crews would still be called to meet all ships, and take them to their berths.

29.

MEETING held 1st June, 1897, at the "Australian Hotel," Ballina, at 8:30 p.m.

Present:—G. A. WILSON, Esq., J.P. (in the Chair); JAMES POWELL, Esq., J.P.

Messrs. George Cheyne, W. T. Bryant, and J. L. Johnson waited on the Commission to put their cases before them.

Mr. G. CHEYNE said he was a pilot's boatman, and joined the service in 1890, at £96 per annum. At the time of his engagement he was told that his salary would be increased by £5 each year, but the increases were stopped in 1893.

Mr. W. T. BRYANT said he also joined the service in 1890 as pilot's boatman, at £96, on the understanding that he would receive annual increases of £5. The increases, however, were stopped in 1893.

Mr. J. L. JOHNSON, pilot's boatman, also complained of the stoppage of the increases. He had started in 1889 at £101, and after three months' service his salary was lowered to £96. He said he had had four yearly increases since then, but they stopped in 1893.

Mr. WILSON said that as a Public Service Board they could do nothing in this matter, but as a Royal Commission on the Marine Board they might mention it in their report, but that was all.

The Commission then adjourned at 9 p.m.

30.

REPORT of a deputation representing the Chamber of Commerce, Newcastle, received at Newcastle on 3rd May, 1897.

Present:—G. A. WILSON, Esq., J.P.; JAMES POWELL, Esq., J.P.

Mr. H. J. BROWN, President of the Chamber of Commerce, said that the deputation, which was the outcome of a recent public meeting, wished to urge upon the Commissioners the necessity for at once sending a steam pilot-boat to Newcastle. He referred to the dangerous risk incurred in going out to meet ships in the open pilot-boats, and he could see no reason why Newcastle should not follow in the wake of all other important ports and have a steam pilot-boat. This would not only be a very great benefit to the vessels coming to the port, but it is possible that an improved pilot service would induce vessels to come to Newcastle which, under the present system, would rather go somewhere else. It is some considerable time since the Government promised to send a steam-boat to the port, and the delay he believes is due to it having been decided to obtain the steering gear from England. He thought it was hardly necessary to send Home for the steering gear seeing that the boat was built in Sydney. Even if this were necessary, the boat should be sent to Newcastle in the meantime with her present gear.

Mr. KNIGHTLEY said that when high seas are running and a south-east gale is blowing it is impossible for men to man the open boats and to get on board an incoming vessel until she has rounded Nobby's, when the great danger and difficulty of entering the harbour has been overcome. The people who own these ships have to pay very high pilot rates. Up till recently they had to pay 4d. a ton in and 4d. a ton out, and no services in many instances were rendered to the incoming vessels. He did not wish for one moment to insinuate that the people employed in the pilot service showed any neglect. The fault was not theirs, it lies with the higher powers. If the "Ajax" had been in the possession of the harbour authorities he had no hesitation in saying that the vessels that have ineffectually endeavoured to enter the port would not now be strewn on the beach. He referred to the life-boat, which he declared to be utterly useless and not at all fit to send out in the teeth of a south-easterly gale. He compared Newcastle Harbour to Sydney Harbour, showing that the former,

former, owing to its geographical position, is much more dangerous, and that in a south-easterly gale ships have no chance of keeping off the sea-board. The Chamber of Commerce, he said, had been for over eight or ten years persistently knocking and begging at the doors of every Government as they came into power, with the view of getting a more efficient service. He expressed his pleasure at the visit of the Commissioners who, as business men, he felt sure would at once see the absolute necessity for having the "Ajax" or some other efficient steamer sent on forthwith to render service to vessels that may otherwise find themselves in the unfortunate position of those that have been lost on the beach. With an efficient steamer, vessels, instead of being allowed to run on the beach, would be towed out to sea beyond the danger point, where they could take care of themselves. The service as it is now, he declares to be a delusion and a snare—that is to say, the crews of vessels in danger assume that an important port like Newcastle would possess a life-boat or have some means available to take them off, and they would cling to the ropes in the hope of rescue, which, however, would not come, and ultimately they would drop off with fatigue. If they had jumped into the sea at first the probabilities are that they would have been then strong enough to swim to land. He referred to the last wreck which, although it occurred at 11 o'clock at night, did not receive the services of the life-boat until 7 o'clock in the morning.

Captain WILLIAMS said that when pilots go out with a ship the captain often takes them 5 or 6 miles off the port, and they are then two or three hours in getting back. In the meantime ships are waiting at the buoys to go to sea, but there are no pilots. If a steam boat were supplied, the pilots could do their work in one-half or one-third of the time it now takes. The cranes are also stopped waiting for the pilots to shift the ships. If the "Ajax" had been at the port on the night of the "Alderley" wreck, that disaster would not have occurred. He thought it hardly a fair thing to ask the owner of a tug-boat to risk his property to save life for the public. A boat should be provided to the public for the saving of life.

Mr. WILSON: The steamer would not only lead to the saving of life and property, but it would also lead to the pilots doing more work?

Mr. BROWN: Yes; a steam pilot boat could really guide five or six vessels at the same time.

Mr. WILSON: We are quite with you in this matter. We have taken a great deal of evidence upon it, and I went down to Sydney on Saturday afternoon and saw our colleague, who quite agrees with us. I handed him a report of the deputation which waited upon us the other day, and he will, if he can get an audience, submit to the Premier this morning that the matter be expedited. As you know, the Marine Board now deals with collisions, &c. Is it your opinion that the Marine Board is the proper tribunal for trying these cases?

Mr. BROWN: Most decidedly not.

Mr. WILSON: Are you in favour of a proper Marine Court, presided over by a District Court Judge and Assessors?

Mr. BROWN: Yes. A similar procedure has been adopted in England. There the Admiralty Court, which, of course, is a Court of higher jurisdiction, consists of a single Judge with assessors. The Judges, whether they originally knew anything about it or not, have evidently acquired very great knowledge relative to all matters concerning collisions, seeing that their decisions are so acquiesced in that there are very few appeals.

Mr. WILSON: Supposing there was a collision in this district, and the Court could come up here and hold an inquiry, it would be a travelling Court—it would provide for all marine disasters?

Mr. BROWN: Yes, and also provide for misconduct on the part of the officers. The Marine Board here holds a very anomalous position. It acts as a Board of Inquiry, and it also sees, to a certain extent, to the working of the harbour, but it is subject in all these things to the Board in Sydney. It cannot even issue a certificate. I would like to point out that no proceedings can be taken against anybody for a breach of the Navigation Act without first obtaining the sanction of the local Marine Board. If, on a Friday or Saturday afternoon, the master of a vessel threw a quantity of ballast overboard and endangered the harbour, no proceedings could be taken against him until the Board sat, and, by then, he may have escaped. This applies to Sydney as well. Things were very much better done before the establishment of the Marine Board; but I do not say that the present unsatisfactory state of things is due to the fault of the Board. It is due more to the roundabout proceedings things have to go through.

Mr. WILSON: Do you think you should have proper local government, so far as the harbour is concerned?

Mr. BROWN: Yes; the Board should not be subordinate to any other body, and this would save time.

Mr. KEIGHTLEY: One of the most efficient men we have in Newcastle refused a seat on the Local Board because of it being so very much under the thumb of the Sydney Board.

Captain WILLIAMS: The Local Board has no control at all. The hopper barges run quite as much sand into the harbour as they take out. The Board wrote to the owner, saying that in future he should cease from sending any of his hopper barges alongside vessels. A hopper barge has, however, been sent alongside in defiance of the Board, and is still at work. The Marine Board say they have no power to prevent it.

Mr. BROWN: That is the fault of the Act, which is a very defective one. I never take a case into Court but what I expect to be beaten. I beg to hand you a copy of the correspondence that has taken place between the Chamber of Commerce and the Marine Boards of Sydney and Newcastle with reference to the erection of signals to indicate whether vessels are coming in or going out of the harbour. I might point out that the distance from the entrance to the harbour to the wharfs is very short, and a vessel coming in has no knowledge of what is taking place within the harbour until she is actually inside, when, as the channel is very narrow and dangerous, she is liable to find herself unable to avert a collision should there be a vessel going out. To obviate this, Captain Williams has suggested that a system of signals should be instituted.

Captain WILLIAMS: My reason for bringing this up is because of there being no way of knowing from outside what is going on inside the harbour. I think a signal giving this information should be erected in some prominent position where it could be seen both from outside and from up the harbour. Every shipmaster you speak to on the matter will say that it is very necessary to know before coming down the harbour whether there is a vessel coming in. If there should be, he would not attempt to come down the harbour until that vessel had passed round the corner (Stony Point). I understand that some expert evidence on this matter has been given by several of the pilots, but no chance at the time was given to the Chamber of Commerce to give evidence on the point. An exempt shipmaster, as soon as his ship is loaded, receives instructions to leave the wharf. The pilots down at their station get orders that a vessel is ready to go to sea, but before they shift her the tide must be suitable, and before one leaves the waiting-room he ascertains from the hill whether any ships are signalled, and if so, what distance they are off. So it will be seen that the pilots receive from their station the information that it is desired should be signalled to the shipping. They are in a different position to the shipmasters. The pilot people seem to think that there would be a lot of confusion if a means were adopted to signal this information to the ships; but the majority of them, however, will tell you that there is a great risk in rounding the corner should another vessel be met there. The current comes down there at the rate of fully 6 miles an hour. Quite recently I came down the harbour in the Union Company's steamer "Rakauoa," when we met a ship coming round the corner. We passed within 15 feet of the Horse-shoe Buoy, and within 10 feet of the ship. Now, I would ask if it is a fair thing to bring ships together like that. If we had known that ship was coming in we would have remained in the harbour until she got in. The "Tekapo" would not have been wrecked had the signals I suggest been shown, nor would the "Alice-Federal" collision have occurred.

Mr. WILSON: Do I understand that this has been submitted to the Marine Board, and they have not approved of it?

Mr. KEIGHTLEY: It was submitted first of all to the Marine Board here to make representations to the Marine Board in Sydney. Neither of the Boards have approved of it. We presume it is on account of the expense of having a signal-man up there.

Captain WILLIAMS: I believe it is the responsibility they are afraid of. The following is an extract from a letter received from the Under Secretary for Finance and Trade, in reply to our request for the establishment of this system of signalling: "The present system of signalling was not introduced for the guidance of masters of vessels, who have quite enough to do in the navigation of their respective craft without looking about for signals, but rather for information of the general public." I think it monstrous that an important matter like this should have been thrust aside in that manner. (Captain Williams handed in a model of the signal, which he suggests should be placed on some prominent point of the harbour. He also submitted a plan showing how it should be worked, and a sketch showing the entrance to the harbour.)

Mr. KEIGHTLEY: There is barely room for ships to pass in the channel, it is so small, and the tide rushing across makes navigation very difficult.

Captain WILLIAMS: And we have no signals to guide us. I look upon Newcastle as the most outside port I have ever been in. They have no leading lights beyond those at Bull's Beacon. We have repeatedly asked for lights for the Dyke. I do not think the present place is the most suitable for a permanent signal station. It should be

Shepherd's

Shepherd's Hill. Another thing, the rule which prohibits steamers travelling up the harbour at a speed of more than 6 miles an hour should be rigidly enforced. Very often they travel at 13 miles an hour. It is very important that all stations along the coast should be connected by telegraph. Only the other day the steamer "Byron" signalled herself as in a sinking condition to the Lake Macquarie station. This station is only 12 miles distant, and, it being Sunday, it was four hours before the news reached Newcastle, and by then the captain had run her on the beach.

Mr. BROWN: It is a pity that all the signal stations are not connected by telegraph.
Mr. WILSON: Did you ever enter into a calculation of what it would cost to carry out Captain Williams's suggestion as to the signals?

Captain WILLIAMS: The signal itself would cost about £10. I do not think it would cost an extra man. I have not brought forward this proposal without having first consulted with nearly every one I know who is connected with the harbour. My proposal would not apply to every craft, even to a small ketch, as some appear to believe. They can always get out of the way. It would apply only to large ships. When you meet a large ship fastened to a tow-boat, with a line 120 fathoms out, it is a very difficult matter to keep clear of her. I have seen ships forced to back up between the buoys. With regard to the No. 4 crane, we used to have 19 feet of water there; now there is only 14 feet. They say we have plenty of dredging power. If so, it is time a dredge was placed there. These steamers travelling up the river keep a dredge constantly employed.

Mr. GEORGE BEWICK: The question of dredging the harbour is a very important one. The northern part of the harbour should first be deepened, so that all the vessels that have been loaded at the Dyke might lie there at buoys. The entrance to the harbour, the Horse-shoe, should be left perfectly clear. If this had been attended to, one or two recent collisions could have been averted. The accommodation at the Dyke and at the ballast berths is very limited, and often three or four vessels may be seen lying abreast of one another, which is rather a dangerous thing in rough weather. There is no doubt that a great deal more accommodation is required. Only a very short time ago a vessel had to wait for a fortnight before she could get a ballast berth. If she had been able to obtain a ballast berth on her arrival she would have been loaded and away now. The harbour officials are not to blame in any way, as, with the limited appliances, it is impossible for them to do any more.

Mr. KEIGHTLEY: Three steam cranes at the end of the Dyke are not in use, owing to their being out of repair. If repaired, although they have not the capacity for shipping so much coal within a given time as the hydraulic cranes, they could load small vessels quite as quickly as the hydraulic cranes, because the small vessels cannot take the coal in as quickly as hydraulic cranes could give it. These steam cranes ought to be put into a state of repair as soon as possible. Accommodation should be provided for the shipment of horses and stock from this port. At present vessels, when being loaded with stock, monopolise a crane berth that is absolutely necessary for the use of coal. If the inner Dyke were dredged out sufficiently to accommodate the stock vessels the coal cranes would be relieved. In the matter of ballast berths, accommodation in this respect is very deficient. Altogether, Newcastle should have a great many more facilities than it has. I do not wish to deny for one moment that the Government have done a very great deal for Newcastle, but while making that acknowledgment I wish to impress upon the Commissioners that I do not suppose there are any works that have been carried out in the Colony which, to any appreciable extent, represent the return of money to the Government, not only in the case of working expenses but in the way of paying interest, as has been derived from the Newcastle works. The money laid out on the Newcastle harbour has been more than repaid by the revenue derived by the Government from the various services which they have rendered. I could produce figures, quoted before the Public Works Committee, where it was shown that the profit made by the Commissioners for Railways from coal only amounts to \$35,000 per annum, and I am quite satisfied that this year that sum will be largely exceeded. I hope the Commissioners will look at the report of the Public Works Committee regarding this port, and I am sure that the more the Commissioners become acquainted with this port the more will they become satisfied that the expenditure the deputation has to-day suggested is more than warranted.

Mr. POWELL: As to the signalling, the Marine Board people get the information from Signal Hill?

Captain WILLIAMS: Yes; they can get information about any ship about to enter the harbour.

Mr. WILSON: I think it would be best to appoint an outside independent committee to investigate that matter and bring up a report.

Captain WILLIAMS: The pilots themselves and the experts whom we questioned on this matter, all agreed that it was dangerous to meet a vessel after going round the corner. In the face of that, I think it is a fair thing to signal to the shipmasters and warn them of that danger.

Mr. WILSON: It cannot be a great expense, and it does not require an additional man.

Mr. BROWN: No doubt the Marine Board are under the impression that it is intended the signal should apply to every small craft coming in or going out of the port, and that the shipmasters are as well-informed as the pilots.

Captain WILLIAMS: I heard that the reason why they refused to accede to our request was, that in the event of a collision occurring, and the signal not being up at the time, they would be responsible.

Mr. BROWN: It appears very desirable that some provision should be made for interpreters. We have a number of seamen continually coming here from different nationalities. The Newcastle representatives of foreign nations do not as a rule understand the languages of the countries they act for, and there is great difficulty, say in a case of mutiny, in finding men who can interpret. There are, therefore, no proper means of defending them, or of convicting them if guilty of an offence. I think there might be some person or persons, stamped as it were with the Government mark, to whom reference could be made.

Mr. WILSON: The names of qualified persons could be placed in a register, and they could be allowed a retaining fee.

Mr. BROWN: Yes; and later on it would be for the Public Service Board to consider, when they saw the amount of fees paid, whether it would not be more economical to provide a permanent official.

Mr. WILSON: In the meantime, if the names of qualified persons were placed in a register, the case would be met?

Mr. KEIGHTLEY: Yes. I have seen the police running up and down the street looking for a man who would give his services for nothing. That is not a right thing for a port like this, with a volume of trade surpassing perhaps Sydney. The deputation withdrew.

31.

To Mr. Barling, Royal Commission.

Newcastle, 29 April, 1897.

DISSATISFACTION is strongly expressed at the delay in stationing a suitable steam vessel here for the pilot service. It is stated that a recent wreck would not have happened if a pilot steamer had been outside to render assistance; and fears are expressed that changes in the weather may bring about serious mishaps as the winter approaches.

It appears desirable to assure the public that every exertion is being made to render the "Ajax" ready for service at Newcastle in the shortest time possible. In the meantime it would be a much appreciated concession to public feeling if a strong serviceable tug-boat could be hired at once for special service by the week or month.

GEO. A. WILSON,
JAMES POWELL.

A DEPUTATION consisting of the Mayor (Alderman Miller), Alderman Sharp, Messrs Jas. Clark, R. A. Wallace, T. Brookes, F. Eupp, Captains Larsen, Pritchard, Jenkins, and others, representing the commercial and shipping interests of Newcastle, waited on the Public Service Board at Newcastle on the 30th April, 1897, for the purpose of bringing under notice the necessity of a steamer being provided for the pilot service of the port.

The MAYOR referred to a very representative meeting of the citizens which was held at the Council Chambers on Wednesday evening last, 28th instant, when the opinion was unanimously expressed that had there been a steam boat attached to the pilot service of the port the wreck of the "Adderley" would never have occurred. The Government, he stated promised eighteen months ago that a steamer would be set apart for this service, but as yet nothing definite had been done. At present vessels are boarded by the pilots only just outside Nobby's. This, he contended, should not be. The same practice should be followed here as obtains in Sydney and Melbourne, where the pilots go out great distances.

MR. WILSON here interposed that he and Mr. Powell were not receiving the deputation as members of the Public Service Board, but as members of a Royal Commission appointed to inquire into the management of the Marine Board. One of the Commission being not present, they would not be able to say anything definite, as they would have to consult with their colleague in arriving at a recommendation.

The MAYOR remarked that they had decided to wait also on the Premier.

Mr.

Mr. JAS. CLARK referred to a paragraph in the *Sydney Daily Telegraph* of even date which afforded additional evidence for the necessity of providing a steam service;—"A Pilot-boat in danger.—If further proof were necessary in support of the necessity for a steam pilot service at this port, it was forthcoming yesterday afternoon, when one of the pilot whaleboats was in imminent danger of swamping. During the afternoon a nasty sea broke across the bar, and as the ship 'Iolanthe' was being taken to sea, bound for Acapulco, she shipped several seas. The pilot boat, which was towing behind to bring the pilot back to port, received a severe buffeting by the seas, but it was not till she left the ship on the return trip that she got into serious trouble. Sea after sea came rolling along, and large bodies of water found their way on board, and despite the bailing of the crew, the water was gaining so fast that it was feared she would swamp. For the safety of the pilots the tug 'Young Bungaree' was hailed, and the crew was transferred to the tug, as was also the boat's gear. Some of the pilot boat's crew stated that had they not left the boat when they did the chances are that they would have been drowned." The present state of affairs, he said, is very dissatisfactory for a port so important as Newcastle. A steam service is required here more than in Sydney.

Mr. R. A. WALLACE said that the men on this pilot station are as fine a body of men as could be found at any port in the world, but they are miserably equipped for outside work. He thought that steps should be taken at once to provide a steam service, and thereby put an end to those sad mishaps which occur on this particular coast.

Alderman W. B. SHARP spoke of the number of years this question had been under discussion, which culminated in a definite promise being made by the Government eighteen months ago that the "Ajax" would be fitted up for the service. But as the "Ajax" is not here yet, he would request the receivers of the deputation to lay the matter before the Premier and urge him to cause the promise to be at once fulfilled. He is satisfied that there is no port in the world, of the importance of Newcastle, where the character of the pilot service is so primitive. He referred to the returns, which show that a greater number of ships visit Newcastle than Sydney.

Captain LARSEN gave his experience of coming into the port a few days ago. It is his first visit to this part, and it struck him as very strange, when he found himself in a most dangerous position outside, that there should be no pilot about to take charge of his ship. He only missed the bank by about 30 feet, and thought his ship would be lost. He could not help himself as he was quite a stranger to the port, and did not know its peculiarities. He certainly thought that, in the interests of the shipping trade, there should be a steam pilot boat.

Captain PRITCHARD also spoke of the difficulty he had in making this port on last Friday during the storm. They were in great danger outside, and no pilot could be found till they got inside, when, of course, his services were not nearly so necessary. In his experience this is the only port where the pilot service is so primitive; and he certainly thinks that a steam service should be provided.

Mr. EARP pointed out the dangers of the port. Forty per cent. of the ships come in at night, and in thick weather their presence is not known until they are within 2 or 3 miles. It is impossible in rough weather to render them any assistance in open boats. One pilot has lost his life indirectly consequent upon the defective service. His boat was capsized, and illness followed upon the wetting, from which he succumbed.

Mr. BROOKES said that he thought this port, which is every day growing in importance, should be properly equipped. Then the very fine body of men stationed here would be able to work effectively in safe-guarding the shipping interest, and in preventing loss of life. Under present conditions, in bad weather, the pilot has to remain inside Nobby's, but fees are charged all the same—charged for a service never rendered. He felt sure that it was never intended a pilot should board a vessel inside the harbour, and full pilot fees be charged. He admitted that the pilot fees are very low, but that is a slip of the Act. Notwithstanding, they should not be levied if not earned. Speaking generally, he thought fees sufficient to provide an efficient pilot service should be made, and every ship, excepting intercolonial traders, should be compelled to take a pilot. He cannot understand the delay that has occurred in the fitting out of the "Ajax," and is at a loss to understand why another ten weeks are required in which to do the work. He is confident that, if she were handed over to him, he would be able to have her ready in a month. He drew attention to the danger being run by ship captains who are strangers to this port. They, in the absence of a pilot, may be driven ashore, and, in consequence, cancellation of their certificates would probably ensue; so that their very living is, as it were, imperiled by the present deficient service.

Mr. CLARK asked whether, in view of the approaching south-east winter gales, it would not be possible to hire a boat pending the arrival of the "Ajax"?

Other members of the deputation supported Mr. Clark in this proposal, and Mr. WILSON promised that they would consult their colleague as to whether the Commission should recommend the course suggested by the deputation.

Captain NEWTON, Harbour-master, drew the Board's attention to the number of ships which are moved in the harbour without pilots. In 1896 there were 191 and last quarter 81 ships, so moved. This is a big loss to the revenue.

EXTRACT from *Newcastle Morning Herald*, Saturday, 1 May, 1897.

The Steam Pilot Service.—A Temporary Boat Requested.

YESTERDAY a deputation, consisting of the Mayor, Alderman W. B. Sharp, J. Clark, jun., Thomas Brooks, Alderman Rhead, Messrs. G. Earp, R. A. Wallace, and a large number of shipmasters, waited upon Messrs. Wilson and Powell, members of the Royal Commission to inquire into the working of Marine Boards, to request those gentlemen to use their influence in securing the speedy completion of the alterations to the steamer "Ajax," so that the vessel might take up her duties as a pilot cruiser. The deputation was introduced by the Harbour-master (Captain Newton).

The MAYOR (Alderman Miller) explained that a meeting had been held in relation to the non-arrival of the "Ajax," at which it was arranged that a deputation should wait upon the Premier to urge the completion of the repairs to the vessel without delay.

Mr. WILSON pointed out that they did not receive the deputation as the Public Service Board, but as the Royal Commission appointed to inquire into the working of Marine Boards. They would not be able to give the deputation any definite reply, as their colleague was absent, but all that was put before them would receive due consideration.

Mr. JAMES CLARK, jun., said that, acting on the advice of several representative citizens, he had written to the Commissioners asking them to receive a deputation, believing that they could gather from shipmasters and other practical men a large amount of information which would be of service to them in arriving at a decision on the question. They had kindly acceded to his request, and on coming before them he found his case materially strengthened by an incident which had occurred the day before. While the barque "Iolanthe" was being taken to sea the pilot boat, which was towing alongside, came in for a rough handling with the sea and strong wind, and on leaving the barque to return to the port filled with water. The crew were taken out by the tug boat "Young Bungaree," and brought into port safely. He contended that incidents like these more than proved the necessity for a steam service, and unless something was done soon lives would be lost. It was more necessary that Newcastle should have a steam service than Sydney, as the port was far more dangerous.

Mr. R. A. WALLACE supported Mr. Clark in his remarks as to the inefficiency of the service, but pointed out that the men employed, both pilots and boatmen, were equal to any to be found, and only needed a modern equipment to render the service a thoroughly satisfactory one.

Mr. W. B. SHARP said the matter had been under consideration for some years, and eighteen months ago the "Ajax" had been promised for service at Newcastle, but had not yet arrived. There was no port in the world with a shipping trade equal to that of Newcastle where they permitted such a primitive system to exist. There was a larger number of ships arriving at Newcastle than at Sydney, and still the Department was compelled to continue the system of using open boats. What they wanted was that the Commissioners would urge the Premier to push on the work with all possible speed, and send the vessel as soon as possible.

Captain LARSEN, of the Norwegian barque "Liv," stated that on Friday last when his vessel entered the port she was not more than 30 feet from the oyster bank, and in great danger of being lost. The vessel was well inside the port and past danger before the pilot came on board, but the latter could not be blamed, as it was impossible to come out in an open boat. In his opinion, a steam service was a necessity.

Captain PRITCHARD, of the barque "Haddon Hall," which also arrived on Friday, pointed out that he experienced some trouble owing to the tug's hawser breaking, the vessel getting down close to the beach before the tug got hold again. When approaching the bar and the most dangerous part of the entrance, there was no pilot to take charge, the latter coming on board inside the breakwater, when the vessel was really past the danger. His experience of Newcastle was that in fine weather you could get a pilot well off shore, but in bad weather, when their services were required, their primitive system of open boats prevented them from crossing the bar and meeting the vessel well outside.

Mr.

Mr. GEO. F. EARP said the Government, by promising the "Ajax," had already recognised the need of a steam service, and trusted the Commissioners would urge the Premier to carry out the promise. He had been informed that nearly 40 per cent. of the vessels arriving here made the port in the night-time. In thick weather these vessels would be within a few miles of the port before they could be seen, and consequently would be well down on the bar before the pilot could get out to them. No other port in the world was so inadequately equipped in respect of their pilot service than Newcastle, and already one life had indirectly been lost owing to the system.

Mr. THOS. BROOKS supported the previous speaker, and pointed out that not only life but property was in danger. Had the "Ajax" been in commission the "Adderley" would not have been lost. The growing trade of the port demanded that a steam service should be inaugurated. There was absolutely no excuse for the delay, as any private firm could have completed the necessary alterations in three months. The Government had stated in reply to a question that the boat would be ready in ten weeks; but, speaking as a practical man, he would guarantee to have her in commission in a month.

Mr. CLARE said, as the winter was coming on, they might expect more gales and bad weather, and possibly more wrecks. He would like to know if there was a chance of obtaining the services of a temporary boat while the "Ajax" was being prepared?

Mr. WILSON said the whole of the evidence would be type-written and forwarded to their colleague, and if the repairs to the "Ajax" were to occupy a long period they would recommend that a temporary boat be provided.

The MAYOR then thanked the Commissioners for the reception they had accorded them, and the deputation then withdrew.

32.

Gentlemen,

Harbour Office, Newcastle, 3 May, 1897.

At your request I have the honor to submit the following report *re* want of accommodation for shipping visiting this port:—

For some considerable time past the shipping community have expressed strongly their great dissatisfaction with regard to the very limited accommodation which is provided for vessels arriving here, also the inadequate supply of ballast berths.

Frequently every available space in the stream is occupied, and at the frontage of the ballast jetties and dolphins large ships are compelled to berth three and four abreast. This method of securing vessels in a tidal harbour, which is subject to freshets, and with an insufficient depth of water to use anchors, is not consistent with safety, and is undoubtedly a source of much inconvenience and annoyance to the masters, who contend they pay port dues and are entitled to safe accommodation.

It frequently occurs that late in the evenings the inside vessel of those berthed as above stated receives an order to proceed to a crane berth to load during the night; then the other vessels have to be cast adrift so as to get the inner ship clear. Should any hitch occur, it interferes with the shipment of coal, and is a serious loss both to the Government and the colliery proprietors.

To expedite matters I would respectfully suggest that sections of a wharf be constructed as soon as possible on the east side of the proposed basin, now being deepened, and marked red on attached plan. This would afford accommodation for a number of ships in ballast trim, or waiting their turn to load, and would relieve, to a great extent, the congested state of the ballast jetties.

In order to afford greater facilities for the discharging of ballast, I would also recommend that two jetties be constructed to the northward of Cullen's Wharf, marked blue on the plan. I need scarcely add that, with every prospect of increasing trade, the circumstances demand that every facility be given to the shipping that is commensurate with the importance of the port.

I have, &c.,

The Royal Commission on Marine Board, Newcastle.

HENRY NEWTON,
Harbour-master.

33.

COPIES of Correspondence *re* Entrance Signals, Newcastle.*Chamber of Commerce, Newcastle, 3 December, 1896.*

"I AM directed by my Committee to draw your attention to the fact that at the present time there are no means by which vessels going to sea can ascertain whether there is any vessel about to enter the port, and, on the other hand, vessels approaching the port cannot ascertain whether any vessels are coming down the channel until they come in sight at the North Shore point. It is suggested that a system of signalling vessels about to enter the port, and also those proceeding down the channel to sea, from some prominent position would be of very great convenience to the shipping, and give vessels timely notice of the approach of each other. I am directed to bring the matter before you for your favourable consideration."

From the Local Marine Board, 6th January, 1897.

"By the direction of the local Marine Board, I have the honor of replying to your letter of the 3rd ultimo, *re* establishing a system of signalling vessels moving in and out of this port, and having referred the same to the Marine Board, now send you their minute thereon, viz. :— 'That only useless expense and confusion would arise by any addition to the present excellent rules and regulations.' A deputation then waited upon the Marine Board and fully explained the suggested systems.

From the Chamber of Commerce, 5th February, 1897.

"In accordance with the request of your Board to the deputation from this Chamber, which waited on them on Wednesday last, I now have the honor to ask that you will again bring the matter of establishing a system of signalling vessels entering and leaving the port before the Sydney Marine Board. It was then conclusively shown how great would be the benefit to the shipping. I enclose a diagram showing how this could be done either by the erection of a semaphore, at a nominal cost, as shown in sketch No. 1, or by a more elaborate system as per sketch No. 2."

From the Marine Board, 11th February, 1897.

"By the direction of the local Marine Board, I have the honor of returning the attached diagram, &c., for fuller details of method of signalling, site, &c."

From Chamber of Commerce, 22nd February, 1897.

"With further reference to my letter of 8th instant, and in addition thereto, as requested in your letter of 11th instant, I now give you some further particulars.

"*Site.*—It is suggested that a suitable position for the erection of the signal would be at the north end of Flag-staff Hill, as it would stand clear of all other signals, and could be worked by the present signal staff.

"*Cost.*—The erection of a semaphore, as per sketch No. 1, of wooden material, say 15 feet in height, should not exceed £5 in cost, whereas the more elaborate system, as per sketch No. 2, would probably involve an expenditure of £25.

"Owing to the erection of buildings at the Stockton point it is now impossible for a vessel going to sea to discern another vessel approaching the entrance until she is close to her."

From Local Marine Board, 5th March, 1897.

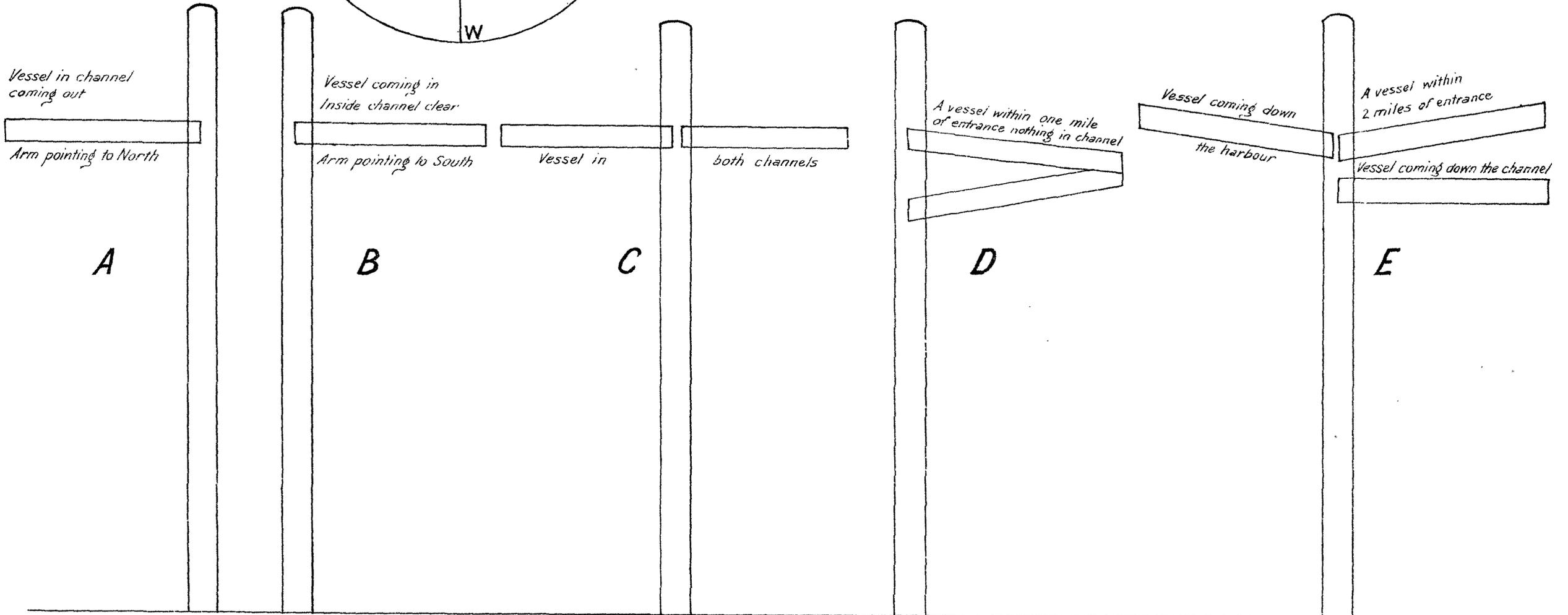
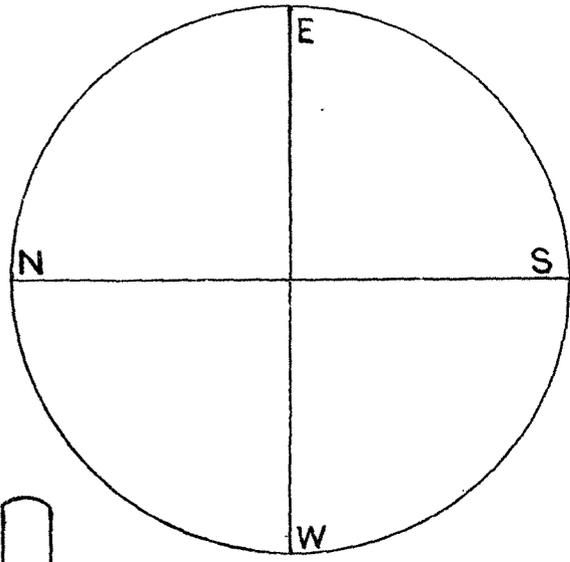
"By the direction of the local Marine Board, I have the honor of replying to your letter of the 22nd ultimo, *re* the establishing of a system of signalling vessels moving in and out of the harbour, which has again had the consideration of the Board, and who cannot recommend the adoption of such system."

From Chamber of Commerce, 23rd March, 1897.

"I am directed by my Committee to acknowledge receipt of your letter of 5th instant, in reference to the establishment of a system of signalling vessels moving in and out of the harbour, and stating that your Board cannot recommend its adoption. My Committee would be glad to learn the nature of the objections to the proposal, as they believe that they will be able to satisfy the Board that the public interest will be better served by the adoption of the proposed scheme than by present arrangements."

From

Nº 1



Vessel in channel coming out
Arm pointing to North

A

Vessel coming in
Inside channel clear
Arm pointing to South

B

Vessel in both channels

C

A vessel within one mile of entrance nothing in channel

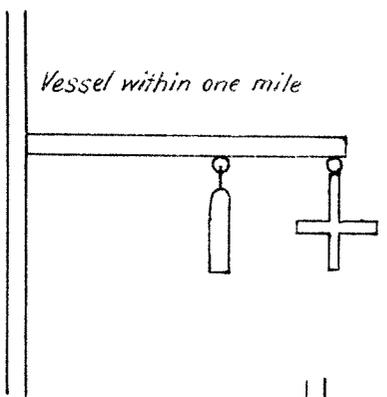
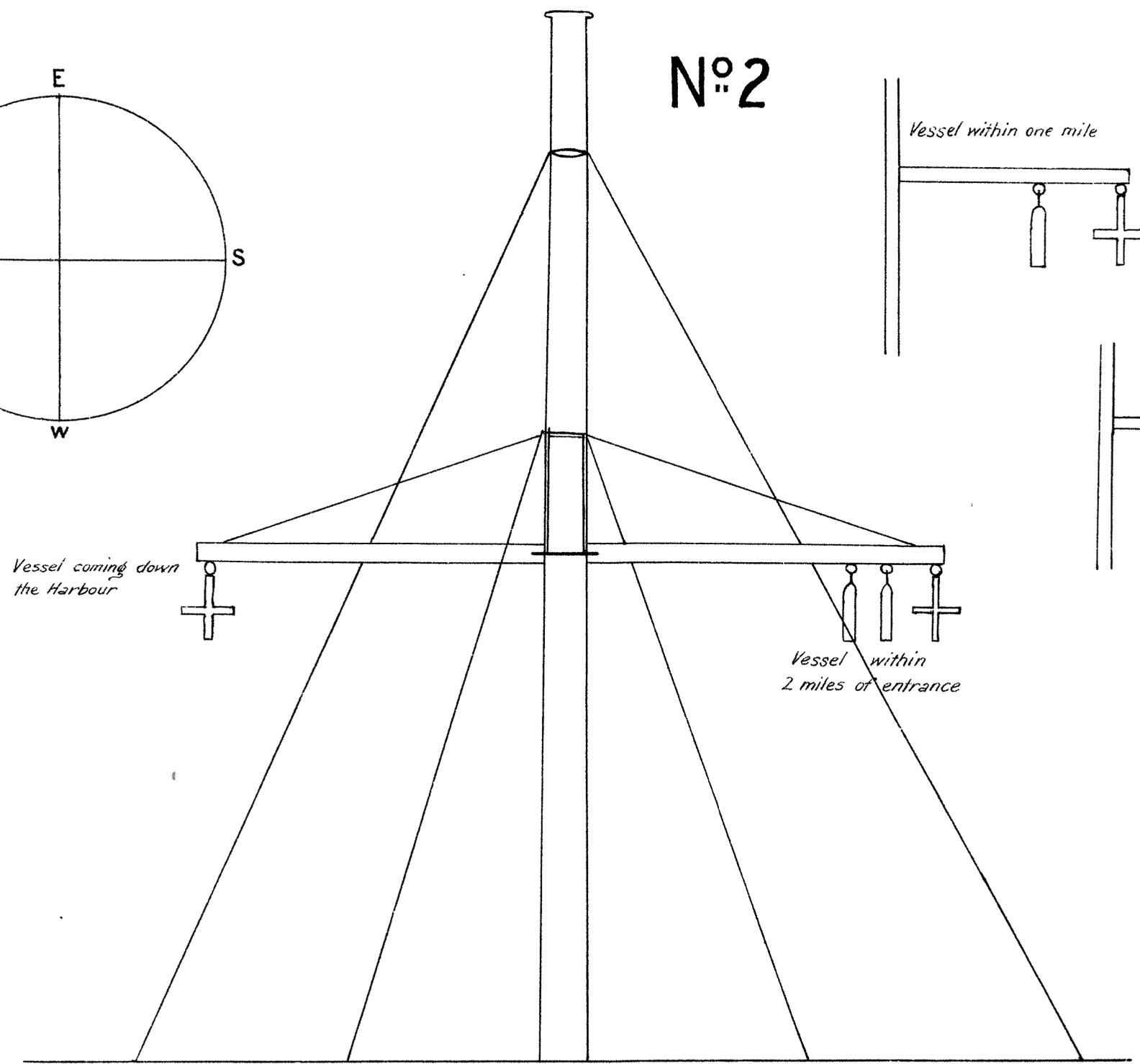
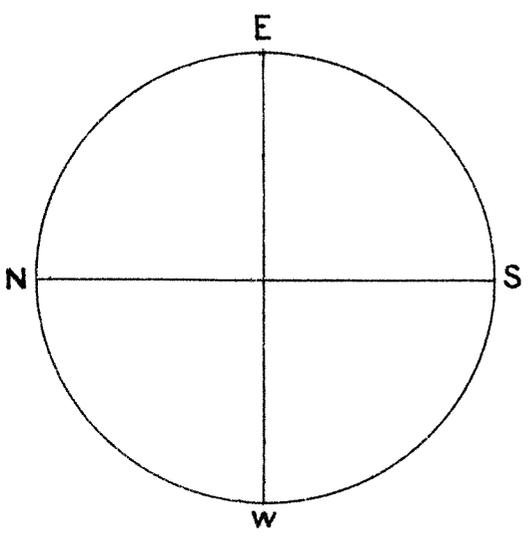
D

Vessel coming down the harbour

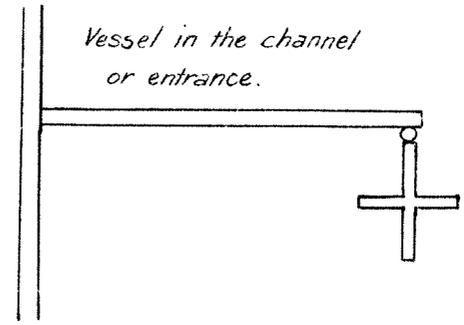
A vessel within 2 miles of entrance
Vessel coming down the channel

E

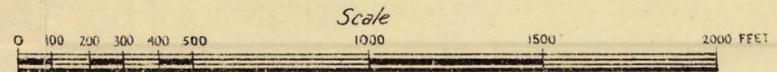
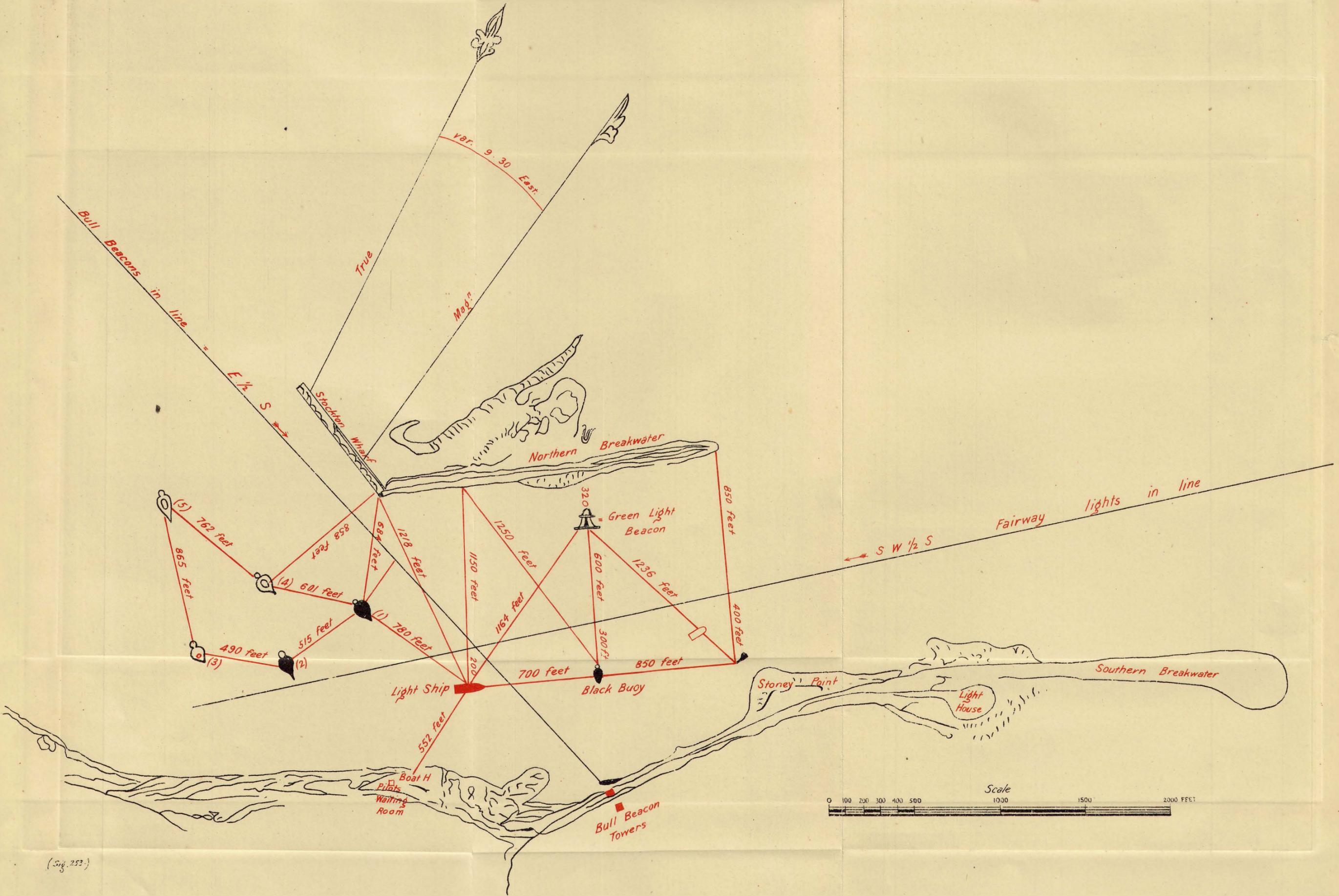
N^o 2



Vessel within one mile



Vessel in the channel or entrance.



PLAN OF THE PORT OF NEWCASTLE

REDUCED FROM RECENT SURVEYS BY OFFICERS OF THE HARBOURS & RIVERS DEPARTMENT
Soundings Corrected to May 1896.

1897.

Soundings are shown in Feet, reduced to Low Water Spring Tides.

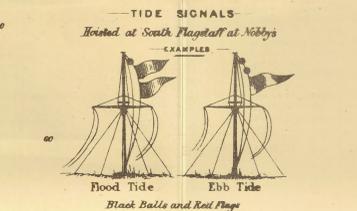
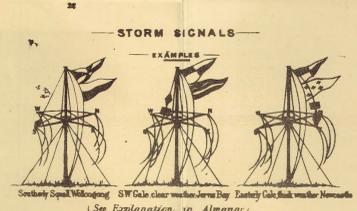
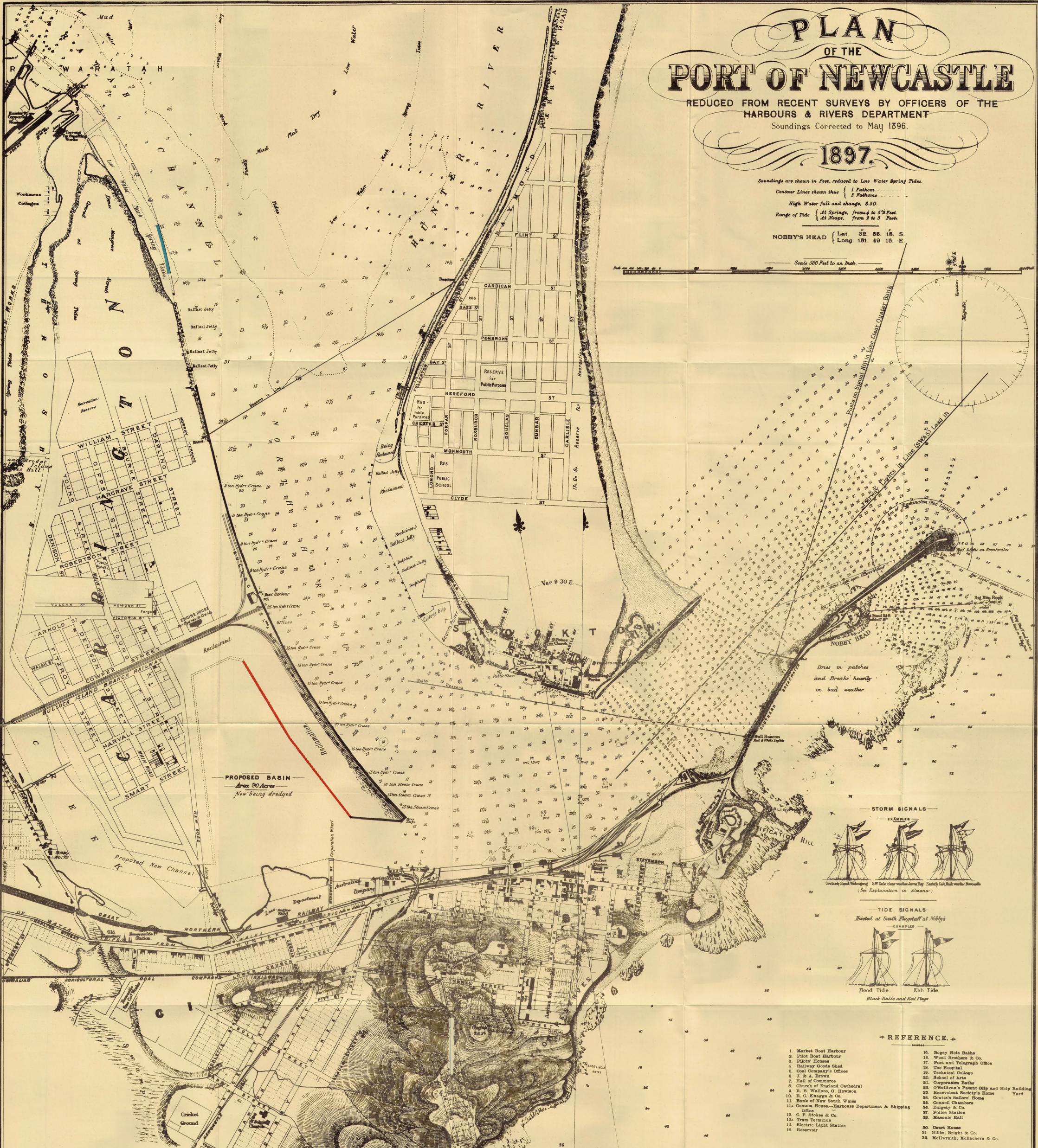
Contour Lines shown thus { 1 Fathom
5 Fathoms

High Water full and change, 8.50.

Range of Tide { At Springs, from 4 to 5 1/2 Feet.
At Neaps, from 2 to 3 Feet.

NOBBY'S HEAD { Lat. 32. 58. 18. S
Long. 151. 49. 18. E.

Scale 500 Feet to an Inch.



- REFERENCE**
1. Market Boat Harbour
 2. Pilot Boat Harbour
 3. Pilot's Houses
 4. Railway Goods Shed
 5. Coal Company's Offices
 6. J. & A. Brown
 7. Hall of Commerce
 8. Church of England Cathedral
 9. R. B. Wallace, G. Hewison
 10. R. C. Knaggs & Co.
 11. Bank of New South Wales
 12. Custom House - Harbours Department & Shipping Office
 13. C. F. Stokes & Co.
 14. Tram Terminus
 15. Electric Light Station
 16. Reservoir
 17. Bogy Hole Baths
 18. Wood Brothers & Co.
 19. Post and Telegraph Office
 20. The Hospital
 21. Technical College
 22. School of Arts
 23. Corporation Baths
 24. O'Sullivan's Patent Ship and Ship Building Yard
 25. Benevolent Society's Home
 26. Coutts's Sailors' Home
 27. Council Chambers
 28. Dalgety & Co.
 29. Police Station
 30. Masonic Hall
 31. Court House
 32. Gibbs, Bright & Co.
 33. McIlwraith, McEachern & Co.

From Marine Board, 27th March, 1897.

"By the direction of the local Marine Board I have the honor, in reply to your letter of the 23rd instant, of informing you that after consideration the local Board regret they cannot accede to the request of your Chamber."

The Under Secretary, Treasury, 6th April.

"I have the honor, by direction of my Committee, to hand you, for the consideration of the Honorable the Colonial Treasurer, copies of correspondence that has taken place between the Newcastle Marine Board and this Chamber relative to the establishment of a system of signalling vessels going in and out of the harbour of each other, which my Board contend would be of great benefit to the shipping. They would ask your careful consideration of the matter, which would involve a nominal cost and cannot fail to relieve shipmasters of anxiety, the signal being intended to indicate whether the entrance channel is clear or not."

From The Under Secretary, Finance and Trade, 21st April, 1897.

"With reference to your letter of 6th instant, enclosing copies of correspondence that has taken place between the Newcastle Marine Board and your Chamber, relative to the establishment of a system of signalling vessels going in and out of Newcastle Harbour of the approach of each other, I am directed by the Minister acting for the Colonial Treasurer to inform you that the Marine Board (Sydney), to whom such correspondence was referred, report as follows, viz. :—

"The Marine Board concur in the opinion expressed by the local Board, that only useless expense and confusion would arise by any addition to the present excellent rules and regulations for the guidance of vessels entering and leaving Newcastle.

"The present system of signalling was not introduced for the guidance of masters of vessels, who have quite enough to do in the navigation of their respective craft without looking about for signals, but rather for information of the general public."

34.

Sir,

Chamber of Commerce, Newcastle, N.S.W., 15 June, 1897.

In reference to the matter of entrance signals, referred to by my Committee at an interview which took place when the Commissioners were in Newcastle, I am directed by my Committee to refer to the collision that recently occurred at the entrance to the harbour between the steamers "Shaftsbury" and "Pacific" as an instance showing the necessity for carrying out the system suggested. Had these vessels been made aware of the approach of each other in time to prevent their meeting in the channel a collision would undoubtedly have been averted. Only on Sunday last an intercolonial steamer, which was some distance astern of a vessel in tow of a tug entering the harbour, stopped until the ship had cleared the channel, thus showing that masters consider it unsafe for two vessels to be in the channel at one time. Shipmasters frequently say that they find it difficult to pass another vessel at this point. It may be said that in the event of the Government deciding to inaugurate a system of signals they would be responsible for the mistakes of the officer in charge, but seeing that they are not answerable for the actions of their pilots, they could hardly be held responsible for the accuracy of the signals.

The sinking of the Government steamer "Castor" abreast of the lightship some years ago made the navigation of the entrance a difficult and dangerous matter; and should one of the vessels trading here be sunk in the narrow channel, the result would be that the whole trade of the port would be immediately stopped, entailing hardship and misery to the workers, particularly, that may be more easily imagined than described.

The Secretary, Public Service Board, Sydney.

I have, &c.,
ARTHUR BOCKETT,

Secretary.

Acknowledge, and say the matter will receive the consideration of the Commission.—J.W.H. (per A.A.G.), 25/6/97. Done.—25/6/97. Refer to the Secretary to the Royal Commission.—J.W.H., 25/6. A. F. Basset Hull, Esq., B.C., 25-26/6/97. Read. Copy evidence on signal system to be made for Commissioners, and model produced on Friday, 2nd July. Captain Hixson to be summoned also for that day.—28th June, 1897. Captain Hixson.—A.F.B.H., 28/6/97.

35.

From Log kept by the Pilot at the Richmond River—January, February, and March, 1897.

Name of Vessel.	Tonnage.	Owner.	Month.	Arrivals.	Departures.
S.S. "Oaklands"	228	Yeager	January	4, 11, 18, 25	2, 5, 13, 21, 27
			February	1, 8, 15, 22	3, 10, 17, 24
			March	1, 8, 15, 22, 29	3, 10, 17, 24, 31
S.S. "Wyoming"	175	"	January	14, 25	9, 17
			February	6, 18	1, 11, 21
			March	13, 26	19, 30
S.S. "Augusta"	122	Tulloch	February	1	2
S.S. "Electra"	210	North Coast S.N. Co.	January	7, 13, 21	9, 16, 23
			February	3	6
			March	14, 25	17, 27
S.S. "Tomki"	376	"	January	4, 11, 17, 25	5, 13, 21, 27
			February	1, 11, 18, 24	3, 14, 20, 27
			March	4, 13, 22, 29	8, 16, 24, 31
S.S. "Macleay"	291	"	January	4, 28	5
			February	15, 22, 28	1, 17, 24
			March	8, 18	10, 20
S.S. "Coraki"	198	"	February	8	11
S.S. "Wyralla"	206	"	March	17	19
"Prosperity," schooner.....	125	Corrigan	January	25	2
			February .....	.....	2
			March	14	31
"Western Star," schooner	124	"	January	24	23
			February	19	2, 25
			March	15	23
"Liffey," schooner.....	102	"	January	18	22
			February	23	28
			March	14	21
"Monarch," schooner	132	Heesch	January	7	.....
			February	1	14
			March	3	14
"Garfield," schooner.....	84	Bills	February	26	.....
			March .....	.....	4
"Elizabeth Allen"	105	Hogan	January	7	.....
			February	1, 27	7
			March	25	8

Log of Pilot-steamer "Captain Cook" for the Month of March, 1897.

Signalled.	Returned to Moorings.	Inward Ship.	Outward.	
1. 7 20 a.m.	8 30 a.m.	"Cape Clear."		
2. ....	.....	.....	"City Dundee"	Took off pilot.
3. ....	.....	.....	"Magic"	"
4. 3 10 p.m.	4 10 p.m.	"Bellambie."	"Alcinous"	"
5. 9 13 p.m.	12 0 p.m.	"C. C. Funk."	Ship	"
6. 2 0 a.m.	3 0 a.m.	"Combermere."		
7. 5 40 a.m.	6 0 a.m.	"Neolli."		
8. 4 40 a.m.	6 15 a.m.	"Australien."		
9. 7 5 p.m.	8 0 p.m.	"Pirate."	"Bellambie"	"
10. ....	.....	.....	"Meg Merrilies"	No call.
11. ....	.....	.....	.....
12. 7 30 a.m.	8 25 a.m.	Ship.	.....	No call.
13. 1 55 p.m.	3 15 p.m. ....	"	.....
14. 1 26 a.m.	2 20 a.m.	Ship.	.....	No call.
15. ....	.....	.....	.....	"
16. 9 35 a.m.	10 15 a.m.	Ship.	.....
17. 3 5 p.m.	3 52 p.m.	"Australien."	.....
18. 7 38 p.m.	8 55 p.m.	Ship.	.....
19. 1 37 a.m.	3 20 a.m. ....	"	.....
20. 5 35 a.m.	6 40 a.m. ....	"	.....
21. 9 48 a.m.	10 35 a.m. ....	"	.....
22. 7 0 p.m.	8 15 p.m.	"Albatross."	.....
23. 2 40 a.m.	3 10 a.m.	"Cosby."	.....	No call.
24. 8 57 p.m.	9 30 p.m. ....	.....	.....
25. 9 0 a.m.	9 50 a.m.	"Strathdon."	.....
26. 1 57 p.m.	2 55 p.m.	"Thornley."	.....	"
27. 8 49 a.m.	9 50 a.m.	Ship.	"John Williams"	Took off pilot.
28. Midnight .....	.....	"La Perouse."	.....
29. 7 35 a.m.	8 12 a.m.	(Fire at Dawes Point—services not required.)	.....
30. 3 43 p.m.	4 55 p.m.	"Saint Pierre."	.....
31. 7 50 a.m.	8 52 a.m.	Ship.	.....
32. 9 25 a.m. ....	.....	.....	Ship	Took off pilot.
33. 1 0 p.m. ....	.....	.....	" .....	"
34. 1 50 p.m. ....	.....	.....	" .....	"
35. 8 40 a.m. ....	.....	.....	" .....	"
36. 3 20 p.m.	4 12 p.m.	Ship.	.....
37. 10 40 p.m.	11 20 p.m. ....	"	.....
38. Noon	1 15 p.m.	"Alameda," and towed "Lilian," s.s., off Sow and Pigs.	.....
39. 11 27 p.m.	12 45 p.m.	"Brand."	.....
40. 7 40 p.m.	9 40 p.m.	Ship.	"Brand"	Took off pilot.

A RETURN showing the number of Vessels reported Inward, and cleared Outward during the Year 1896, attended by Sea Pilots, and charged the usual Pilotage Rates for such service.

Port.	No. of Vessels.	Inward.	Outward.
Sydney	629	336	290
Newcastle	847	445	402

145

38.

RETURN of Steamers subsidised by the Marine Board, showing Tonnage, nominal Horse-power, when built, Owner, Location, Subsidy, and period of Contract.

Name.	Registered Tonnage.		Horse-power (nominal)	When built.	Owner's Name.	Where located.	Annual Subsidy	Period of existing Contracts.	Date when Contracts expire.
	Gross.	Net.							
1. "Marian Mayfield."	47 ⁰ / ₁₀₀	32 ⁰ / ₁₀₀	25	Aug., 1883	John Wright and Thomas Miles	Cape Hawke.....	£ 400	From 1st October, 1896.	At six months' notice on either side.
2. "Volunteer" ...	61 ³ / ₁₀₀	41 ⁰ / ₁₀₀	30	1888.	Francis Buckle, Frederick John Gibbins, and John Paul.	Nambucca and Macleay Rivers.	564		
3. "Thistle"	63 ⁴ / ₁₀₀	43 ⁴ / ₁₀₀	24	Oct., 1892	Francis Buckle	Port Macquarie...	348		
4. "John Gollan" ...	61 ⁰ / ₁₀₀	41 ² / ₁₀₀	25	Oct., 1889	Hector Gollan.....	Manning River...	400		
5. "Terracra"	59 ¹ / ₁₀₀	40 ⁰ / ₁₀₀	25	1896.	Alfred Langley and Robert Henry Langley.	Tweed River.....	849		
6. "Protector"	158 ⁰ / ₁₀₀	99 ⁴ / ₁₀₀	55	June, 1884	Thomas Fenwick.....	Richmond River	1,770		
7. "Unique"	35 ² / ₁₀₀	23 ⁰ / ₁₀₀	25	April, 1887	George de Fraine, Joseph Lauric, William Gill, William Maxwell, Alexander Thomson, Hannah Charlotte Isabella de Fraine.	Camden Haven....	234		
8. "Alert"	27 ⁰ / ₁₀₀	18 ⁴ / ₁₀₀	20	Jan., 1882	Francis Buckle	Bellinger River..	732		
9. "Conqueror" ...	91 ⁰ / ₁₀₀	62 ¹ / ₁₀₀	35	Oct., 1893	James Wallace	Clarence River...	750		
10. "Carbine"	48 ⁴ / ₁₀₀	33 ² / ₁₀₀	25	April, 1889	John James Amess, Samuel Stuart Amess, and William Amess.	Wollongong	336		
							£ 6,383		

39.

RETURN of the Amount of Subsidies paid for Steam-tug Services at—

Station.	1880.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.
	£	£	£	£	£	£	£	£	£	£	£
Cape Hawke	600	600	510	480	480	480	480	480	480	480	460
Nambucca and Macleay	827	827	702	660	660	660	660	660	660	660	636
Port Macquarie	828	828	711	672	672	672	672	672	672	672	591
Manning River	600	600	450	400	400	400	400	400	400	400	400
Tweed and Brunswick	1,740	1,740	1,182	996	996	996	996	996	996	996	960
Richmond River	2,220	2,220	1,950	1,860	1,860	1,860	1,860	1,860	1,860	1,860	1,838
Camden Haven	672	672	578	546	546	546	546	546	546	546	468
Bellinger River	996	996	811	750	750	750	750	750	750	750	746
Clarence River .....	...	...	...	...	...	680	816	816	816	816	799
Wollongong	996	996	624	500	500	500	500	500	500	500	459
Totals	£ 9,479	9,479	7,518	6,864	6,864	7,544	7,680	7,680	7,680	7,680	7,357

N.B.—Total amount paid under present contract, 1st October, 1896, £6,383. See return.

40.

RETURN of Vessels having entered the undermentioned Ports during the year 1896.

Ports.	Regular Coasting Steamers.	Ordinary Sailing Vessels.	Total.
Twofold Bay	182	16	198
Moruya	213	.....	213
Shoallhaven	214	6	220
Wollongong	480	107	587
Lake Macquarie	13	168	181
Cape Hawke	62	188	250
Manning River	74	45	119
Camden Haven	37	172	209
Port Macquarie	118	187	305
Macleay River	124	50	174
Nambucca River	69	98	167
Bellinger River	84	17	101
Clarence River	169	28	197
Richmond River	218	37	255
Tweed River	67	41	108
	2,124	1,160	3,284

Sir,

Engineer Surveyor's Office, 19 May, 1897.

In accordance with instructions, I have the honor to submit the following relating to the subsidised tug steamers on the New South Wales rivers, &c. Under the present arrangement we subsidise ten steamers, and to construct an entirely new plant the approximate cost would be £7,000 for "Richmond" and £2,500 for each of the others. It will also be necessary to provide at least two spare boats in case of loss, repairs, or accidents. This would represent a total capital of £34,500.

At present we pay a total subsidy of £6,353, and although this represents a capital of nearly £128,000 at 5 per cent., still it will be seen by referring to attached sheets giving approximate cost of wages, maintenance, &c., that financially there is a comparatively small balance for contractors. The figures given are correct—that is, as nearly as can be ascertained. Have only taken one of the small steamers, as the average expenses of the others are practically the same.

Captain Lindeman, Secretary.

I have, &c.,

WM. CRUICKSHANK.

Approximate Monthly Expenses of the P.S. "Protector."

Carries five hands, as follows :—	
One master, at £18 per month	£18
One engineer, at £16 per month	16
Two firemen, at £10 per month	20
One deck hand, at £10 per month	10
Total for wages	£64
Monthly maintenance :—	
Coal consumed per month—about 32 tons, at 15s. per ton.....	£24
Stores, packing, oil, paints, ropes, &c.	10
Tow-ropes—3 per year, at £25 each.....	7
Bonus to crew, in addition to wages	2
Twelve per cent. insurance on £4,200	50
Repairs to hull, machinery, docking, &c.	30
Five per cent. depreciation on £4,200	18
	£141
Total monthly wages	£64
„ maintenance	141
	£205 = Total expense per month.
	12
	£2,460 = Total expense per year.
Subsidy	£1,770
Average towages	800
	£2,570 = Total income.
	2,460 = Total expense.
	£110 = Balance.

Approximate Monthly Expenses of the S.S. "Volunteer."

Carries three hands, as follows :—	
One master, at £10 per month	£10
One engineer, at £10 per month	10
One fireman (boy), at £6 per month.....	6
Total for wages	£26
Monthly maintenance :—	
20 tons of coal per month, at 10s.	£10
Stores, packing, oil, paints, ropes, &c.	5
Tow-ropes—3 per year, at £25	7
Ten per cent. insurance on £1,680	14
Repairs to hull and machinery, docking, &c.....	10
Five per cent. depreciation on £1,680	7
Five per cent. to crew on towages—£700 per annum—in addition to wages	3
	£56
Wages, per month	£26
Maintenance, per month.....	56
	£82 = Total expense per month.
	12
	£984 = Total expense per year.
Subsidy	£564
Average towages	700
	£1,264 = Total income per annum.
	984 = Total expense „
	£280 = Balance.

Forwarded for the information of the Royal Commission. The Marine Board is of opinion that Mr. Cruickshank has altogether underrated the cost of this service. If the Government provide tugs the inhabitants of the different districts would insist on having much better boats than those supplied by the present contractors, and the people of the Clarence and other large rivers would never rest content with a less powerful vessel than that at the Richmond. Two spare boats—and they would have to be supplied with crews—would not be sufficient to meet the casualties and wear and tear of so dangerous a service on a coast line of over 400 miles.—Geo. S. LINDEMAN, 21/5/97.

To the Honorable John See, Sydney.

Dear Sir,

S.S. "Coraki," 14 May, 1897.

Mr. Allen requests me to report on the pilot and tug service of the northern rivers, and forward report to you. I beg to state that, in my opinion, the pilot ought to have full charge of the tug-steamers, and that the northern river tugs ought to be owned by the Government, and be made self-supporting; there would then be an efficient service. At present the pilots on the rivers have no responsibility whatever. We can never get a direct answer from scarcely any of them with regard to the state or depth of water on the bars, especially on the Manning.

In the first place, usually the pilot and the tug-master are at variance, and each appears to work against the other. They often do not speak to each other for weeks.

As regards sounding the bars or finding a channel, the pilot and his boat's crew are useless. They never go over a bar in their own boat to find a channel, no matter how smooth the sea. (This applies to the Manning.)

The usual way the bar is sounded is for the pilot to go out in the tug-boat a few minutes before a vessel either comes in or goes out. They just rush in and out a few minutes before high-water. It is impossible to get true soundings or to define a channel by doing so in such a manner. They want to avail themselves of every opportunity when the sea is smooth on the bar. If any of us mention this matter to the pilots, they say, "Oh! we do not want to trouble the tug no more than can be helped." If the circumstance is mentioned to the master of the tug, he grows and makes a complaint that he is burning too much of his owner's coals to no purpose or advantage to the tug. There are none of the tug-masters will go and sound if they can possibly avoid it, unless their tow-rope is taken by the ship, and they are sure of a tow. This applies especially to the Richmond and Manning tugs; and it is quite necessary that the Manning bar should be sounded every possible chance, especially for this past three months.

Were the tugs owned by the Government, and in charge of the pilot and his crew, and he being held responsible, this would be avoided. He would then take care to give correct depths, and be out at all times in fine weather, finding the best channels for the steamers to navigate.

On Friday, the 2nd of April, the tug-steamers broke the main steam-pipe, and became disabled in consequence. I was down with the ship, ready to go out, but had to go back to Coraki and discharge some cargo, there being the bare water on the bar.

The master of the tug positively informed me he would be ready the following morning. Late the same night I got word the tug would not be ready for a week, as the machinery had to be sent to Sydney. I wired him to try and procure the services of the Camden Haven tug; the reply I got was he was not justified in going to that expense. The pilot appeared to have no voice in the matter. After spending a lot of money in wires, I had eventually to wire Captain Kicketts to have the Manning drogher down, so that I could go out and sound in her, which we did. What I wish to point out is this: twelve months previous the same thing happened to the tug, and I had to take advantage of a moonlight night and a high tide to go out, or else I should have been delayed several days. Had the pilot sole charge of the tug there is no doubt but what he would have had a spare steam-pipe on board, which the tug has since got. In my opinion, the pilot ought to have full charge of the tug, as their situations now are only securities. It is even a difficult matter to get any of them up the rivers to replace beacons or buoys that have shifted or got out of place. I do not see what the pilot and his crew does. Whenever a vessel gets stranded the tug has to be employed to run the anchors out to get the ship off, and that is the time the tug reaps his best harvest. This ought not to be, especially at bar-harbours. When a vessel is stranded the tug ought to render all assistance free. If the tugs were owned by the Government and in charge of the pilot, he would be compelled to render all the help he could for his own credit's sake.

In many of the pilots' crews on the northern rivers, there are some of the men in the boats that have no idea how to run an anchor out, or even to pull an oar in broken water when they are wanted in cases of emergency, such as stranding, &c. Some of the men are farmers, others are joiners, and some have been firemen. These men are useless when it comes to running out ropes and laying out anchors; all has to be done by the tug-boat's crew.

Last year all the time I was running to the Macleay River and using the new entrance, I never once saw the pilot or his crew taking soundings. The bar beacons were put in position by Captain Ferguson. The pilot was always against using that channel. The only reason I could account for it was, he was afraid of his station being shifted from the old to the new bar, and that would not suit him as he has a selection close to where he now lives.

The pilots on the northern rivers, I consider, are placed there more to prevent accidents than to pilot vessels in or out, as all masters trading to the rivers are exempt, and should a pilot be wanted the tug is again called in requisition and has to go out for the vessel, the pilot being unable to go out without he goes in the tug. If the pilot was placed in a responsible position with regard to the tug there would be less accidents, and fewer strandings than at present as it is now. They always have a saving clause for themselves.

In my opinion there ought to be a head pilot or an inspector—one that has been used to bar-harbours—to go at times from river to river to see that these men do their duty, and that they keep the beacons and buoys in their proper places; there are often times, when a channel is on the shift, that the beacons and buoys require shifting from day to day, but they are often not touched. If we complain about it to them the explanation they give is—it is no use shifting them as they will have to again do so to-morrow.

Another little matter I beg to draw your attention to, and that is, there are some of the tugs not insured. Sometimes, when the bars are shallow, the tug-boat master refuses to go out to try and find a channel; they simply tell the pilot there is not sufficient water for them to go out, and the pilot does not seem to have the power to compel them to try.

That I consider another reason why the pilot should have sole charge, and the tugs owned by the Government.

I remain, &c.,

S. BOULDEN.

Dear Sir,

The North Coast Steam Navigation Company (Limited), 12 May, 1897.

In view of the sitting of the Royal Commission at the present time to inquire into the tug and pilot services, I hereby beg to express my opinion, from my experience of the working of the northern rivers for the last twenty years.

I am of opinion that the tug and pilot service should be one and the same, as it would do away with all friction between pilot and tug-boat master that so often exists. I have known the pilot wish to sound the bar and the tug master to refuse him the use of the tug. I got my ship aground on the Manning crossing on one occasion, with the tug-boat towing me, the pilot waving me one way, the master of the tug waving me another, and no buoys to give me any help or idea which way to steer. On the Macleay River, when a tug was stationed there, things were the same, and it is much the same at the Richmond River, and has been for some years past. At Port Macquarie things are better than I have ever seen them throughout my whole experience. Captain Baird, the pilot, says, "I want the tug, say, 6 a.m. to-morrow, to sound the bar," and then goes out and sounds the bar and sets his beacons accordingly. This is the only instance that I have seen the two services working amicably together. I have known the tug-boat master to say he refused the pilot to sound the bar as he would not risk his boat, the said boat not being insured.

I think that if the services, pilot and tug, were amalgamated, it would do away with all this friction, and the pilot and crew would earn their living from tug fees. I do not consider that the pilots and crews have half enough to do; consequently, in such a small community, with divided authority, there is sure to be friction.

I should also recommend that a competent man be appointed to travel on the coastal steamers to inspect all bars, buoys, boats, and beacons, both river and crossing channels, to go without notice to any of the rivers, and inspect thoroughly.

I should recommend that the buoys near the heads of all our rivers should be of different shape, the port from starboard, and they could then be distinguished from each other in fog or hazy weather, and that, as we are working nearly all the river bars at night, through there not being enough water in the day, I should recommend that the buoys near the heads should be painted with luminous paint. One word more: I do not think it fair that when a tug is employed by the steamer, that when the steamer gets stuck on a crossing and is paying the usual rates, that the tug master should charge extra for running out an anchor. I have been charged extra both on the Richmond and Manning.

In conclusion, I beg you to understand that I have not said anything here in regard to any of the tug masters or pilots through personal animus, but have stated what is strictly correct.

Mr. Cooke, Secretary North Coast S.N. Co.

Remaining, &c.,

EDWARD FARRELL,

Master, s.s. "Electra."

The

Re Tug Boats on Northern Rivers.

R. Cooke, Esq., Secretary.
Dear Sir,

The North Coast Steam Navigation Company (Limited),
Head Office, 3, Sussex-street North, Sydney, 11th May, 1897.

I venture to offer an opinion, based on over twenty years' experience trading to the northern rivers, that a Government steam-tug, manned by the pilot and his crew, would be very much more satisfactory than the service which operates at the present time, and would, no doubt, result in a large saving of expenditure to the Government of the Colony; inasmuch, that the pilot would do all the towing necessary and, to a certain extent, must undertake the responsibility of a vessel going ashore whilst being towed in. The conditions which we labour under at present, do not place the master of a vessel in a good position, for should his vessel by chance lose the power of the tow-boat and drift ashore, he (the master) is held responsible, the owner of the tug escaping scot free. There is no doubt in my mind that should the existing service of subsidised tugs be dispensed with, and the acknowledged good services of the pilots and crews replace them, that the change would not alone be a vast improvement on the present order of things but the saving to the Government would be well worth consideration.

I have, &c.,
HORATIO WOOD,
Master, s.s. "Australian."

Re Tug and Pilot Service.

R. Cooke, Esq.
Dear Sir,

The North Coast Steam Navigation Company (Limited), May 14th, 1897.

I beg to state that in no instance have I found the present system to work satisfactorily; there is always a certain amount of bad feeling between the two services. On one occasion I arrived off a bar. Another steamer was standing off, and on flying a signal for the tug the tug came out with the pilot on board. The pilot hailed me, gave me the depth water and directions for inside channel. I therefore steamed in and the tug lost a towage. This is the sort of thing that causes enmity between the two, and it is certainly against the best interests of the shipping that it should exist.

I am strongly of the opinion that the tug ought to be in the hands of the pilot, and if any fees are to be charged they ought to take the form of tonnage dues, for the following reasons: If the pilot was empowered to charge for towage, he would naturally try to make as much as he could for his vessel; yet in many instances it is not necessary for the tug to give her tow-line to the steamer. All that is required is for the tug to go ahead and point out the best water and leave the steamer to follow. At present, to do that would cost the steamer a towage; and if the pilot was allowed to charge, it is only to be expected that the man that gave him most towages would get most attention.

I have, &c.,
W. B. NELSON,
Master, s.s. "Wyrallah."

43.

STEAM TUG SERVICE.

CONDITIONS of Contract referred to in Treasury Notice of the 7th April, 1896, calling for tenders for the supply and maintenance of a steam tug.

- (1.) The tug is to be available for towing vessels in and out of the place tendered for.
- (2.) The tug is not to leave its station at any time without the sanction of the Marine Board; and is to endeavour to be in the vicinity of the station when vessels are there ready for sea.
- (3.) Priority of service is to be given to the vessel being then ready for sea, and first notifying to the master of the tug the want of such service, except in the case of a vessel in actual danger, when assistance is to be promptly rendered.
- (4.) Should the tug at any time, or for any reason, be absent from her station without authority, or be incapacitated from performing her duty, the subsidy for the period of such absence or incapacity shall not be paid, unless the contractor shall substitute an approved steamer for the service during such absence.
- (5.) The ordinary rate for towing in or out, chargeable for the use of the tug, is not to exceed 4d. per registered ton, with a minimum of £1 10s. In the event of cargo being taken to and from vessels, a rate not exceeding 2s. 6d. per ton may be charged.
- (6.) In the event of dispute arising, by reason of special services having been rendered by the tug to stranded vessels, or to vessels otherwise in distress, the matter is to be settled by arbitration, without litigation, by the tug owner and the owner of the distressed vessel appointing arbitrators in the usual way, and calling in an umpire if necessary. The party decided against to pay the costs of the arbitration.
- (7.) The master of the tug will be required to take the pilot off (weather permitting) to any vessel signalling for his services in the offing. He will also be expected to render any assistance—such as sounding the bar, moving buoys, or otherwise aiding in the safe navigation of the port, &c., as may be required of him by the pilot.
- (8.) The service may be terminated by six months' notice on either side, subject to the right of the Government to cancel on breach of any of the conditions.
- (9.) All conditions being observed, the subsidy will be paid monthly at the Treasury.

The Treasury, New South Wales, 7th April, 1896.

G. H. REIF

44.

"RICHMOND RIVER TIMES," 20 MAY, 1897.

The Richmond River Tug.

THE tug "Protector" arrived off the bar on Tuesday night, having left Sydney on Sunday. Captain J. Lewis resolved to bring the vessel into the river instead of standing off till daylight, and in spite of the fact that the night was dark, the moon not having arisen, succeeded in doing so, crossing in about seven o'clock. To look at the vessel as she lays at the wharf, a superficial observer would scarcely comprehend the extent of repairs and improvements that have been made during the recent visit to Sydney. The hull, in the hands of Mr. D. Drake, of Balmain, was stripped and newly planked and caulked. A new keelson was also put in, new boiler beds, new stringer pieces, with diagonal stays between, 37 feet of new keel, new combings, and finally the hull was re-metalled all through, making the vessel far stronger than she has ever been before. The machinery, in the hands of Mr. W. Grant, of Pymont, has received the best attention. The boilers were lifted out, patches renewed, new smoke boxes provided, also new boiler beds and pistons. The condenser tubes were thoroughly cleaned, paddles rebushed, and machinery relined, consequently the whole may now be truthfully said to be in first-class order. The management of repairs to machinery was in the hands of Mr. Andrew Fenwick, while Captain J. Lewis, in conjunction with Captain J. Banks, supervised the repairs to the hull. Great credit is due to Captain Lewis for the expedient way he had the work carried out, and singular to say, his ideas of strengthening the hull were exactly the same as those of Captain J. Banks and Mr. Drake, he having taken the necessary timber with him to put those ideas into execution. Regarding the cost of repairs, which are the result of the work on the bar, Mr. A. Fenwick quite agrees with a par in a recent issue of the *Times* in which it was stated that the tug service is not all "beer and skittles." The work of renovation was completed on Saturday last and a trial spin made in the afternoon, when, beyond the usual stiffness consequent upon so thorough an overhaul, everything proved satisfactory. The trip up the coast was a fine one, and no hurry was made, Captain Lewis wisely opining that new bearings, &c., would best get into order by steady work.

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45.

MINUTE PAPER.

Subject :—Combining duties of Dredge Service Tugs and Pilot Tugs.

Department of Public Works, Engineer-in-Chief's Office, Sydney, 23 June, 1897.

CAPTAIN HIXSON asked me if I could say, in the absence of Mr. Darley, whether it would be practicable and advantageous to the Public Service to arrange for the towing work at the bars of the different ports to be performed by the tugs attached to the dredges, instead of, as now, by chartered steamers. In my opinion the dual service would not be workable, and in proof of this I will briefly state how the dredging is carried on at the different rivers.

Tweed Heads.—Dredging by sand-pump; no tug required.

Richmond Heads.—Dredging by sand-pump; no tug required. A tug is used by Mr. Keele for towing punts with 20-ton blocks from the quarry 20 miles away to Ballina, but the vessel could not be spared for an hour on account of so many men being dependent upon the regularity of the tug.

Clarence Heads.—The improvement to the bar and crossing by training walls has rendered dredging at the Heads unnecessary. The dredge is employed from 10 to 40 miles away, and the tug attached is a small launch worked by one man, and arrangements are in progress for employing a pump so as to dispense with the tug.

Bellinger Heads.—Sand-pump employed; no tug.

Nambucca Heads.—Sand-pump employed; no tug.

Macleay Heads.—Sand-pump employed; no tug. A ladder-dredge with a small tug may be commissioned for work near Kempsey, 28 miles from Heads.

Port Macquarie.—Sand-pump nearly completed; no tug required.

Camden Haven.—Sand-pump working; no tug.

Manning River.—Dredge with tug generally working many miles from Heads; tug cannot be spared.

Cape Hawke.—Sand-pump; no tug.

Port Stephens.—Sand-pump; no tug.

Wollongong.—No dredge stationed here.

I should have stated that two small launches are used by Mr. Blomfield at the Clarence Heads training walls, but as they will not be required when the work is finished it would not be advisable to calculate upon them for bar work; besides, they are unsuitable for sea towing.

A. B. PORTUS.

46.

MINUTE PAPER.

Subject :—Tugs for Bar Harbours.

Department of Public Works, Engineer-in-Chief's Office, Sydney, 9 July, 1897.

The Engineer-in-Chief for Public Works to The Chairman of the Royal Commission on the Marine Board.

FORWARDED for the information of the Royal Commission on Marine Board.

I think Mr. Portus' minute contains the information asked for. I have prepared a schedule showing in detail the probable cost of crew, working expenses, and maintenance of each class of boat. From the experience gained with our own tug boats, I find it costs on an average, taking one year with another, just about 10 per cent. of the original cost of each boat to maintain it. This, of course, includes repairs, painting, docking, and keeping everything up to a high state of efficiency, so that, after a number of years, most of our boats are, for all practical purposes, as good as new.

In my opinion, two of the large class of boats would be necessary, which may be called Class A, and nine of the smaller boats, called Class B.

The two Class A boats to be stationed at the Richmond and Clarence Rivers, and when one of them may be in need of an overhaul, it should be relieved temporarily by sending a Class B boat to the Clarence, but always keeping a Class A boat at the Richmond.

The Class B boats are required as follows :—

Tweed	1	Manning	1
Bellinger	1	Cape Hawke	1
Nambucca	1	Wollongong	1
Macleay	1	Spare relief boats	2
Port Macquarie	1		
Camden Haven	1		
			9

The boat stationed at Clarence River should act as tender, supplying stores to Solitary Island Lighthouse, having more time to spare than the Macleay boat, and the Clarence being a safer and more convenient port to send stores to.

I invite special attention to Mr. Portus' observations about the eight-hour system. It is obvious that if this service is established, it must be under special regulations, apart from any other branch of the Public Service.

The tug boat crews may have long hours of continuous work occasionally to suit the tides, but, on the other hand, they will, at other times, have days of idleness when the bar is too rough to work, or no vessels approaching.

C. DARLEY.

I concur generally with Mr. Darley, except that I think the boats are unnecessarily heavily manned. I would point out that as the master of the boat would be the pilot, the whole cost of the existing pilot services at those ports would be saved.—R.H., 9/7/97.

SCHEDULE of probable cost and annual expenses connected with Tug-boats for Pilot Service.

Class A.		Class B.	
	£		£
Estimated cost	3,200	Estimated cost	2,300
Crew—		Crew—	
Master, at £16 per month	192	Master, at £14 per month	168
Engineer, at £16 per month	192	Engineer, at £14 per month	168
Firemen, at £11 per month	132	Firemen, at £7 10s. per month*	90
Seaman, at £9 10s. per month	114	Boy, at £5 10s. per month	66
Coal (say 18 tons per month), at 13s. = £11 14s.	140	Coal (say 10 tons), at 14s. = £7	84
Stores (say)	75	Stores (say)	60
Maintenance, including wear and tear, at 10 per cent. on cost of boat	320	Maintenance, at 10 per cent. on cost	230
	1,165		866
Write off capital value of boat (say, 5 per cent. per annum)	160	Write off capital value of boat (say 5 per cent. per annum)	115
	£1,325		£981
Interest, at 3 per cent.	96	Interest, at 3 per cent.	69

* On some of the rivers the firemen might be dispensed with—work to be divided between the engineer and a smart lad.

C. DARLEY,

9/7/97.

MINUTE

MINUTE PAPER.

Subject:—Tugs for Bar Harbours.

Department of Public Works, Engineer-in-Chief's Office, Sydney, 9 July, 1897.

FIRST-CLASS Tugs.—A suitable tug for the Clarence and Richmond would cost, new, about £3,200. Dimensions, about 85 to 90 ft. x 19 ft. 6 in., with 7 ft. draught. Engines, 13 in. and 26 in.; steam, 120 lb. The crew to consist of:—Master, at £16 per month; engineer, £16; fireman, £11; seaman, £9 10s.; but it should be clearly understood that no eight-hour system should apply to this service. The wages named are higher than those paid by owners of tugs now performing the service.

For the other rivers the class of tug should be a vessel 80 x 17½, with 6 ft. draught, or for very shallow bars, 5 ft. Engines, 11 and 22, with 120 lb. steam. Estimated cost, new, £2,300. Crew:—Master and engineer, £14 per month; fireman, £7 10s.; seaman, £5 10s. Conditions of work same as stated above. Crews to find themselves with provisions. The cost for coal, stores, repairs, might be put down at £500 per year for the large tugs, and £400 for the small ones.

Depreciation, 9 per cent. per annum.

A. B. PORTUS.

47.

RETURN showing amounts paid by the North Coast Steam Navigation Company (Limited) for Towage at the Northern Rivers.

	Richmond.	Nambucca.	Bellinger.	Manning.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Half-year—				
30th December, 1891	609 0 0	27 0 0	.....	.....
Year ending—				
31st December, 1892	678 0 0	21 0 0	18 0 0	.....
31st December, 1893	417 0 0	74 0 0	31 0 0	199 0 0
31st December, 1894	111 0 0	69 0 0	47 0 0	122 0 0
31st December, 1895	296 0 0	61 0 0	58 0 0	161 0 0
31st December, 1896	1,025 0 0	128 0 0	82 0 0	86 0 0

48.

COMMUNICATION from Mr. Alfred Langley in connection with his Evidence.

In my opinion it would be sufficient if the Marine Board were to issue instructions to the masters of all the tugs that they must tow vessels of a night when there is sufficient water and favourable weather, and also instruction to all the pilots that they must render all assistance possible with their crews, by putting up leading lights of a night and in any other way. Some of the pilots and captains of tugs do this now, but others, I believe, decline to do so.

ALFRED LANGLEY.

49.

MEMORANDUM from Henry Selfe, Government Engineer Surveyor, Marine Board Office, Circular Quay.

To the Secretary, Royal Commission.

Sydney, 23 June, 1897.

Sir, As the great object of the Commission is economy, I do myself the honour to respectfully call their attention to the antiquated method in use for lighting Sydney Harbour at the Heads.

A small tower could be erected on Sow and Pigs reef, and it, together with the south reef lighthouse and leading lights, be connected by cables, and illuminated from the South Head lighthouse.

The lights are all of moderate power, and incandescent lamps would be suitable, the whole installation being in duplicate.

A lighthouse without keepers might seem strange, but at the present stage of advancement in electric lighting I am of opinion an up-to-date expert could only approve of it.

Trusting I am not exceeding the privileges of my position,

I have, &c.,

HENRY SELFE.

Acknowledge receipt of letter, and thank Mr. Selfe for suggestions contained in his communication, which will receive due consideration.—J.W.H., per A.G., 24/6/97. Done.—24/6/97. Refer to Secretary of Royal Commission.—J.W.H., 25/6/97. A. F. Basset Hull, Esq., B.C., 25/6/97. Read. Mr. Selfe to be summoned before the Commission on Friday, the 2nd July.—28/6/97. Mr. Henry Selfe.—A.F.B.H., 28/6/97.

50.

Marine Board of New South Wales, Sydney, 12 July, 1897.

Sir, Referring to my late examination by the Royal Commission on the Marine Board, I beg to inform you that I have put myself in communication with Mr. Elwell, and ascertained that he has no scheme, nor has he ever heard of one, for substituting electricity for present appliances at the light-ship, pile-light, &c.

This arrangement could, no doubt, be carried out, but it is surrounded by many difficulties, and the expense would be so great as to justify the Marine Board in retaining the present system, which answers admirably for fogs and storms and all conditions of bad weather, at all events for the present.

I have, &c.,

FRANCIS HIXSON,

President.

The Secretary, Royal Commission on Marine Board.

Read.—A.F.B.H., 14/7/97.

[Two charts.]

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

MARINE BOARD, NEWCASTLE.

(RETURN RESPECTING RETIREMENT OF MEMBERS OF.)

Printed under No. 6 Report from Printing Committee, 3 June, 1897.

SCHEDULE.

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No. 1.

Minute by The Honorable the Premier.

5 November, 1896.

INFORM Mr. Brooks that in the opinion of the Government his positions as Lloyd's Surveyor and Shipwright Surveyor to the Sydney Marine Board are inconsistent with his position as member of the local Marine Board, and state that he must either give up the latter position or the other positions. State also that I hope he will definitely act upon this suggestion at once, as otherwise it will be the duty of the Government to remove him from the local Marine Board without further delay.

G.H.R.

Mr. Robberds.—F.K., 5/11/96. Informed.—C.E.F.R., 6/11/96. Records.

No. 2.

Mr. Thomas Brooks to The Under Secretary for Finance and Trade.

Sir,

Newcastle, 13 November, 1896.

In reply to your favour dated 6th November, I beg to state that in deference to the wishes of the Hon. the Premier and Treasurer, I tender my resignation as a member of the Newcastle local Marine Board, and in doing so feel, whether rightly or wrongly, that I am the victim to make a holiday for some one.

The latter paragraph of your letter, wherein you state if I do not take definite action it will be the duty of the Government to remove me from the local Marine Board, was unnecessary and uncalled for, and a gratuitous insult.

I have, &c.,

THOMAS BROOKS.

Submitted.—F.K., 16/11/96. Approved.—G.H.R., 16. Mr. Robberds.—F.K., 16/11/96.
Acknowledged.—C.E.F.R., 17/11/96. The Secretary, Marine Board.—F.K., 19/11/96. Noted
and returned.—G.S.L., 12/5/97. The Under Secretary, Finance and Trade.

No. 3.

Mr. Stewart Keightley to The Honorable the Premier.

Dear sir, Newcastle, 1 October, 1896.
 Replying to your letter of the 30th ultimo, Lloyd's surveyor does quite five-sixths (5ths) of
 all the surveying at this port. Yours, &c.,
 STEWART KEIGHTLEY.

For Cabinet.—G.H.R., 2.

No. 4.

Mr. Thomas Brooks to The Under Secretary for Finance and Trade.

Sir, Newcastle, 17 January, 1895.
 In reply to your letter of 9th instant, I would have responded earlier to your previous communication of 22nd October, 1894, except, from the fact, that I cannot see why I should be selected to give effect to the opinions expressed therein as every member of the local Board, as at present constituted, are under the same disabilities as myself, all being connected with shipping interests.
 I can only give you my assurance that I will refrain from taking any part in an inquiry where I have been engaged professionally.

Yours, &c.,
 THOMAS BROOKS.

No. 5.

Mr. C. F. Stokes to The Under Secretary for Finance and Trade.

Sir, Newcastle, 21 November, 1894.
 I have the honor to acknowledge your letters of 17th ultimo and 17th instant.
 I would state for the information of the Honorable the Colonial Treasurer that I have a house of business (Charles F. Stokes & Co.) in Newcastle, and one in Sydney (R. Towns & Co.), so that my time is passed between the two cities.
 I own a residence in Newcastle, and my wife one in Sydney, she was ordered by her medical adviser to reside out of Newcastle, the strong sea air not agreeing with her.
 Communication by train and steam being so frequent and speedy, I am always in either city when required. My travelling being at night, I have the clear day in either city, and when necessary I stay longer. After the first of the coming year I shall be in Newcastle even more frequently.
 My attendance at the sittings of the Board is so constant and regular that it is impossible that any public inconvenience has at any time been experienced through my absence.

I have, &c.,
 C. F. STOKES.

I think nothing more need be done.—G.H.R., 30. Records. Mr. Ross, reminder to Mr. Brooks.—F.K., 8/1/95. Reminder.—M.R., 9/1/95. Marine Board, at Newcastle.—Messrs. Stokes and Brooks have not replied to Treasury letters. Registrar, please say.—F.K., 14/11/94. Not to Treasury letters of 15th (to Mr. Stokes), and 22nd October (to Mr. Brooks). Papers herewith.—A.L., 14/11/94. The Under Secretary. Remind.—G.H.R., 16. Mr. Ross.—F.K., 16/11/94. Reminders sent.—M.R., 17/11/94.

No. 6.

Mr. Thomas Brooks to The Under Secretary for Finance and Trade.

Sir, Newcastle, 17 October, 1894.
 I have the honor to acknowledge receipt of your letter No. 1,122, of the 5th instant, re Messrs. Thompson and Windeyer's letter, dated 7th September, 1894, and in reply thereto beg to state:—
 1. I did survey the s.s. "Ceres," for the Harbours and Rivers Department, for the purpose of ascertaining the extent of the damage, and to advise as to her seaworthiness to proceed to Sydney for repairs (and not for the purpose of ascertaining the cause of the damage, as implied by Messrs. Thompson and Windeyer).
 2. I informed Mr. Thompson, before he subpoenaed me, that I knew nothing about the collision, except that it had occurred, and yet, in the face of these facts, he subpoenaed me for the self-evident purpose of preventing my sitting at the inquiry.
 3. After the usual Board business was completed on the 11th October, and the inquiry about to commence, I informed the Chairman that I was subpoenaed as a witness, and regretted I could not sit and assist in the inquiry. I accordingly left the room, and remained in attendance while two witnesses were examined (Dunnet and Steele), after which the Board adjourned. Mr. Thompson then informed me that as I could not throw any light on the cause of collision he would not require me to attend any longer as a witness.
 4. I must admit that I felt indignant at what I believed to have been a trick on the part of Mr. Thompson to prevent me from sitting, and bringing my common sense and experience to bear on the inquiry; therefore, this action on the part of Mr. Thompson was quite unnecessary, for, from my observation and long experience of ship-masters visiting this port, I believe Dunnet, the master of the "Bungaree," to be one of the best masters in Newcastle.
 5. When discharged as a witness, I attended next morning, the 12th, and informed the Chairman that I would sit. Mr. Thompson objected and protested, but it being an open court I knew that so long as I did not take part in the finding, there was nothing to prevent my enjoying the same privileges as the public.
 6. On the 8th November, the Board met for the usual business, and when finished the Chairman announced that they must give their finding in the "Ceres"-"Bungaree" collision. I informed him that, although I sat during part of the inquiry in view of Mr. Thompson's protest, and my not having heard the evidence

evidence of two witnesses I must decline to take part or join in the finding. Although not taking part in the finding, I sat throughout, except when Dunnet and Steele's evidence was taken. I have perused their evidence very carefully, and have come to the conclusion that Mr. Thompson is attempting to make a scapegoat of Mr. Stokes and myself to extort money from the Government. I beg to refer you to the Chairman of the local Board who will verify my statements as to my not joining in the finding.

Trusting this explanation will prove satisfactory,

I am, &c.,

THOMAS BROOKS.

Inform Mr. Brooks that it is not considered desirable that a gentleman however otherwise competent should be a member of the Marine Board while following the profession of a marine surveyor. Inform him that in my opinion he should either discontinue the practice of his profession or terminate his connection with the Marine Board.—G.H.R., 19.

Mr. Galloway.—F.K., 20. Informed.—F.H.G., 22/10/94.

No. 7.

Mr. C. F. Stokes to The Under Secretary for Finance and Trade.

Sir,

Newcastle, 10 October, 1894.

I have the honor to acknowledge receipt of your communication, M. 1,124, 6402, Misc. of date 5th instant, with a copy of a letter from Messrs. Thompson and Windeyer, dated 7th September last.

In reference to the paragraph in the letter from these gentlemen respecting myself, I have the honor to state that as circumstances prevented me sitting on the inquiry in question on the second day, "I did not sit on the inquiry on the last nor on any other day except the first."

The local Board deliberated and arrived at their finding during my absence, and entirely irrespective of and without in any way referring to me.

Messrs. Thompson and Windeyer are therefore in error in their inference that I took any part in the finding.

I have, &c.,

C. F. STOKES.

I would suggest that Messrs. Thompson and Windeyer be so informed.—F.K., 12. Appd.—G.H.R. Mr. Galloway. Then write to Mr. Stokes and ask him if it would suit his convenience to reside in Newcastle.—F.K., 13. Informed.—F.H.G., 15/10/94.

No. 8.

Messrs. Thompson and Windeyer to The Under Secretary for Finance and Trade.

Sir,

Newcastle, 7 September, 1894.

For the information of the Honorable the Premier we do ourselves the honor to bring under his notice certain facts in connection with the method of working the Marine Board at this port, with the view, in the first place, of showing how absolutely necessary it appears to be that some alteration, as proposed by the Government with regard to the Marine Board in Sydney, should be made in its constitution and working, and secondly, that some redress may be afforded to our clients, Messrs. J. and A. Brown, of this city, for the mischief that has been caused to them in the particular matter to which we desire to draw attention.

In the month of October last a collision took place in the harbour of Newcastle between the Government steamer "Ceres," under the command of Captain Hare, and the tug "Bungaree," belonging to our clients, in consequence of which our clients applied to the local Marine Board for an inquiry, which was granted, and duly came on for hearing.

Mr. Thomas Brooks surveyed the "Ceres" for the Government shortly after the collision, and whilst the damages to that vessel were still quite fresh and apparent.

From our instructions it appeared to us that Mr. Brooks could give very material and valuable evidence as to the way in which the collision probably occurred, and we accordingly caused him to be subpoenaed, and he was paid the sum of one guinea therewith.

Our Mr. Thompson, who conducted the inquiry on behalf of our clients, was unable to see Mr. Brooks as to the evidence he could give until the inquiry had commenced, and after hearing what Mr. Brooks had to say on the point as to which it was believed he could give evidence, Mr. Thompson informed him that he need not further attend.

Mr. Brooks was at this time a member of the Marine Board, but was not present at the sittings of the Board when the evidence of several of the witnesses for Messrs. J. and A. Brown was given.

Just before the opening of the inquiry (which extended over many days) on one of the days of hearing, Mr. Thompson was informed that Mr. Brooks intended to sit that day, and accordingly Mr. Brooks appeared in the Board-room, and before the proceedings opened addressed the Chairman and said he intended to sit in the inquiry.

Mr. Thompson then addressed, and pointed out that it appeared to him that Mr. Brooks certainly could not, and his own sense of propriety should show him that he ought not, to sit on the inquiry, for, putting aside the matter of the subpoena, under which Mr. Thompson admitted his attendance was not required, Mr. Thompson pointed out that Mr. Brooks had not heard the evidence that had already been adduced, and being in effect both a jurymen and a judge at the Board he was bound to give his decision according to the evidence, which then he could not do, but independently of that fact he had been admittedly employed and paid by the Government for his survey and report of the damage to the "Ceres," in the matter of the very collision which was the subject of inquiry.

The Chairman said the Board could not prevent Mr. Brooks sitting if he chose, and thereupon Mr. Thompson handed in a written protest, which should be with the papers in the case to which Mr. Thompson craves leave to direct the Premier's serious attention.

The inquiry proceeded, and Mr. Brooks sat throughout, and the decision of the Board, in which Mr. Brooks joined, was that both parties were equally in fault, which, according to Mr. Thompson's view of the matter, was dead in the teeth of the evidence and of the probabilities of the case.

It should be here mentioned that the Captain of the "Ceres," shortly before this, had been one of the parties in another collision case in this harbour which occurred shortly before, in which case the decision showed that he had been utterly in fault.

We

We now desire to call the Premier's attention to another matter with regard to the same inquiry which, though not so startling in its aspect as that in which Mr. Brookes is concerned, yet shows what a curious view members of the Board take of their duties.

Mr. C. F. Stokes was a member of the Board at the time of inquiry. He attended and sat the first day, and never again, to our belief, until the last day, when he sat again; and he, too, joined in giving the decision.

It appears to us that it is virtually impossible that justice can be done in any such case as that referred to if this practice of members of the Board, disregarding the principle of *audi alteram partem*, be allowed to obtain, and members come and sit when and as long as they please.

Consequent upon the collision, our clients have been put to considerable expense in repairing their vessel and in demurrage, and they have deemed it their duty to commence proceedings for the recovery of damages, as the late Government, guided, no doubt, by the faulty decision of the local Marine Board, refused to make compensation.

We conceive, however, that it is not too late to bring the matter of this claim once more under attention; and we have, therefore, the honor to ask, that as soon as the Premier can spare time to go into the whole matter, the papers in the case may be submitted to him for inspection, when, we think, it will be seen that our clients are certainly entitled to compensation, without being compelled to go through the whole inquiry case once more in the Supreme Court.

Awaiting a reply, at the convenience of the Premier.

We have, &c.,

THOMPSON AND WINDEYER.

Mr. Galloway.—Acknowledge receipt, please.—F.K., 10/9/94. Acknowledged.—F.H.G., 11/9/94. The President of the Marine Board, for inquiry and report.—Does Mr. Stokes live in Newcastle? Does Mr. Brooks practise as a marine surveyor?—G.H.R., 17/9/94. The Secretary, Marine Board.—F.K., 17.

I have ascertained that Mr. Stokes does not live at Newcastle; also that Mr. Brookes does practise as a marine surveyor, although he is a member of the local Marine Board. Perhaps an official communication should be sent from the Treasury to each of these gentlemen, asking if they can, under the circumstances, show why they should not be removed from their positions as members of the local Marine Board at Newcastle.—FRANCIS HIXSON, 26/9/94. The Under Secretary for Finance and Trade.

Approved.—G.H.R., 28. Mr. Galloway.—F.K., 28. Copy of Messrs. Thompson and Windeyer's letter sent to Messrs. Brooks and Stokes.—F.H.G., 5/10/94.

No. 9.

Captain H. Newton to The Under Secretary for Finance and Trade.

Sir,

Harbour-master's Office, Newcastle, 6 January, 1897.

I do myself the honor to acknowledge the receipt of your letter of the 31st ultimo, and, in compliance with your request, beg to tender my resignation as a member of the local Marine Board at this port, which position I have held for nearly nine years, and since the retirement of Captain D. T. Allan.

I would, however, respectfully state, that when promoted to the office of Harbour-master, in December, 1884, I held the position of Inspector to the Marine Board, also Examiner for Pilotage at £50 per annum, which was part of my salary.

These offices I held until appointed a member of the local Marine Board. I could not, however, consistently hold both positions, consequently resigned the office of Inspector; that of Examiner for Pilotage I still retain without emolument.

Under these circumstances, my retirement from the local Marine Board is a reduction in my salary of £54 per annum, which I trust may be considered.

I have, &c.,

H. NEWTON, H.-M.

Submitted.—F.K., 7/1/97. Resignation accepted.—J.N.B., 7/1/97. Mr. Robberds.—F.K., 7/1/97. Informed.—C.E.F.R., 8/1/97. Records.

Harbour-master's Office, Newcastle, 6 January, 1897.

Captain H. R. Cross, Chairman, local Marine Board, Newcastle.

Dear sir,

I have been invited by the Government to sever my connection with the Marine Board by resignation.

In compliance therewith, I beg to tender my resignation as a member of the local Marine Board, after a membership of nearly nine years.

I am, &c.,

H. NEWTON, H.-M.

The Chairman and remaining member of the local Board (Mr. Reid) forward, with much regret, this communication from Captain Newton, and desire to say that the Board will suffer great loss from his absence from their deliberations. By order.—J. H. VERRILL, Secretary, L.M.B. Newcastle 6/1/97.

In forwarding this communication the Marine Board begs to point out that the local Marine Board at Newcastle is ineffective at the present time, from the fact that there are not sufficient members on it to form a quorum. By order.—GEO. S. LINDEMAN, 12/1/97. The Under Secretary for Finance and Trade. Seen.—J.N.B., 14/1/97. Records.

Telegraphic message from Henry Newton, Harbour-master, Newcastle, to F. Kirkpatrick, Under Secretary for Finance and Trade, Sydney.

6 January, 1897.

"My resignation posted to you this day."

Seen.—J.N.B., 7/1/97. Records.

No. 10.

J. H. Veitch to The Secretary Marine Board, Sydney.

Sir, Office of the local Marine Board at Newcastle, 30 December, 1896.
I have the honor, by direction, of forwarding the attached papers referring to the proposed resignation of Captain Newton from the local Marine Board.

The said Board wish to express their regret that such a step has been thought necessary, as Captain Newton has been and is a most valuable member, and the local Board have always received the greatest assistance from his experience and services, which his position as Harbour-master in no way interferes with.

The Board therefore trust that the matter may be reconsidered.

I have, &c.,
J. H. VEITCH,
Secretary, Local Marine Board.

This communication, which has been received from the local Board at Newcastle, is forwarded for the consideration of the Government. By order—G. S. LINDEMAN, 5/1/97. The Under Secretary for Finance and Trade.

May be informed that the subject has been fully considered and the decision cannot be reversed. Captain Newton has already resigned.—J.N.B., 7/1/97. Mr. Robberds.—F.K., 7/1/97. Done.—C.E.F.R., 8/1/97. Records.

No. 11.

The Under Secretary for Finance and Trade to Captain H. Newton.

Sir, The Treasury, New South Wales, Sydney, 21 December, 1896.

I am directed to inform you that the Cabinet have recently had under consideration the constitution of the Newcastle Marine Board—and that the conclusion was arrived at that it was inadvisable that the Harbour-master at that port should be Chairman of the Board,—but should rather be the Board's officer. In intimating that it is the wish of the Government that you should resign the position of Chairman of the Newcastle Marine Board, I am, however, to explain that the step is in no wise to be considered as in any way reflecting upon your personal competency or fitness for that or any other position in the Public Service.

I have, &c.,
F. KIRKPATRICK,
Under Secretary for Finance and Trade.

No. 12.

Captain H. Newton to The Under Secretary for Finance and Trade.

Sir, Harbour Office, Newcastle, 24 December, 1896.

I do myself the honor to acknowledge the receipt of your letter of 21st instant *re* retirement as Chairman of the Newcastle Marine Board.

I would most respectfully point out that the Cabinet are under a misapprehension in assuming that I am Chairman of the local Marine Board. The previous Harbour-master was Chairman for many years.

I am a member, however, and will lay the letter before the Board at their next meeting.

In the meantime I would be glad to be informed if it is the intention of the Government to cause me to resign my connection with the Board as a member.

I have, &c.,
H. NEWTON,
Harbour-master.

Submitted.—F.K., 29/12/96. Harbour-master Newton to be informed that the Government disapprove of his association with the Marine Board, and suggest his retirement from the position. See Premier's minutes.—J.N.B., 29/12/96.

Mr. Robberds.—F.K., 29/12/96. Done.—C.E.F.R., 31/12/96.

No. 13.

W. T. Dick, Esq., M.P., to The Honorable the Premier.

Dear sir, Newcastle, 14 December, 1896.

I beg once more to bring under your notice the matter of the Marine Board appointment. General dissatisfaction will be caused among the mercantile and nautical men if a gentleman be appointed not qualified in the way of special knowledge for such a post, however unexceptionable he may be in other respects. You may have recognised in your visits to the city that this matter is, in the eyes of the citizens, an important one, and should another appointment be made similar to some in the past, odium will attach to the Government and (by reflection) to me. I recognise it is not my business (though it certainly is my interest) to interfere in such a matter.

Yours, &c.,
W. T. DICK.

For Cabinet.—G.H.R., 16.

Cabinet decide that Harbour-master, Newcastle, should not be Chairman of the Newcastle Marine Board. The Government consider that such an officer should be the servant of the Board, rather than its head. Inform Captain Newton that it is the wish of the Government he should resign the position of Chairman; also that this step is not to be considered as in any way a reflection upon his competency, or fitness for the position, or any other position in the Public Service.—G.H.R., 18.

Mr. Robberds.—F.K., 18/12/96. Captain Newton.—C.E.F.R., 21/12/96. Records.

1897.

LEGISLATIVE ASSEMBLY,
NEW SOUTH WALES.

REPORT

OF THE

ROYAL COMMISSION

APPOINTED TO INQUIRE INTO THE

Cause of the Dangers to which Vessels Carrying Coal
are said to be peculiarly liable, and as to the
best means that can be adopted for removing or
lessening the same;

TOGETHER WITH

APPENDIX AND MINUTES OF EVIDENCE.

APPOINTED 28TH JULY, 1896.

Presented to Parliament by Command.

Printed under No. 3 Report from Printing Committee, 13 May, 1897.



SYDNEY: WILLIAM APPLIGATE GULLICK, GOVERNMENT PRINTER.

1897.

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Commission.

VICTORIA, by the Grace of God, of the United Kingdom of Great Britain and Ireland, Queen,
Defender of the Faith, and so forth,—

To Our Trusty and Well-beloved

PROFESSOR RICHARD THRELFALL, M.A., and
EDWARD FISHER PITTMAN, F.G.S., A.R.S.M.,—

Greeting:—

KNOW ye, That We, reposing great trust and confidence in your ability, zeal, industry, discretion, and integrity, do, by these presents, authorise and appoint you, or any one of you, as hereinafter mentioned, to make a diligent and full inquiry into the cause of the dangers to which vessels carrying coal are said to be peculiarly liable, and as to the best means that can be adopted for removing or lessening the same: And We do, by these presents, grant to you, or one of you, at any meeting or meetings to which both of you shall have been duly summoned, full power and authority to call before you all such persons as you may judge necessary, by whom you may be better informed of the truth in the premises, and to require the production of all such books, papers, writings, and all other documents as you may deem expedient, and to visit and inspect the same at the offices or places where the same or any of them may be deposited, and to inquire of the premises by all lawful ways and means: And Our further will and pleasure is that you do, within three months after the date of this Our Commission, certify to Us, in the office of Our Colonial Secretary, under your hands and seals, what you shall find touching the premises: And We hereby command all Government Officers and other persons whomsoever within Our said Colony, that they be assistant to you and each of you in the execution of these presents: And We appoint you, the said Professor RICHARD THRELFALL, to be President of this Our Commission, which said Commission We declare to be a Commission for all purposes of the Act 44 Victoria No. 1, intituled "*An Act to regulate the taking of Evidence by Commissioners under the Great Seal.*"

In testimony whereof, We have caused these Our Letters to be made Patent, and the Great Seal of Our said Colony of New South Wales to be hereunto affixed.

Witness our Right Trusty and Well-beloved Cousin, HENRY ROBERT, VISCOUNT HAMPDEN, Our Governor and Commander-in-Chief of Our said Colony of New South Wales and its Dependencies, at Government House, Sydney, in New South Wales aforesaid, this twenty-eighth day of July, in the year of Our Lord One thousand eight hundred and ninety-six, and in the sixtieth year of Our Reign.

(L.S.)

HAMPDEN.

By His Excellency's Command,
JAMES N. BRUNKER.

Entered on Record by me, in REGISTER OF PATENTS No. 18, page 76, this twenty-eighth day of July, one thousand eight hundred and ninety-six.

For the Colonial Secretary and Registrar of Records,
CRITCHETT WALKER,
Principal Under Secretary.

EXTENSION OF COMMISSION.

ROYAL COMMISSION OF INQUIRY INTO THE DANGERS TO WHICH SHIPS CARRYING COAL CARGOES
ARE LIABLE.

WHEREAS it is necessary to extend the time within which the Commissioners are to make their report in the above matter: Now, therefore, I do hereby, with the advice of the Executive Council, extend the time within which the said Commissioners are to make such report for a period of three months,—to take effect from the 28th instant.

Given under my hand, at Government House, Sydney, this twenty-second day of October, one thousand eight hundred and ninety-six.

HAMPDEN.

By His Excellency's Command,
JAMES N. BRUNKER.

FURTHER EXTENSIONS.

ROYAL COMMISSION OF INQUIRY INTO THE DANGERS TO WHICH SHIPS CARRYING COAL CARGOES
ARE LIABLE.

WHEREAS the time appointed for the return of the Commission in the above matter was, by an instrument dated the twenty-second day of October last, extended for a period of three months: And whereas it is necessary to extend the same still further: Now, therefore, I do hereby, with the advice of the Executive Council, extend the time within which the Commission are to make their return to and for a further period of two months beyond the time in and by the aforesaid instrument appointed for the purpose,—to take effect from the 28th ultimo.

Given under my hand, at Government House, Sydney, this third day of February, one thousand eight hundred and ninety-seven.

By Deputation from His Excellency,
FREDK. M. DARLEY,
Lieutenant-Governor.

By His Excellency's Command,
JAMES N. BRUNKER.

WHEREAS the time appointed for the return of the Commission in the above matter was, by an instrument dated the third day of February last, extended for a period of two months: And whereas it is necessary to extend the same still further: Now, therefore, I do hereby, with the advice of the Executive Council, extend the time within which the Commission are to make their return to and for a further period of one month beyond the time in and by the aforesaid instrument appointed for the purpose,—to take effect from the 28th instant.

Given under my hand, at Government House, Sydney, this thirty-first day of March, one thousand eight hundred and ninety-seven.

HAMPDEN.

By His Excellency's Command,
JAMES N. BRUNKER.

PROCEEDINGS OF THE COMMISSION.

27 AUGUST, 1896.

THE Commission met at the University, Sydney, at 2:30 p.m., and examined Captain Francis Hixson, President of the Marine Board.

1 SEPTEMBER, 1896.

Left Sydney for Newcastle.

2 SEPTEMBER, 1896.

Morning.—Inspected the loading of vessels at Bullock Island, Newcastle.

Afternoon.—Met at the Custom-house, Newcastle, at 2:15 o'clock, and examined the following witnesses:—Messrs. T. Brooks, A. Bertram, and J. Russell.

3 SEPTEMBER, 1896.

Morning.—Inspected the trimming of two vessels at Bullock Island, Newcastle.

Afternoon.—Met at the Custom-house, Newcastle, at 2:15 o'clock, and examined the following witnesses:—Captain Parkhill, Mr. J. D. Beeston, Captain H. Porter, and Messrs. H. Ford and J. Gallaghan.

4 SEPTEMBER, 1896.

Morning.—Visited the Wickham and Bullock Island Colliery.

Afternoon.—Met at the Custom-house, Newcastle, at 2:30 o'clock, and examined the following witnesses:—Captain R. C. Perry, Mr. J. M. Hyde, Captain D. Williams, Messrs. W. H. Cremor and A. Wallace.

Visited the vessel, "Geneva M. Tucker," to view an enlarged hatch.

5 SEPTEMBER, 1896.

Returned to Sydney.

9 SEPTEMBER, 1896.

Morning.—Left Sydney for Newcastle.

Afternoon.—Met at the Custom-house, Newcastle, at 2:30 o'clock, and examined the following witnesses:—Messrs. J. May, J. Whittaker, A. Gardiner, and J. Dixon.

10 SEPTEMBER, 1896.

Morning.—Visited two vessels which were preparing for coal cargoes, and interviewed the masters.

Afternoon.—Met at the Custom-house, Newcastle, at 2:30 o'clock, and examined the following witnesses:—Messrs. A. Ross, H. Harper, W. Marsden, W. R. Logan, and J. O'Sullivan.

11 SEPTEMBER, 1896.

Morning.—Visited the Wallsend Colliery.

Afternoon.—Met at the Custom-house, Newcastle, at 2 o'clock, and examined the following witnesses:—Captain H. R. Cross, Messrs. G. Bewick, W. M'Neil, R. A. Buhl, G. Wycherly, and W. F. Ossinger.

12 SEPTEMBER, 1896.

Returned to Sydney.

23 SEPTEMBER, 1896.

Morning.—Left Sydney for Newcastle.

Afternoon.—Visited the Wallsend Colliery with the object of ascertaining the extent of the breakage of coal in the loading of the waggons, and witnessed experiments conducted with a view to prevent such breakage. Inspected a "small-coal" hopper at the colliery, and from it took samples, for future analysis, of coal which was at and above the normal temperature.

24 SEPTEMBER, 1896.

Morning.—Visited the Australian Agricultural Company's Borehole pit to examine portions of the mine where fires had occurred.

Afternoon.—Inspected the coal shoots of the Australian Agricultural Company at Newcastle.

25 SEPTEMBER,

25 SEPTEMBER, 1896.

Morning.—Inspected the loading of coal from the Australian Agricultural Company's shoots; and visited the Waratah Colliery to examine the system there adopted of screening coal by means of shifting screens and a continuous belt.

Afternoon.—Met at the Custom-house, Newcastle, at 2:30 o'clock, and examined the following witnesses:—Messrs. Jesse Gragson, G. Hewison, R. West, J. Price, and T. Burke.

Visited the vessel "Les Adelphe" referred to by R. West in evidence.

Inspected the coal distributing appliance patented by Mr. H. Harper.

26 SEPTEMBER, 1896.

Returned to Sydney.

Consulted literature having reference to the subject of the Commission's inquiry.

1 OCTOBER, 1896.

Afternoon.—Met at Sydney and inquired into the researches of authorities on the spontaneous combustion of coal, &c. Abstracted literature.

2 OCTOBER, 1896.

Afternoon.—Met at Sydney, at 2:30 o'clock, and examined the following witnesses:—Captain Laidman, Messrs. J. H. Storey, J. St. Vincent Welch, and S. Hague Smith.

7 OCTOBER, 1896.

Afternoon.—Met at Sydney, and examined and abstracted works relating to the subject of the Commission's inquiry.

9 OCTOBER, 1896.

Afternoon.—Met at the Chief Secretary's Office, Sydney, at 2:30 o'clock, and examined Captain W. Barfield. Messrs. R. Long, J. C. Rankin, E. E. Brett, and H. McLachlan (Secretary for Railways) appeared before the Commission by arrangement, the two former partly explaining methods for the manufacture and application of carbon dioxide for the prevention of fires on board coal-laden ships.

14 OCTOBER, 1896.

Afternoon.—Inspected the Australian Gas-light Company's coal stores at Darling Harbour and Mortlake.

16 OCTOBER, 1896.

Afternoon.—Met at the Chief Secretary's Office, Sydney, at 2:15 o'clock, and examined the following witnesses:—Colonel C. E. Stokes, Messrs. T. J. Bush, T. Croudace, W. G. Dixon, T. J. Watters, W. A. Gibb, and C. Danvers.

Left Sydney for Newcastle.

17 OCTOBER, 1896.

Morning.—Visited the Wallsend Colliery, and arranged for the conduct of an experiment with the coal in the "small-coal" hopper at that mine.

21 OCTOBER, 1896.

Afternoon.—Met at the Chief Secretary's Office, Sydney, at 2:30 o'clock, and examined the following witnesses:—Messrs. L. R. Mitchell, T. M. Tinley, W. H. Rowsell, A. F. Robinson, C. J. Royle, and E. S. Chapman.

29 OCTOBER, 1896.

Left Sydney for Wollongong.

30 OCTOBER, 1896.

Morning.—Examined the coal-loading shoots at Wollongong and at Port Kembla.

Afternoon.—Proceeded to Bulli, and inspected the loading appliances at the jetty there.

31 OCTOBER, 1896.

Morning.—Visited the Corrimall Colliery and Coke Works at Unanderra.

Afternoon.—Returned to Sydney.

11 NOVEMBER, 1896.

Afternoon.—Met at the Chief Secretary's Office, Sydney, at 2:30 o'clock, and examined the following witnesses:—Hon. Alex. Brown, M.L.C., Messrs. N. Mcadon (Fleet Engineer), C. T. McGlew, F. W. Binney, and J. R. M. Robertson.

17 NOVEMBER,

17 *NOVEMBER*, 1896.

Left Sydney for Newcastle. Inspected Harper's patent coal distributing appliance in use in the loading of the vessel "Frances Fisher." Returned to Sydney.

18 *NOVEMBER*, 1896.

Afternoon.—Met at Sydney, at 2:30 o'clock, and examined the following witnesses:—Messrs. S. E. Laidley, B. Chadwick, J. S. Hutchinson, W. A. Firth, and T. Kerr.

20 *NOVEMBER*, 1896.

Morning.—Left Sydney for Newcastle.
 Afternoon.—Met at the Custom House, Newcastle, at 2:30 o'clock, and examined the following witnesses:—Messrs. J. Brown, J. Reed, W. B. Sharp, and Captain T. Williams.
 Visited Stockton, and inspected the loading shoots in active use.
 Returned to Sydney.

11 *DECEMBER*, 1896.

Afternoon.—Met at Sydney, at 2:30 o'clock, and examined Mr. H. McLachlan (Secretary for Railways), and Mr. Cecil W. Darley (Engineer-in-Chief for Public Works).

14 *DECEMBER*, 1896.

Morning.—Met at Sydney, at 10:15 o'clock, for consideration of evidence, Appendices, &c.

23 *DECEMBER*, 1896.

Afternoon.—Met at Sydney, at 2:30 o'clock, and examined Messrs. W. Thow (Chief Mechanical Engineer for Railways), and T. R. Firth (Engineer-in-Chief for Existing Lines).

1 *FEBRUARY*, 1897.

Afternoon.—Met at Sydney for consideration of statistics regarding the coal trade of Newcastle, casualties, &c., &c.

5 *FEBRUARY*, 1897.

Afternoon.—Met at Sydney for consideration of scientific investigations on the subjects of the weathering and spontaneous combustion of coal, &c. Translated and abstracted the works of E. Richters.

23 *FEBRUARY*, 1897.

Afternoon.—Met at Sydney for consideration of statistics to be embodied in Appendices to Report.

19 *MARCH*, 1897.

Afternoon.—Continued examination of scientific literature on the subject of the Commission's inquiry. Abstracted the writings of M. Fayol.

26 *MARCH*, 1897.

Afternoon.—Met at Sydney, and continued the examination of the investigations of French and German experts relating to the subject of the spontaneous combustion of coal, &c. Translated and abstracted literature.

1 *APRIL*, 1897.

Afternoon.—Met at Sydney, and completed the abstracts of the German works of Richters and Fischer.

14 *APRIL*, 1897.

Afternoon.—Met at Sydney for consideration of Draft Report.

23 *APRIL*, 1897.

Morning.—Met at Sydney for further consideration of Draft Report.

ROYAL COMMISSION TO INQUIRE INTO THE CAUSE OF THE DANGERS TO WHICH VESSELS CARRYING COAL ARE SAID TO BE PECULIARLY LIABLE, AND AS TO THE BEST MEANS THAT CAN BE ADOPTED FOR REMOVING OR LESSENING THE SAME.

REPORT.

To His Excellency the Right Honorable HENRY ROBERT, VISCOUNT HAMPDEN, Governor and Commander-in-Chief of the Colony of New South Wales and its Dependencies.

MAY IT PLEASE YOUR EXCELLENCY,—

We, the Commissioners appointed on the 28th July, 1896, to make a diligent and full inquiry into the cause of the dangers, to which vessels carrying coal are said to be peculiarly liable, and as to the best means that can be adopted for removing or lessening the same, have the honor to submit the following Report:—

Although the Commission issued on the 28th July, 1896, a month elapsed before the Secretary was appointed, and, consequently, the formal inquiry did not begin until the 27th August.

We examined a large number of witnesses, whose names and occupations will be found on page 87. Amongst them were included representatives of all branches of the coal-mining and shipping industries, including underwriters. Witnesses examined.

We visited a good many mines with the object of familiarising ourselves with the present practice of coal-mining, and also visited the Dyke at Newcastle on several occasions, and saw the methods of loading and trimming coal in practical operation. We went down into the holds of ships where coal was being loaded and generally studied the whole process until we felt that we were sufficiently acquainted with it. In fact, every branch of the coal-shipping industry passed under our personal observation. Places visited.

The statistics of the coal trade since the year 1888 were collected by the Secretary and tabulated by him from the monthly shipping reports of Messrs. Charles F. Stokes & Company and the firm of Robert B. Wallace, which are admittedly accurate. (*See Appendix L, p. 46.*) The data thus obtained were treated by us, and we are, therefore, in a position to report exactly as to the facts. Statistics of coal trade.

For reasons which will appear later, it became very desirable to examine the behaviour of Newcastle coal, stored in large quantities, under the combined influence of air and moisture. The Newcastle-Wallsend Coal Company have a large hopper in which variable quantities of small coal are stored, and this was very courteously placed at our disposal for experimental purposes. Unfortunately, however, the hopper has happened to be empty or nearly so (as we have been informed by the officials of the company) ever since the commencement of our inquiry, and, therefore, up to the present time, we have not had an opportunity of making the observations we desired to make on this subject. Examination of large stores of coal.

The literature of the spontaneous heating of coal is fairly heavy, and will be found in a condensed form in the Appendix, page 65. We wish to acknowledge the assistance we have obtained from the works of Richters and Fayol, particularly the latter. Literature consulted.

Method of loading coal.	The possibility of improvements in the manner of loading coal at Newcastle has occupied much of our attention, and a discussion of the matter will be found towards the end of this Report. We desire to express our indebtedness to the Agent-General of New South Wales for the trouble he has taken in procuring information for us under this head.
Missing ships.	As will appear later, there are a few cases on record of ships leaving the port of Newcastle, and never being heard of again. We have devoted some attention to the question of the most probable cause of loss in these cases, and have been led to investigate the subject of the trimming of coal-laden ships, both from the mechanical and economical point of view, including the relation of the trimmers and stevedores to each other and to the officers and agents of the ships.
Trimming of coal-ships.	
Causes of heating.	Before entering upon the Report in detail, we wish to say that we consider that the main causes of heating of cargoes of coal have been thoroughly established by the authors we have quoted; and that we agree with the finding of the English Commission of 1876, that it is, on the whole, better not to attempt to ventilate coal cargoes, except from the surface.
Ventilation of coal cargoes.	
Size of shipments.	The English Commission also found a relation between the size of coal shipments and their liability to spontaneous combustion. This conclusion is strongly supported by our data, and may be regarded as perfectly established.
Schemes for extinguishing fires.	Several patent schemes for extinguishing fires on board coal-laden ships have come before us, but we are unable to recommend any of them.

Statistics of the Coal Trade of Newcastle.

Statistics of the coal trade of Newcastle. No known case of the loss of a ship from the spontaneous combustion of coal derived from the Newcastle mines occurred previously to 1892. We have tabulated the statistics of the coal trade since 1888 only, on account of the fact that the Marine Board only began in that year to make official inquiry into the cause of the loss of missing ships. It must not be supposed, however, that the scope of the inquiry generally was restricted in like manner.

Oversea sailing shipments to America, selected for statistical treatment. A great deal of the coal shipped from Newcastle goes to Melbourne and other colonial ports; some shipments are also made to oversea ports by steamers. Since, under normal conditions, time is required for spontaneous combustion, it is evident that in an inquiry having for its object the elucidation of the laws to which the heating of coal cargoes are subject, we must begin by excluding shipments which are at sea for short periods only. Since climatic conditions are also of importance, it appears desirable that we should, in the first instance, confine ourselves to one class of shipping, and we have selected the oversea trade to America from Newcastle by sailing ships as being the most suitable for statistical treatment. It comprises by far the greater part of the oversea trade, as may be seen from Table III of *Appendix L*, page 47).

Number of casualties in American trade. On pages 7, 8, and 9 of the Report will be found some tables and diagrams showing the history of the sailing trade to American ports, classified according to the tonnage of the shipments. During the epoch considered, there were 2,149 shipments of coal to the west coast of America (see Table VI, page 10 of Report), and out of these there were thirteen cases where the cargo is known to have become heated or to have taken fire, and seventeen cases of missing vessels, some of which may also have been cases of heating. The total casualties amount to 1.4 per cent. of the shipments, and of this 0.61 per cent. is known to be due to spontaneous heating. This is shown in Table VI, and in detail in *Appendix "A,"* p. 27.

These figures compare favourably with those disclosed by the Report of the English Commission for the year 1874, where out of 490 shipments of between 1,000 and 1,500 tons, there were 3½ per cent. of casualties, and this increased as the tonnage rose.

Sudden increase in casualties during 1895-6. During the years 1895 and 1896, however, the percentage of casualties with Newcastle coal was much larger, as is shown by *Appendix "A,"* Synopsis of Table I (page 30), and by Table VII of *Appendix L* (page 49), and by the Table appearing below. In 1895, out of 294 ships sailing to America 6 were either burned or the cargoes became hot, and in the first nine months of 1896 the number was 4 out of 200.

TABLE

TABLE I.
Sailing Shipments to America.
Number and percentage of Casualties in each year, from 1888 to 1896.

Year.	Shipments.	Fire or Heat		Missing.		Totals.	
		No.	%.	No.	%.	No.	%.
1888	262	.....	.....	1	·38	1	·38
1889	269	.....	.....	2	·74	2	·74
1890	182	.....	.....	1	·55	1	·55
1891	296	.....	.....	1	·34	1	·34
1892	224	1	·45	2	·89	3	1·34
1893	165	2	1·21	2	1·21	4	2·42
1894	257	.....	.....	1	·39	1	·39
1895	294	6	2·04	6	2·04	12	4·08
1896 (9 mos.)	200	4	2·00	1	·50	5	2·50

General Explanation of the Theory of Spontaneous Heating.

It is necessary to give a short account of the elements of the subject of spontaneous heating, otherwise the rest of the Report will be unintelligible. We have also found that the principles of the matter are not in general understood even by those directly interested in the shipping of coal. The Appendices will, we think, justify the views we adopt.

The following theory of the spontaneous heating of coal appears to us to be well established. Coal naturally absorbs oxygen from the air and undergoes a process of slow combustion. As this process goes on heat is developed, and the temperature of the coal tends to rise. The activity with which oxygen is absorbed increases as the temperature rises. It appears, therefore, that the conditions necessary for the spontaneous heating of coal are (1) a sufficient supply of oxygen, (2) prevention of the escape of the heat generated. These two conditions are more or less incompatible. Whether the coal heats or not depends on whether the heat can or cannot escape as fast as it is generated. Since heat passes away more rapidly (other things being equal) the hotter the coal, while the supply of air for promoting combustion is conditioned by other circumstances, it often happens that the temperature of a heap of coal will rise to a certain point, which it will not pass.

If a heap of coal is prevented from coming in contact with air, no action will occur and no heat will be developed. On the other hand, if the air supply be so free as to carry away the heat generated at a sufficient rate, again, no heating will take place. In order that spontaneous combustion may occur, the supply of air must be nicely regulated. The kind of ventilation which used formerly to be employed with coal cargoes often supplied just the air necessary for spontaneous heating. At low temperatures the absorption of oxygen by coal is a comparatively slow process, and, at a given temperature, the rate of absorption depends on the ratio of the surface of the coal to its volume. Thus, other things being equal, the smaller the coal the more rapidly will it absorb oxygen. On the other hand, the coal cannot absorb oxygen unless the oxygen is there to be absorbed, and when the coal is in very fine dust the rate at which the air can penetrate the heap is only small. It, therefore, appears that when the coal is in large pieces it will only absorb oxygen slowly, because of the comparatively restricted area of surface which it exposes; while, if the coal is in very fine powder, the air will not be able to penetrate the mass with sufficient freedom. There must, therefore, be a certain size of coal at which the rate of absorption will be a maximum. Such an effect was observed by Fayol*, who shows that heaps of small coal mixed with coal-dust offers the most favourable conditions for heating. Such heaps are formed under the hatchways of ships which are loaded by dropping the coal from hoppers, spouts, or waggons, so that the coal gets broken up during the process.

The size of a heap of coal has a great influence on its liability to spontaneous combustion. Thus, Fayol* found that the coal of Commentry never took fire by exposure to air when the heaps were less than 2 metres deep, no matter what the lateral dimensions of the heaps might be.

We

* "Etudes sur l'Altération et la Combustion spontanée de la Houille exposé à l'air" (see Appendix DD, p. 73).

We obtained some valuable evidence on this point from Mr. Bush, the engineer of the Australian Gaslight Company. It appears that the Australian Gaslight Company has two coal stores—one at Kent-street, the other at Mortlake. These stores are kept more or less full of slack for gas making. The Kent-street store is filled with coal to a depth of 14 feet; the Mortlake store to a depth of 20 feet. The Mortlake store requires great care to prevent the coal firing, whereas no case of firing from spontaneous combustion has occurred at Kent-street. All other circumstances are, so far as are known, exactly the same at both stores. The opinion of Mr. Bush (Answer No. 2562), with which we agree, is that the cause of the difference in the behaviour of the coal in the two stores is to be attributed to the difference of depth of the coal. The importance of this will appear later on.

Effect of
pyrites and of
moisture.

It was formerly supposed that the oxidation of pyrites (a common impurity of coal) is the initial cause of spontaneous heating. This, however, has been disproved in many test cases by direct experiment, and it also appears that there is no direct relation between the pyrites content of coal and its liability to spontaneous combustion. On the other hand, if coal is wet it has been shown that the pyrites tends to oxidise, and in so doing may help to break up the coal, and so render it more liable to spontaneous combustion by increasing the surface. We are of opinion, however, that the cases of spontaneous combustion of Newcastle coal are not in any way traceable to this action, since we have not been able to find that the cargoes which have fired have been unusually wet, or that the sulphur content was unusually high; in fact, the average sulphur content is only about 0.5 per cent.

It must still be regarded as an open question, however, whether the heating of Newcastle coal is in any way dependent on the amount of moisture which it contains. On the one hand, we have the very definite experimental result of Fayol that moisture has no influence whatever on the liability to spontaneous combustion of the coal of Commentry, and, on the other, we see that the disintegrating action of oxidising pyrites may have an indirect effect.

Most of the witnesses we examined were of the opinion that coal was more likely to fire when wet; and some important evidence was given us by Mr. A. Ross, Manager of the Wallsend Mine (answer 1379 *et seq.*), also by Mr. Reed, Screen Overseer, in charge of the hoppers in which the Newcastle-Wallsend Coal Company store their small coal (answer 3407 *et seq.*). These witnesses stated that the temperature of the coal in the Wallsend hopper increased within a few days after a shower of rain. On visiting the hopper, and digging into the coal to a depth of 2 or 3 feet, we obtained samples of coal, some hot and moist, others dry and cool. The place whence the hot sample was obtained was distant only a few feet from the place where the cold sample was taken. Chemical examination disclosed no appreciable difference between the samples. It occurred to us that possibly the hot coal had been heated by the distillation of steam from the coal below, which was spontaneously heated, and this, we are inclined to think, was really the case, for the seat of spontaneous combustion is never within 3 feet of the surface of a heap of coal. On drawing Mr. Reed's attention to the possibility of this explanation, he appeared inclined to agree with us (Q. 3426-8). We consider it not unlikely that the heating up of otherwise unheated coal by the distillation (and condensation) of steam may have given rise to the idea that moisture is favourable to spontaneous heating.

Of course, if coal is red hot and small quantities of water are poured upon it, the resulting steam is decomposed by the red-hot coal, and the carbon monoxide and hydrogen thus liberated burn with flaming. This fact, also, we are inclined to think, may have tended to give rise to the impression that moisture assists the spontaneous combustion of coal.

It is to be regretted that, though we placed tubes for thermometers in the Wallsend hopper, the store of coal was never large enough to allow us to make observations which could carry any weight, nor was the weather sufficiently variable. We hope, however, to be enabled to carry this experiment through in course of time, and hence to settle the important point as to whether the Wallsend coal, and hence the Newcastle coal generally, is more liable to heat when damp. At present, our impression is that moisture has no effect in promoting spontaneous combustion.

It

It is, perhaps, obvious from what has been said on the subject of the absorption of oxygen by coal, that a very important condition is the initial temperature of the coal. From two cases which came under our notice we are inclined to think that the masters of ships are not sufficiently alive to the importance of keeping the coal away from hot surfaces, especially when these surfaces are themselves far below the ignition point of coal. A donkey-engine and boiler, for instance, may be separated from the hold by a cement floor laid on the deck planking, and—so far as we could ascertain—there seemed to be an impression that the heat which could be transmitted through such a shield could have no ill effect on the coal. The fact is, however, that the rate of absorption of oxygen increases so greatly with rise of temperature that the moderate warming of the coal by a steam pipe or boiler may enormously shorten the time necessary for spontaneous combustion to set in, or may render spontaneous combustion possible in cases where it would otherwise be impossible.

Initial temperature of coal on loading.

These remarks apply with great force to the practice of loading coal in very hot weather. The coal lying in trucks on the dyke and exposed to the sun is loaded at a temperature which it might take months to reach if it had to generate the necessary heat by absorption of oxygen. This reasonable conclusion is supported by the fact—sad, but significant—that three very large ships loaded together during the hot weather of January, 1896, and all three were the victims of spontaneous combustion.

The acceleration of the rise of temperature, consequent on a large initial temperature, is also well illustrated by the cases of the "Knight of St. Michael," the "Morna," and the "Invermay," all of which were loaded during extremely hot weather, and all of whose cargoes became dangerously heated within a short time of loading.

We are now in a position to understand the main features of the phenomena of the spontaneous combustion of coal. Coal always absorbs oxygen from the air, and always generates heat in consequence of the combination of the oxygen with the carbonaceous contents of the coal. The rise of temperature, however, which accompanies this process is dependent on the rate at which oxygen is absorbed, on the one hand, and on the rate at which heat escapes, on the other. Both of these factors may be greatly influenced by comparatively trifling variations in the conditions. The size of the coal, the distribution of coal-dust, the initial temperature of the coal, the temperature of the enclosure in which the coal is placed, the size of the heap of coal—all have an effect on the temperature attained. To anyone approaching the subject for the first time, the great puzzle is to understand why some cargoes fire and why others escape—all being under conditions which are to the first order identical. After study of the phenomena, however, it easily appears that there must necessarily be a kind of critical temperature. If the coal succeeds in reaching this, then its thermal equilibrium becomes unstable and the temperature rises indefinitely. A very slight difference in the conditions will determine whether this critical temperature, which itself depends on the special circumstances, is attained or not. The puzzle above referred to is, therefore, solved by the remark that when some cargoes fire and others do not, the conditions are *not* the same in reality, though, roughly speaking, they may appear to be so. The apparently erratic behaviour of coal cargoes is, therefore, just what would be expected, having in view the fact that *very slight variations* in the circumstances may make all the difference in determining whether the critical temperature will be passed or not.

Conditions affecting heating.

Critical temperature.

Mining and Treatment of Coal in the Newcastle District.

The coal is mined in the Newcastle district chiefly by undercutting, followed by blasting. The coal on coming up from the mines is partially separated from the "hand," or dirty portion, on the screens, from which it is dropped into waggons—generally of the hopper kind, and capable of holding some seven to eight tons of coal. Most of the coal is friable, so that as it falls into the waggons—a distance of about seven feet—it tends to break up. A further pulverisation occurs during the journey, averaging several miles, to the ship's side. On arrival at the dyke, where the cranes are situated, the hoppers are lifted from the under-carriages, hoisted over the hatchways of the ships, and discharged by opening the swing bottoms. In some cases the hoppers are now lowered to the bottom of the ships (this was formerly not the practice), but this is not always practicable,

Mining and treatment of coal in the Newcastle district.

Agencies of breakage of coal.

Process of
loading and
trimming.

practicable, either because the jibs of the cranes are too short, or because the hoppers are too large to go down the hatchways. The general result is that the coal gets greatly broken up by falling from the top of the hatch. Even when the hoppers are lowered so that breakage during this part of the operation is minimised, there still remains the dust and small coal which has accumulated at the bottom of the waggons, partly as a result of the method employed in loading them, and partly due to breakage during transit. We satisfied ourselves that the waggons arriving at the cranes do, as a matter of fact, contain a large percentage of smalls and dust. When the coal which has been poured through the hatchway has formed a heap reaching to the top of the hatch, the trimmers get to work and shovel the coal into the empty spaces at each side of the hold (called the "wings"). As the heap becomes less steep during this process, iron plates are placed upon it to assist the coal in gliding away, and the processes of loading and trimming thereafter go on together. Some contractors, it appears, fill up all the hatches of the ship with coal before the men are put on to trim—a matter to which we shall have to return when we consider the problem of the shifting of coal cargoes.

We must not forget to mention that when the ships first go under the cranes they still have a certain amount of ballast on board. The coal is poured into the hold in the first instance to a sufficient extent to enable the ballast to be discharged without endangering the stability of the ship. Coal loaded to replace ballast is generally called "stiffening coal." In the case of ships carrying cargoes to Sydney, which are discharged at that port, it is often necessary to introduce stiffening coal before the ship can proceed to Newcastle. Such coal is brought from Newcastle in coasting vessels, or from the southern coal-fields by train or sea, and is loaded into the ships by means of baskets. These baskets might, of course, be lowered into the hold, but we understand that, in practice, the baskets are generally emptied from the coamings of the hatch—a practice which leads to the same breakage as if the coal were dropped from hopper waggons. The quantity of coal loaded in this way is in general too small to be able to heat, but if the weather is exceptionally hot it may do so—witness the cases of the "Morna" and "Invermay," in Table I of Appendix A, page 27.

Increase in
casualties
during 1895-6

One of the objects of the appointment of the Commission was to ascertain the reason for the unfortunate increase in the number of casualties occurring during the years 1895-1896. The following table, together with the diagrams 1, 2, and 3, pages 8, 9, and 10 of Report, will, we think, enable this question to receive a satisfactory answer.

TABLE II.
Cargoes that Fired or Heated.

Date of Sailing.	Name of Vessel.	Tonnage of Vessel.	Depth of Hold.	Tonnage of Coal.	Maximum shade temperature during loading.
1892. 23 December	King James	2,200	.....	3,489	78·5
1893. 5 March	Cedarbank	2,800	24·5	4,283	91·0
4 November	Hawaiian Isles	2,027	23·6	3,300	79·0
1895. 13 June	Royal Forth	2,988	25·6	4,558	68·5
7 September	West Glen	700	18·6	1,086	78·0
19 "	John Ena	2,568	25·0	4,257	80·0
10 December	Garsdale	1,645	23·0	2,490	99·0
10 "	Hollinwood	2,606	24·2	4,060	99·0
27 "	Alexandra	1,297	23·9	1,798	91·0
1896. 22 January	Republic	2,847	24·0	3,770	103·0
31 "	Brablock	2,000	24·2	3,154	103·0
2 February	Knight of St. Michael	2,191	24·1	3,206	90·0
22 April	Flora P. Stafford	1,250	23·8	1,964	80·0 (to Manila)
25 August	Rhuddlan Castle	2,093	24·6	3,100	63·0

It will be noted that all these ships were loaded at high (some of them at very high) temperatures. They were all deep ships; all were fairly large, and some very large. The temperatures given in the table are shade temperatures, and, of course, in

in general less than the temperatures of the coal at the times of loading. We are enabled to get some idea of the probable temperature of the coal from some observations made for the purposes of the Commission by Mr. T. H. Palmer, the chemist employed by the Commission at the Wallsend hopper.

TABLE III.

Date.	Maximum shade temperature.	Maximum temperature observed in coal in Wallsend hopper at a depth of 3 in. or 4 in.
1896.		
27 December	100.0	136.6
28 "	107.8	133.4
29 "	83.4	120.2
30 "	79.2	115.7
31 "	83.4	117.5
1897.		
1 January	101.6	127.6
2 "	88.6	119.8

The latter months of 1895 and the early months of 1896 were exceptionally hot, and it is not too much to say that the accidents which occurred to ships loaded during this period are directly attributable to the loading of large ships with exceptionally hot and much broken coal. This conclusion we shall now proceed to establish. Cause of increase of casualties in 1895-6.

We have been able from the records to trace out very distinctly both the growth of the Newcastle sailing trade to Western American ports, and the increase in the size of the ships employed in the trade. Growth of trade and increase in size of ships.

The following Tables and Diagrams show clearly that during the year 1891 there was an increase both in the tonnage carried and in the percentage of that tonnage carried by ships of 2,000 tons burden and upwards. During the years between 1891 and 1894 the size of the shipments increased pretty uniformly; during 1895 rather smaller vessels were used, and in 1896 the size returned very nearly to its 1894 value.

TABLE IV.

(Illustrated by Diagram I, p. 8.)

ЕРОСИ 1888-1896 (to 30 September).

THE Table shows the total Sailing Vessel Coal Trade to America (1) in ships carrying cargoes of under 2,000 tons, and (2) in ships carrying cargoes of 2,000 tons and over.

Year.	(1)	(2)
	Cargoes under 2,000 tons.	Cargoes of 2,000 tons and over.
	tons.	tons.
1888	254,334	186,976
1889	260,399	227,830
1890	149,984	193,800
1891	277,988	266,749
1892	182,814	275,418
1893	99,887	277,009
1894	131,887	471,485
1895	208,758	430,118
1896 (to 30 September)	120,147	338,015

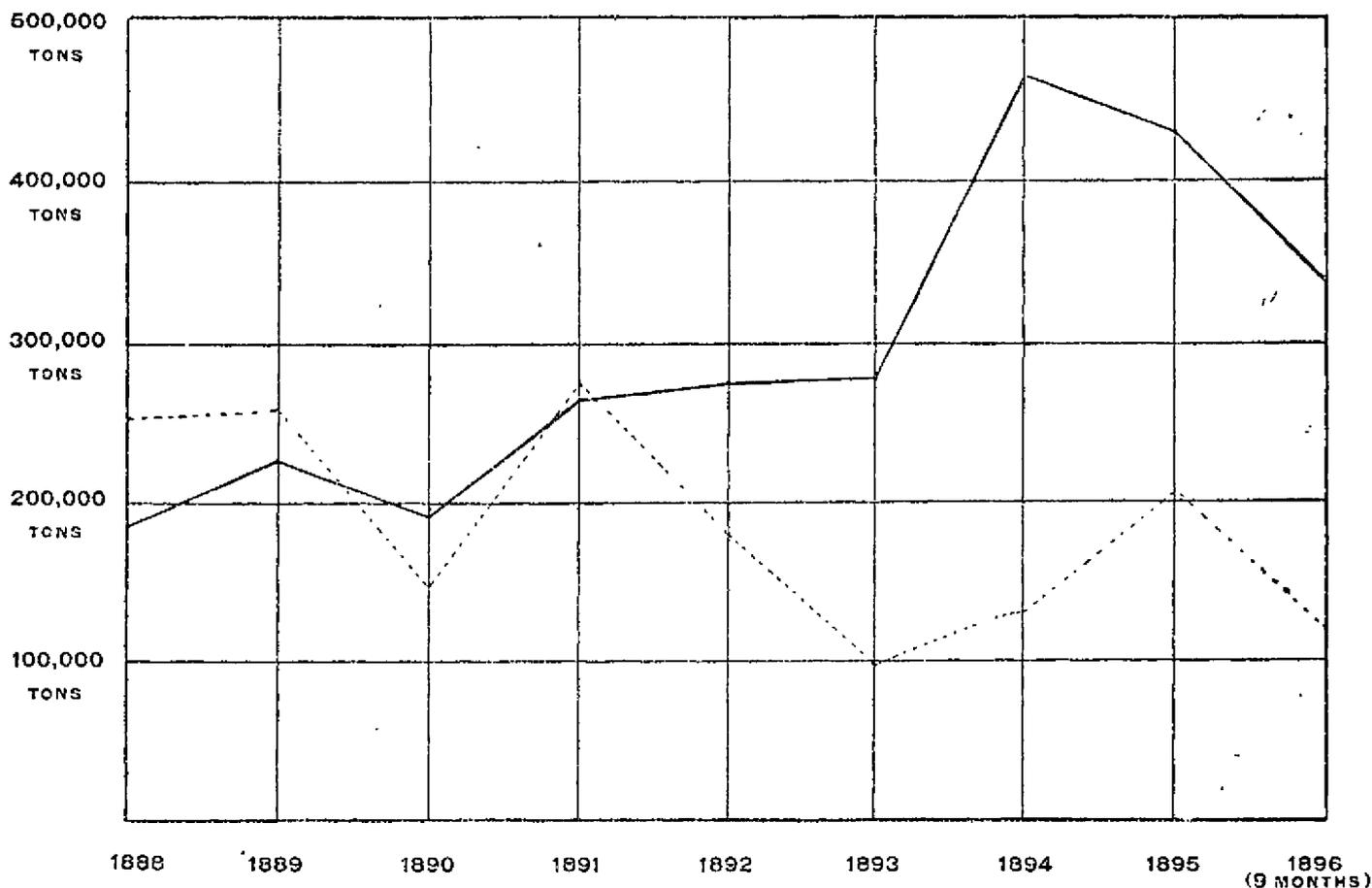
DIAGRAM I.

DIAGRAM I.

EPOCH 1888-1896.

Ordinates: Total sailing shipments to America in tons of coal.

Abscissa: Time in years.



The full line refers to coal shipped in 2,000-ton cargoes and over.
The dotted line refers to coal shipped in cargoes of under 2,000 tons.

TABLE V.

(Illustrated by Diagram II, p. 9)

EPOCH 1888-1896 (to 30 September).

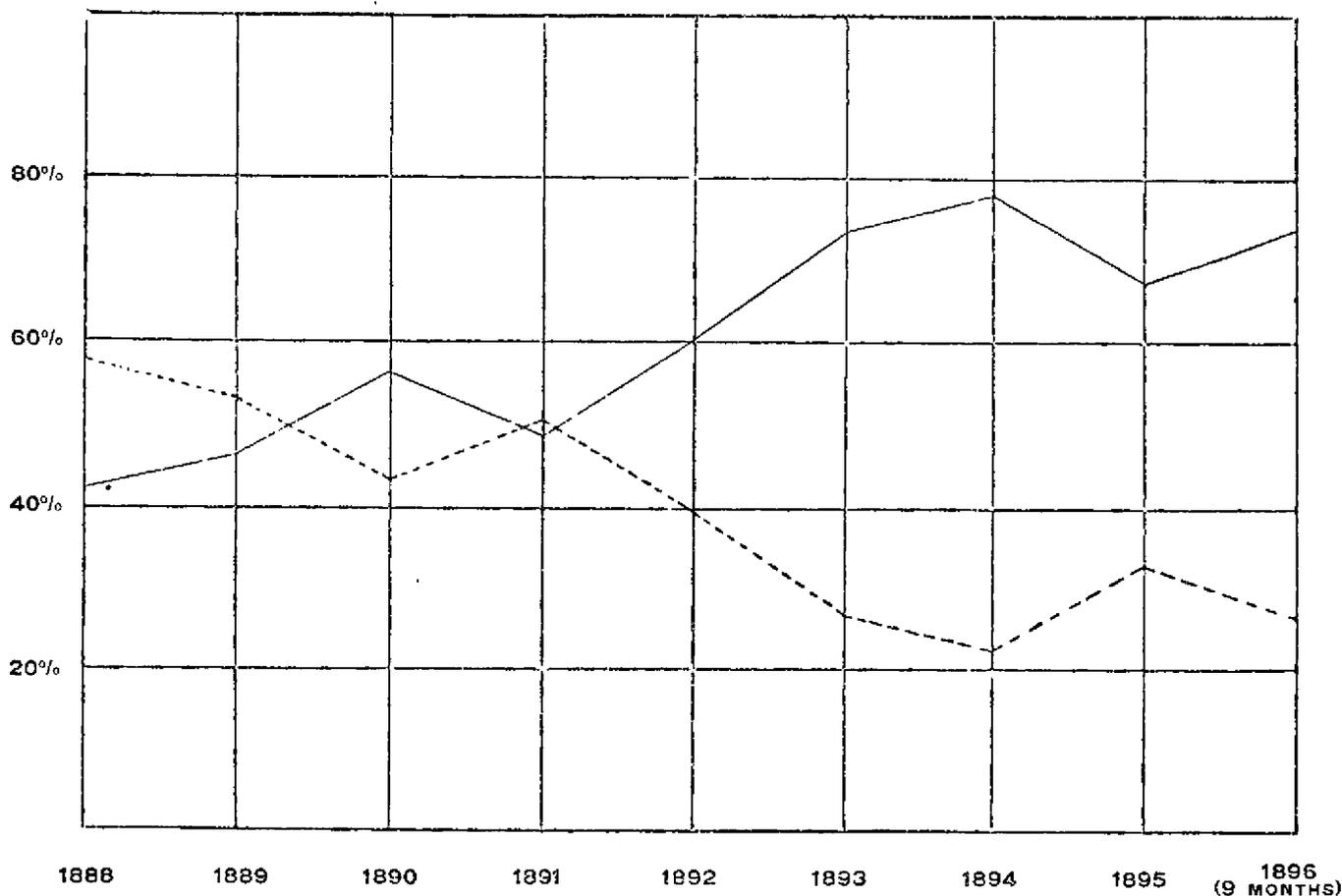
Sailing Cargoes from Newcastle to America.

THE Table shows the total tonnage in each year, classified according to size of shipments; also in each year the percentage of that year's shipments in cargoes of over 2,000 tons and under 2,000 tons.

Year.	Cargoes under 2,000 tons.		Cargoes of 2,000 tons and over.	
	Tons of Coal.	Percentage of Total Tonnage for Year.	Tons of Coal.	Percentage of Total Tonnage for Year.
1888	254,334	57.68	186,976	42.37
1889	260,360	53.34	227,830	46.66
1890	149,984	43.63	193,800	56.37
1891	277,938	51.03	265,740	48.97
1892	182,814	39.90	275,418	60.10
1893	99,887	26.50	277,099	73.50
1894	131,887	21.86	471,485	78.14
1895	208,758	32.68	430,118	67.32
1896 (to 30th September)	126,147	26.22	338,015	73.78
	1,686,198	38.73	2,667,481	61.27

DIAGRAM II.

EPOCH 1888-1896

Ordinates : Percentage of total sailing trade to America in each year carried by ships as classified.*Abscissæ* : Time in years.

The full line represents the magnitude of the shipments in cargoes of 2,000 tons and over, expressed as a percentage of the total trade of the year.

The dotted line represents the magnitude of the shipments in cargoes of under 2,000 tons, expressed as a percentage of the total trade of the year.

Another aspect of the same phenomenon is presented by Table XIV of Appendix L, page 53, which shows the growth of the trade in very large ships, *i.e.*, carrying over 4,000 tons. Taking the year 1895, we see that out of seven of these vessels three suffered from the heating of the cargo. From what has been said above as to the theory of heating, it, therefore, appears that the risk of accident must have increased of late.

It was the opinion of at least one witness that the increase in the tonnage of the ships had not been accompanied by any considerable increase in their depth—a view which, if correct, would make it more difficult to understand why there should be more danger with large ships than small ones. We consequently examined this question by a process of sampling, by taking ships at random and noting their tonnage and depth. Such a list appears as Table XV of Appendix L, page 54; and this shows very clearly what is, we presume, really well known, that the larger ships are, on the whole, deeper than the smaller ones.

From what has already been said with respect to the experiments of Fayol and the experience of Mr. Bush, a difference of even 1 foot in the depth of the hold may be of immense importance in determining whether coal in a suitable condition as to size shall become unmanageably hot or not. If to this we add (1) that the coal gets more broken the further it falls; (2) that the greater the cargo the greater the heap of smalls and dust; we shall be prepared to consider a small increase in the depth of hold as a phenomenon of the first importance in relation to the

the question of heating of cargoes. There are strong *a priori* reasons, therefore, for an anticipation that an increase in the size of the ships has an important influence on the percentage of casualties, and this anticipation is verified with startling completeness by a reference to the following Diagram, No. III and Table VI.

TABLE VI.

SHOWING the number of sailing shipments to America between the years 1888 and 1896, classified according to size of cargoes; also showing the number of cargoes that fired and heated, and the number of missing vessels.

(To accompany Diagrams III and IV, which exhibit the results graphically.)

Size of Cargoes.	Number of Shipments.	(1) Cargoes that Fired or Heated.		(2) Vessels Missing.	
		Number.	Percentage of Total Shipments in each class.	Number.	Percentage of Total Shipments in each class.
Under 500 tons	6	.....	.....	.....	.....
500 and under 1,000.....	146	.....	.....	1	68
1,000 " 1,500.....	446	1	22	2	45
1,500 " 2,000.....	567	1	18	7	123
2,000 " 2,500.....	441	1	23	3	68
2,500 " 3,000.....	267	.....	.....	3	112
3,000 " 3,500.....	162	5	309	1	62
3,500 and over	114	5	439	.....	.....
	2,149	13	61	17	79

Note --Between 1888 and 1896 there were twenty-two cargoes to America of over 4,000 tons, and of these four either fired or heated = 18.18 per cent. (See Table XIV, Appendix L, p. 53)

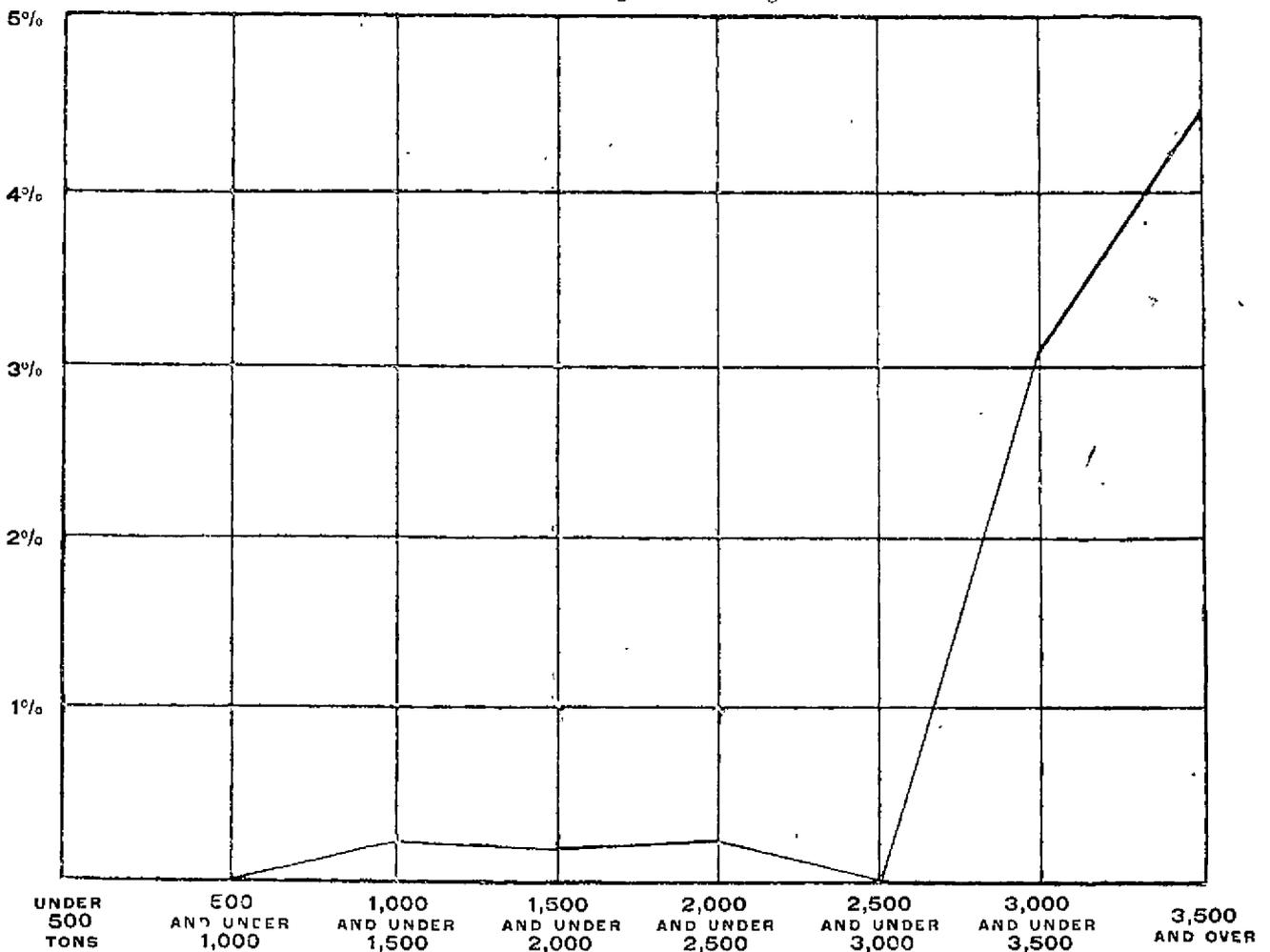
DIAGRAM III.

Illustrating heating of cargoes in (classified) ships which sailed to American ports.

EPOCH 1888-1896.

Ordinates : Percentage of casualties.

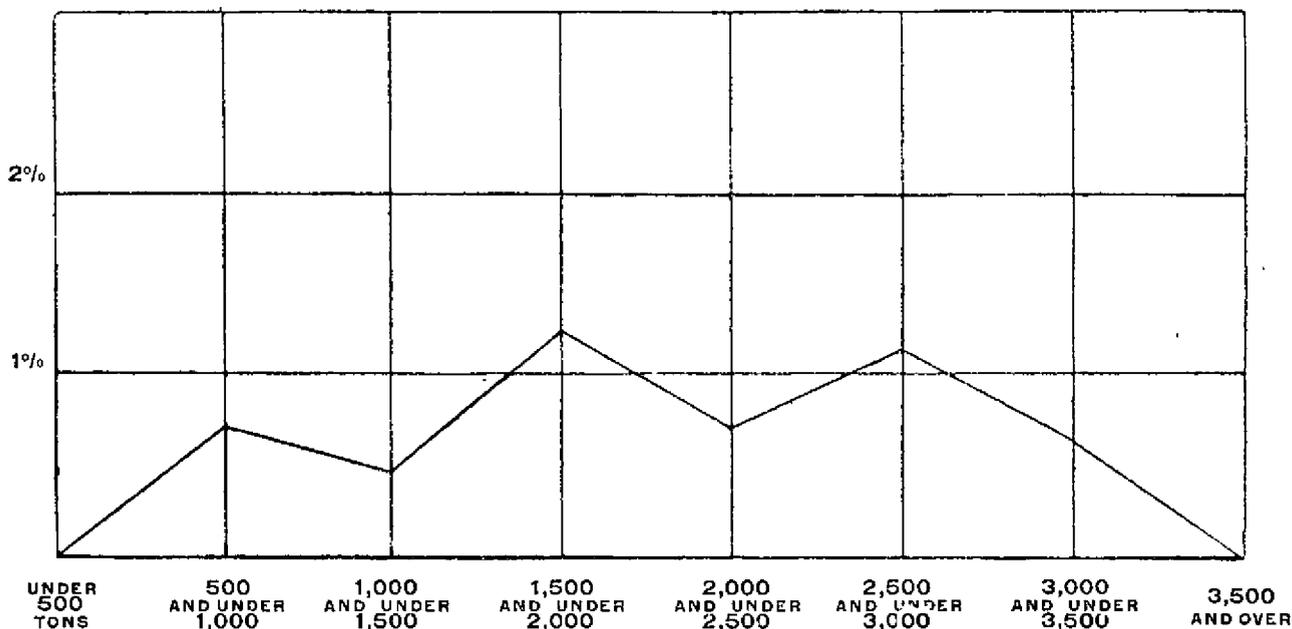
Abscissæ : Magnitude of cargoes.



The object of this diagram is to show how greatly the risk of fire increases with the size of the shipments. The irregularities of the curve are, of course, due to the fact that the data available are numerically too small for a smooth statistical treatment.

DIAGRAM IV.

Ships missing which sailed to American ports—nature of casualty unknown.

Ordinates : Percentage of casualties.*Abscissæ* : Magnitude of cargoes.

The object of this diagram is to enable a comparison to be made with Diagram I, in order that a judgment may be formed as to the probable nature of the causes of the loss of missing ships. The want of smoothness noted on Diagram I is accentuated here.

This is, of course, an old result, having been arrived at by the English Commission; but in view of its importance, and the fact that it was *possible* that Newcastle coal might behave differently to English coal, we have thought it best to reconsider it.

The effect of loading ships in hot weather is clearly shown in Diagram No. 5 below, to which we shall have to return presently. We will merely remark here that no ship loaded in June or July has ever suffered from the heating of Newcastle coal. We consider, therefore, that we have now justified our statement that the accidents in 1895-96 were due to loading large ships with hot coal. Effect of loading in hot weather.

TABLE VII.

SHOWING the Months of Loading of the Sailing Vessels to which Casualties occurred (all cases in Newcastle trade included), from 1888 to 1896.

(To accompany Diagrams V and VI., p. 12.)

Month of commencement of loading.	Cases of Firing or Heating.	Missing Vessels.
January	3	1
February	2	6
March	1	3
April	1	.....
May	1	2
June .....	.....	1
July .....	.....	1
August	2	.....
September	1	3
October	1	.....
November	2	3
December	2	2
	16	22

DIAGRAM V.

EPOCH 1888-1896.

Heating of cargoes.

Ordinates: Number of casualties occurring in total sailing shipments from Newcastle during the epoch quoted.

Abscissæ: Time in months of loading.

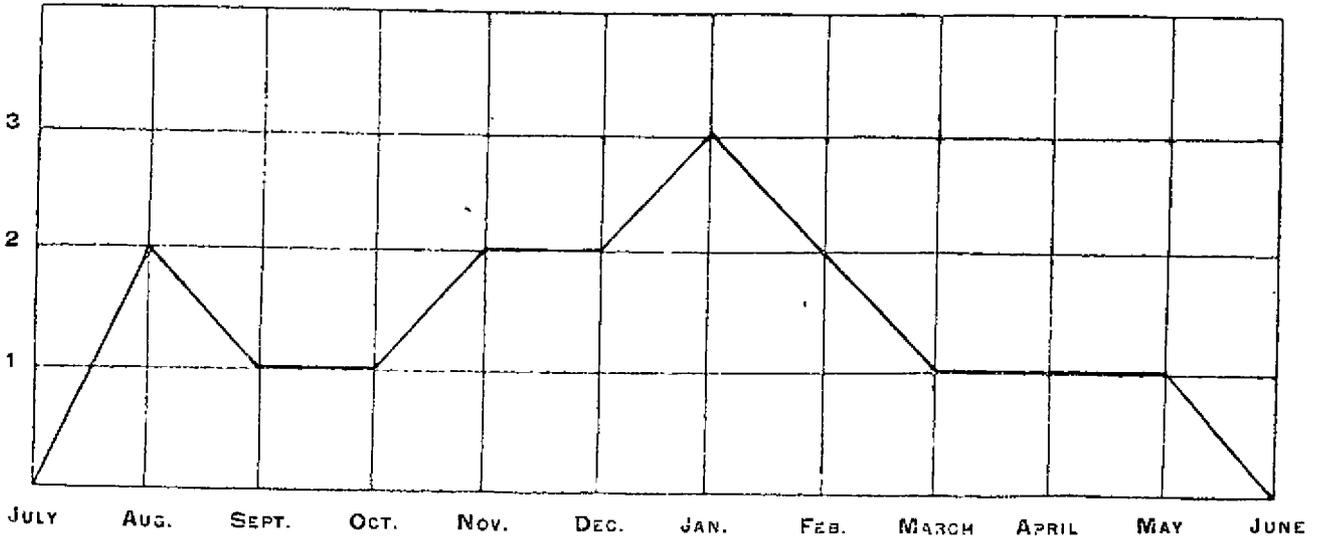


DIAGRAM VI.

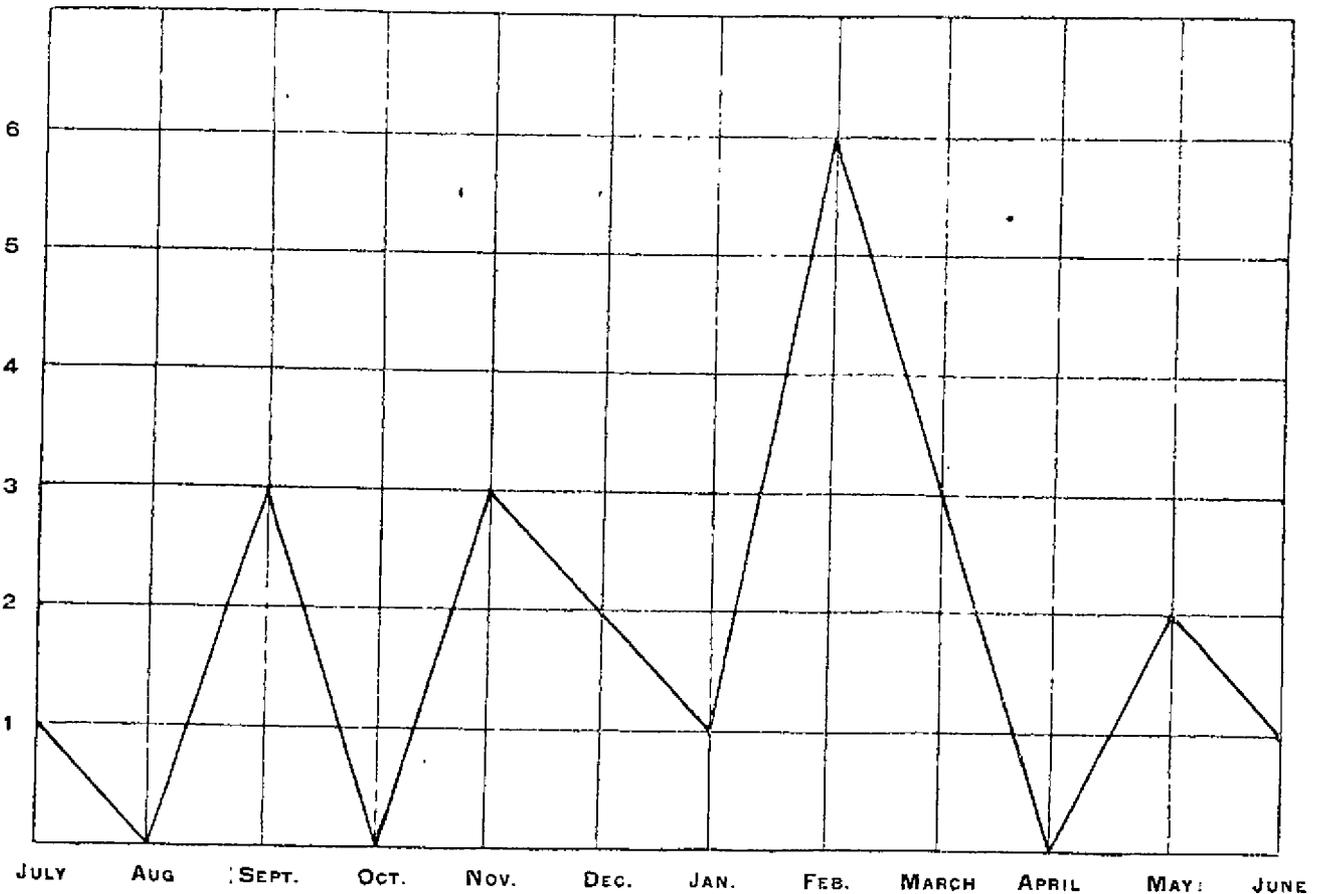
EPOCH 1888-1896.

Vessels missing—nature of casualty unknown.

(This refers to the total sailing shipments from Newcastle for the epoch quoted.)

Ordinates: Number of casualties.

Abscissæ: Time in months of loading.



We have now shown—

1. That there has been an actual as well as a proportionate increase in the size and depth of ships carrying coal.
2. That the ships whose cargoes heated have, with trifling exceptions, been particularly large and deep.
3. That they were all loaded in exceptionally hot weather; the end of 1895 and beginning of 1896 particularly being one of the hottest periods ever known in the Colony.
4. That the mode of loading ensured a cone of broken coal in the square of the hatchways.

The general theory shows that given these conditions an increase in the percentage of casualties in 1895-96 could have been foretold.

Missing Ships.

During the years 1888 to 1896 inclusive (nine months), there have been Missing ships. altogether twenty-two cases of missing coal laden vessels, seventeen of which occurred in the American trade, and of which six cases occurred in 1895.

We will now give an account of the tests we have applied in the hope of Attempt to trace probable cause of loss. finding out what was the cause of these accidents. The facts are collected in Table II of Appendix A. In order to find out whether these vessels, as a class, were lost through the firing of cargo, we have made the following statistical comparisons:—

Diagram No. III, p. 10, shows clearly that the percentage of cases of heating increases very rapidly with the size of the shipments. We hoped that some light would be thrown on the cause of "missing" by plotting the percentage cases against the magnitudes of the shipments. Diagram IV, p. 11, indicates the result.

Comparing Diagrams III and IV, the inference would seem to be that the "missing" have not as a class suffered from spontaneous combustion, or if there is any relation between the casualties and the size of the ships as indicated in the diagram, it is of an opposite character to that shown in Diagram III—the larger the ship the less chance of its being "missing."

Another way in which this inference may be checked, is to plot the casualties against the temperatures at the time of loading, or, what comes to the same thing very nearly, to plot the casualties against the times of the year at which the ships were loaded. This was done (Diagram VI, p. 12), and a comparison between Diagram VI and Diagram V will show that the former inference is not exactly correct—for six ships were lost which had loaded in February. In this connection, Table XIII of Appendix L, p. 52, may be consulted.

A circumstance which has a great influence upon the risk of spontaneous heating, is the average temperature during the voyage. The effect of this was Average temperature during voyage.] examined by the English Commission in 1876. With regard to the sailing trade to America, there can be no doubt but that ships sailing to the north of the equator go through much hotter weather than ships which do not cross the equator, seeing that the coal ports on the west coast of South America are considerably south of the line. It might, therefore, be anticipated that there would be a connection between the percentage of ships lost by spontaneous combustion, and the port to which they sailed. The following table was, therefore, prepared, showing the number of ships whose cargoes heated, and the number of ships which were missing, classified according to whether they sailed for ports north or south of the Equator:—

TABLE VIII.

	North of the Equator.	South of the Equator.
Cases of Heating	10	3
Missing Vessels	5	12

It appears from the table that out of thirteen ships whose cargoes were known to have heated, ten sailed for ports north of the Equator and three sailed for ports south of the Equator. With the missing vessels, on the other hand, we find that

that five out of seventeen sailed to the north and twelve to the south of the Equator. We have to thank the Secretary of the Commission for suggesting this test to us.

No doubt some other variable, such as the relative amount of ice which would be met with on the voyage according to the time of the year, the prevalence of stormy weather in different months, &c., could be selected as the basis of further diagrams. The objection would be that these variables are not capable of exact specification. Again, it may be asked, why were not Diagrams V and VI plotted against the actual temperatures? The answer is, that this would have involved the obtaining and reduction of the meteorological records for some thousands of ships, and the time which would have been required for this would have delayed our Report by several months. Also, it did not appear that the establishment of a mere probability would have justified the expense and trouble which would have been involved.

Our conjecture, based on the diagrams and general data, is that probably some half-dozen of the missing ships were burned, and that the rest were lost owing to other causes.

We have taken care in Tables I and II of *Appendix A* to supply all the data we possess ourselves, so that others may be in an equally good position to hazard conjectures on this subject.

Causes of Danger, other than Spontaneous Combustion, to Ships carrying Coal Cargoes—Explosion.

Explosion.

It will be observed that in the above we have said nothing at all on the subject of explosion. We feel it necessary, however, to add a note on the matter, because we have found an almost complete popular misapprehension in regard thereto. Nearly all of those with whom we have conversed on the dangers to which coal ships are liable have placed the danger of explosion in the foremost rank; whereas, during the epoch considered, there have only been two *known* cases of explosion on board coal-laden ships, and both of these occurred with southern and not with Newcastle coal. The two ships on which the accidents took place were the "Argo" and "Prosperity," both of which were comparatively small vessels. The "Argo," it so happens, was examined by one of us personally immediately after the explosion occurred, and there can be no doubt that the accident was due to an explosion of gas. Details of these two cases may be found in *Appendix A*, page 35.

Now, gas may be given off from coal in two ways: (1) The coal may itself be saturated with gas which has not had time to escape during the interval which elapses between the winning of the coal and its loading on board ship; (2) When coal becomes heated, combustible gases are occasionally evolved, and it is possible for these to accumulate to a dangerous extent. It is for these reasons that all ships are provided with surface ventilation, and if this is fairly efficient there ought to be little or no danger from explosion of combustible gases. It must, however, be admitted that it is a dangerous practice to load certain descriptions of coal at too short an interval of time after it has been obtained from the mine.

Shifting of Cargoes.

Shifting of cargo.

Some light may be thrown on this matter by a study of Table III, of *Appendix A*, which details the known cases of shifted cargoes. Although it is admitted on all hands that iron or steel ships require to be provided with shifting-boards, we find that out of eight ships of this kind whose cargoes shifted two were unprovided with shifting-boards, a vastly unusual proportion. (*See Appendix U*, p. 9.) (A shifting-board is a temporary but strong longitudinal partition run down the fore and aft line of the ship through the coal cargo. It is generally made by lashing strong boards to the stanchions of the ship.) In the case of wooden ships, the construction is often of such a nature that the woodwork of the ship forms a sort of natural but imperfect shifting-board, and the necessity for shifting-boards will depend on the degree to which the constructional timbering may be considered to form a shifting-board. (*See Appendix J*, page 42, on the loss of the "Patrician".) There can be no doubt that all iron or steel and most wooden ships ought to be provided with shifting-boards; and this is the position taken up by nearly or quite all the

witnesses

witnesses examined. It is of no use, however, to adopt shifting-boards unless the cargo is properly trimmed. Now proper trimming consists in filling the hold of the ship uniformly with coal, and in finishing off the heap of coal at certain points fore and aft by means of a wall of large pieces of coal. A great deal of the evidence we obtained was as to whether the trimming of the cargoes was carried out properly at Newcastle. We do not propose to discuss the detail of this matter at any length, and shall, therefore, confine ourselves more or less to our conclusions—referring the reader to the evidence on which our opinions are based. We must premise that the operation of loading a ship is performed by three different services. In the first place, the loading appliances are under the control of the Railway Commissioners, who carry the coal, and who put the waggons as nearly as possible under the cranes. The working of the cranes is let to a contractor, who contracts with the Commissioners of Railways to put the coal on board at a certain price per ton; this charge being, of course, added to the freightage. Handling the coal on board ship is the duty of another contractor—a master trimmer or stevedore—who contracts to trim the coal at so much per ton. There is no doubt from the evidence we have obtained—

- (I) That the master of a ship can always get the coal trimmed exactly as he wishes, provided he will either personally, or by his officers, take the necessary trouble in superintending that operation. (*See* especially, on this point the evidence of Captain Parkhill, master of the “Scottish Lochs,” question 337, *et seq.* to 370. We were considerably impressed by Captain Parkhill, and feel sure that his evidence is particularly reliable and judicious.)
- (II) That no opposition to the supervision of trimming on the part of the ship’s master has been shown by the contractors or trimmers.
- (III) That, in general, if the trimming is not so superintended there is at least a tendency to hurry and scamp the work; *see* question 383, Parkhill—“If you did not see to the work yourself it might be done faultily? Of course they will not shovel the coals more than they can help.”
- (IV) That it is unfortunately not unusual for the masters and officers of ships to neglect their duty by neglecting to supervise the trimming.
- (V) That in consequence of this many ships have left the Port of Newcastle improperly trimmed. (This view was also taken by the Newcastle Chamber of Commerce in an inquiry held in October, 1894—*See* Appendix M, p. 55.)

Many witnesses were asked what course they would recommend in order to ensure proper trimming. They were almost unanimously of opinion that—

- (1) Licenses should be issued to competent stevedores, and that only such licensed stevedores should be allowed to tender for trimming.
- (2) That a system of Government inspection of trimming should be inaugurated and that it should be the duty of the inspector to report to the local Marine Board any case of imperfect trimming.

Issue of licenses to stevedores, and inspection of trimming.

We have given much attention to these proposals and find ourselves unable to recommend either of them.

With regard to (1) it appears that the ship’s officers are able to secure good trimming if they will take the trouble to do so. The shipping agents are presumably acquainted with the Port, and it is not the duty of Government to say who shall be employed by them and who not.

Comparatively few of the ocean-going ships are owned in New South Wales; nor are their crews citizens of New South Wales.

With regard to inspection, the “Navigation Acts, 1871–1881” really give very limited powers to the local Marine Boards. They can only inspect “on complaint or otherwise,” and after the vessel has been “provisionally detained,” even with regard to the load marks. They have no power to send an agent forcibly on board to inspect anything (*see* question to Crown Solicitor and answer thereto, *Appendix A.A.*, page 62).

Again, if the master and officers of the ship, whose lives depend on seeing that the trimming is properly done, neglect to attend to it, why should it be supposed that a Government official, who has comparatively no interest in the matter, would attend to it better?

Also,

Also, as already stated, the ships for the most part are foreign-owned and foreign-manned. They come to Newcastle for a certain commodity; what they do with it is their business, not the business of the New South Wales Government.

One witness told us that there had been complaints already from foreign owners of the irksomeness of the port regulations at Newcastle, and reminded us of the well-known principle that the less trade is hampered by regulation the better. With this, of course, we agree, and would point out that no inspection of the kind recommended could be made without passing a new Navigation Act; and this could hardly be done reasonably without lengthy consultation with foreign Boards of Trade. Moreover, if trimming is to be supervised, on what grounds could supervision be refused to victualling, reparation of hull or rigging, or any other of the thousand and one precautions necessary to secure a seaworthy ship? Some idea as to at least one of the motives underlying the demand for inspection may be gathered from the evidence of T. Burke (Question 2199, *et seq.* to 2214).

In conclusion, it is with satisfaction that we record that the officers of ships examined by us were unanimous in praise of the working coal trimmers of the Port of Newcastle. This, however, is hardly an argument for the necessity of Government supervision.

There is one aspect of the question of supervision, however, which we examined at some length. It occurred to us that if a system of inspection were inaugurated, the insurance companies might possibly see their way to reducing the rates charged for underwriting. In the event of this being actually done, it was thought that possibly those who benefited might agree to pay the cost of inspection. Nearly all the witnesses, of course, thought that the Government ought to pay, or, at all events, that the class to which they happened to belong ought not to be taxed.

We examined a large number of insurance agents and managers, and they were on the whole inclined to treat the proposal favourably, provided that any recommendations we might make, and which they might happen to endorse, with regard to the prevention of spontaneous heating, were also enforced by inspection.

After considerable time had been spent over the matter, we discovered that the amount of insurance effected in Sydney was so trifling that even in the event of the local Underwriters supporting the scheme of inspection, the general position would not be materially affected. Insurance on hulls is effected in London, as a rule, under an open policy, and might not be greatly influenced by proposals which could only affect, perhaps, one out of the several voyages covered by the policy. We are unable, therefore, to see that the proposed inspection could carry with it any commercial advantage. There is undoubtedly an opening, however, for underwriters to assess their premiums according to the temperature at which the coal is loaded; and according to whether the main hatchways are or are not large enough to allow of the hoppers being passed down them.

PREVENTION OF ACCIDENTS.

TRIMMING.

Prevention
of accidents.
Trimming.

With regard to trimming, we can only recommend that the owners of ships should issue strict orders to their masters with regard to the supervision of trimming, and that they should provide all, or at least, all iron or steel ships with shifting-boards.

HEATING.

Heating.

With regard to heating the case is more complex.

Nature of the Coal.

It appears most distinctly from Fayol's great investigation, in which he divides coal into ten classes, that the kind of coal which is most liable to spontaneous combustion is that kind which is most readily inflamed. The criterion of inflammability employed by Fayol appeared to us to be—perhaps intentionally—vague. The ease with which the coal can be lighted by a flame or in a grate appears in some way to be the criterion, and coals are classified in this respect without any detailed account

account of how the classes are to be separated. Thus we are quite unable to say to which of Fayol's classes any particular bit of coal may be considered to belong, nor is it clear how one would set to work to find this out.

The result, in general terms, is clear enough, however; the order of inflammability given by Fayol is the same as the order of liability to spontaneous combustion, and runs thus—(1) lignite; (2) gas coal; (3) coking coal; (4) anthracite.

Now, Newcastle coal in general is suitable for gas making, and may, perhaps, be classed as (2) gas coal.

Statistics relating to Collieries.

We have collected the statistics referring to the coal shipments from each colliery, and the accidents which have occurred, and the results appear in Tables VI, VIII, XI, and XII, of Appendix L, pages 48, 50, and 51. Statistics relating to collieries.

There is also a statement handed in by Mr. Binney (Appendices O and P).

Table VIII of Appendix L, page 50, may be regarded as containing the proximate results of the investigation. It appears from this table that the Wallsend, Duckenfield, and Greta collieries alone have done a sufficient over-sea sailing trade to America to allow of the proper application of a statistical method. During the epoch 1888 to 1896, the Wallsend and Duckenfield coals appear to have had 1·34 and 1·13 per cent. of total casualties respectively, while the Greta coal has only had 0·4 per cent. A closer analysis is attempted in Table XI, Appendix L, page 51, whence it appears that in ships carrying 2,000 tons and over, as regards known cases of heating, the Greta coal has met with no accident at all; Wallsend with 1·03 per cent. and Duckenfield with ·66 per cent. only. These figures referring to large ships only, loading generally in warm weather, and performing long voyages in warm weather, must be considered as wonderfully favourable. With regard to the other collieries we prefer to draw no inference, the number of shipments being too small to be treated by statistical methods. Percentage of casualties with different kinds of coal.

As a general result of the data collected in this Report and Appendix, and of an inspection of collieries and examination of witnesses, we find as follows:—

- (1.) Those coals which have been shipped in sufficient quantity to be fairly susceptible to treatment by statistical methods have shown themselves to be at least up to the general average of good coal with regard to freedom from spontaneous combustion.
- (2.) There has been no change during recent years, either in the method of mining, or in the character of the coal met with, which throws any light on the casualties of 1895-96.
- (3.) The cause of spontaneous combustion does not appear to us to depend on or to be associated with any particular description of Newcastle coal, nor can we say that any particular coal is dangerous. Cause of spontaneous combustion probably not associated with any particular description of Newcastle coal.

We are, therefore, forced back upon the considerations already advanced in the first part of this Report, in which we sought to explain the accidents of 1895 and 1896. In a word, if accidents are to be prevented we must improve our methods of shipping coal, and must not load very large ships in very hot weather. Loading appliances.

Loading Appliances.

The system of loading in vogue at Newcastle has two recommendations, and two only. It is cheap and it is expeditious. The practice of dumping 7 or 8-ton loads down a depth of about 30 feet is entirely antiquated, and from the point of view of the underwriter, about as bad as can be imagined.

There is, we believe, no case on record of a ship's cargo taking fire anywhere except in the square of one of the hatchways; out of the hundreds of known cases of *spontaneous* heating of English, Foreign, and New South Wales coal—there is actually not a single case where the fire did not first appear under the square of one of the hatches, generally, if not always, the main hatch. We thought we had a case, that of the "Alexandra," but the master happening to arrive in port during our inquiry, we discovered that this case also was perfectly normal (*see* Q. 218-20; 2492.) Location of heating of cargo.

A good many witnesses would have us believe that firing arose from accidents with candles, odds and ends of fuse left in the coal, &c. These views, always vague, may, we think, be dismissed at once, seeing that the square of the hatch is just the place where such accidental fires would not break out. We have, in fact, to deal with a purely Richtersian phenomenon—that of the slow oxygenation of coal, as already explained.

The problem is, therefore, how can we prevent the coal from being broken up as it falls into the hold? or, more generally, how can we load a ship with “whole” coal only?

Breakage in Dropping from the Screens.

Breakage in dropping from the screens.

This might easily be greatly reduced by the adoption of some proper appliance, *e.g.*, by the use of an inclined swinging plate acting as a shoot from the screens to the waggons. The plate might be formed of steel laths mounted on flexible material, so as to allow of withdrawal as the coal rises in the waggons.

Breakage in Waggons in Transit.

Breakage in waggons in transit.

The breakage produced during the carriage of the coal may, we think, be neglected at present in comparison with the greater breakage at loading and discharging. The remedy is to be sought in getting rid of the idea that any kind of a permanent-way is good enough for a colliery railway.

Breakage in Loading the Ship.

Breakage in loading the ship.

This matter has received a good deal of attention, and we will consider in order the things which might be done, and give our reasons for or against them:—

Lowering of hoppers in hold of ship.

(1.) The waggons might be lowered to the bottom of the hold to begin with, and afterwards to the top of the coal as a heap is gradually formed. This is now done so far as is possible, but in many cases the hatches are too small for the hoppers, and in others the jibs of the cranes are not long enough to lower the waggons fairly down the hatchways. A remedy would be to make the jibs of the cranes, at all events, long enough to lower the hoppers where possible.

Alteration of waggons.

(2.) The waggons might be made smaller so that they would go down the hatchways. This is by no means an impossible cure. The objection, however, is that the hopper waggons are otherwise very good and economical, and most collieries have discarded their box-waggons to put in hoppers. To change back to boxes would increase the cost of conveying the coal to the ship's side; would increase the cost of discharging the coal to the ship; and would ruin most of the coal companies who own the waggons used in transporting the coal. We do not think that the slight extra cost entailed by the use of box-waggons would be serious and there would be a gain in the value of the coal as delivered. Although we believe that some of the collieries have been mistaken in discarding the box-wagon for the large hopper, we cannot ask the colliery owners to ruin themselves by instantly replacing their hoppers; on the other hand, we think that the substitution of boxes for hoppers might, perhaps, be made as time goes on, and this would most undoubtedly enable the coal to be delivered in better and more valuable condition, and would reduce the risk of heating (*See especially on the question of box-waggons the evidence of Mr. J. R. M. Robertson, Q. 3,136*).

Alteration of ships' hatches.

(3.) The hatches of the ships might be made larger. We were satisfied that this would be a very difficult reform to make, and unless extra expenditure were incurred in building the ship, would tend to weaken it. There are certain regulations governing the insurance rates, known as Lloyd's rules, which prescribe how the hatch is to be formed. These rules should be altered so as to allow of larger hatches being put into ships. We think it desirable that the authorities of Lloyds, as well as the ship builders and owners, should be conferred with on this matter. Lloyd's rules appear to govern ship building to an almost incredible extent, and are, no doubt, very good; still, they must march with the times, like everything else.

(4.)

- (4.) Appliances might be fitted in the ship so as to allow of the coal sliding—instead of falling—into the holds. A drawing illustrating the working of one of such appliances appears on page 86, and a report by one of us who witnessed the loading of a ship with another of them appears as Appendix Y., p. 61. Our opinion is that both these appliances, in the form in which they came before us, are clumsy and unpractical. On the other hand, we see no reason to believe that the ingenuity of inventors has been exhausted in this direction, and we see no reason why a practical contrivance should not be forthcoming; at present, however, it does not exist.

Loading appliances fitted in vessels.

Reconstruction of the Loading Appliances at the Dyke.

The possibility of an entire change to more modern methods of loading has been fully considered by us. The first thing that appears is that no blame of any sort is to be laid upon those who inaugurated the present system. At the time the cranes were erected there had been no case of heating of Newcastle coal, and it was supposed, in consequence, that this coal enjoyed an immunity from danger of spontaneous combustion. The question at that time was merely how to get the coal on board as quickly and economically as possible, and this question was and is very perfectly solved by the now existing system. We now know, however, that Newcastle coal *can* heat under favourable circumstances, and the position is therefore somewhat changed.

Introduction of more modern methods of loading.

In the Report of the English Commission will be found a very complete account of the coal-loading appliances in use at that date—1876, and this we do not propose to recapitulate. It will suffice to say that of late years engineers have attempted to solve the problem of loading coal without breakage by proceeding along two lines of thought. On the one hand, arrangements have been made for emptying the waggons into vessels small enough to pass down the hatchways of a ship. These vessels have then been lowered till their movable bottoms arrived within easy distance of the bottom of the ship, or of the top of the coal, and devices have then been used to discharge them automatically. The best example of such an appliance that has come before us is Lewis and Hunter's system, now in use at the Roath Dock, Cardiff. On the other hand, attempts have been made to discharge the waggons into a movable spout, reaching nearly to the bottom of the ship; this system has reached, perhaps, its latest development in arrangements now in use at Cleveland, Ohio, U.S.A.

Lewis and Hunter's system of loading.

Of these two systems we greatly prefer that of Lewis and Hunter for use at Newcastle, and have obtained, through the Agent-General, a report from Sir Leader Williams (an eminent English engineer) on the working of the system at Cardiff. This report (*Appendix Z.*) is entirely favourable, and we know of no reason against installing the system except the enormous expense which would be involved. Not only would the dyke have to be faced by a concrete wall so as to form a concrete wharf (as we are unofficially informed by Mr. Darley, Engineer-in-Chief for Public Works), but the general arrangement of the sidings on Bullock Island and the arrangements for bringing the waggons under the cranes would have to be totally uprooted, and new arrangements made. To this the cost of the appliances is to be added. It appears that the bare cost of the appliances (without provision of power, which already exists) would be £14,879, f.o.b. London, and for this would be obtained two 18-ton cranes capable of serving a berth 300 feet long. We imagine that about three such sets would be required, but cannot say exactly without a personal study of the working of the system. The £50,000 or so thus required would be much the smaller part of the total cost. We do not consider that we are justified in recommending any such expenditure, at all events until the following simple recommendations have been acted upon.

We consider that the jibs of the hydraulic cranes should be lengthened, so that the hopper or box waggons can be lowered down into the holds of such of the largest ships as have hatchways of sufficient dimensions. We cannot do better than print here the answer we received from Mr. Darley to our question on this head. The cost of the proposed alterations would not be very heavy.

Lengthening of jibs of existing cranes.

Department of Public Works, Engineer-in-Chief's Office,
Sydney, 15 December, 1896.

Sir,

With reference to your letter of 30th ultimo, requesting certain information in regard to the coal-loading cranes at Newcastle, I have now the honor to forward you the following particulars:—

1. Number of cranes—
15, viz., 12 hydraulic, 3 steam.
2. Lifting power of each—
2 of 9 and 25 tons capacity.
6 " 9 " 15 " "
4 " 9 " " "
3 (steam) 15 " "
3. Length of jib of each—
See Schedule attached (overhang over wharf).
4. The length of jib required to enable the coal-hoppers to be lowered down the holds of the largest vessels visiting the port—
19 ft. 6 in. reach beyond face of wharf.
5. What objections, if any, are there to the jibs being lengthened for this purpose, or new jibs being attached to the cranes in lieu of the present ones, if necessary, to secure that object—

The jibs of the six hydraulic cranes, viz., Nos. 4, 5, 7, 8, 9, 10 can safely be lengthened to make them reach, say, 19 ft. 6 in. beyond face of wharf, which will be sufficient, so long as the load lifted from the lengthened jib does not exceed 9 tons; but if the cranes are ever required for 15-ton loads, then care must be taken to reeve the chains through what will be the inner or original sheave, which must be retained for that purpose.

I have, &c.,

C. W. DARLEY,
Engineer-in-Chief for Public Works.

The Secretary, Coal Cargoes Commission,
Chief Secretary's Office.

Particulars of Cranes at Bullock Island.

Name.	Radius from centre of Crane.	Height of Sheave to Deck of Wharf.	Overhang over Wharf.	Lifting Power.	
1	about ft. in. 28 0	about ft. in. 31 0	about ft. in. 15 0	15 tons	Steam.
2	about 28 0	about 31 0	about 15 0	15 tons	Steam.
3	about 28 0	about 31 0	about 15 0	15 tons	Steam.
4	28 0	38 4	16 9	9 tons and 15 tons	Hydraulic.
5	28 6	38 4	17 3	9 tons and 15 tons	Hydraulic.
6	33 6	51 0	19 6	9 tons and 25 tons	Hydraulic.
7	28 3	38 4	16 6	9 tons and 15 tons	Hydraulic.
8	27 9	38 4	14 9	9 tons and 15 tons	Hydraulic.
9	28 0	38 4	15 9	9 tons and 15 tons	Hydraulic.
10	27 3	38 4	16 0	9 tons and 15 tons	Hydraulic.
11	35 0	51 0	22 0	9 tons and 25 tons	Hydraulic.
12	30 0	48 0	19 9	9 tons	Hydraulic.
13	30 0	48 0	19 9	9 tons	Hydraulic.
14	30 0	48 0	19 9	9 tons	Hydraulic.
15	30 0	48 0	19 9	9 tons	Hydraulic.

C. W. DARLEY,
Engineer-in-Chief for Public Works.

It will be seen that there are at present six cranes whose jibs are long enough, and we believe that in ordinary times these six cranes are sufficient to serve the large ships. On the other hand, we consider that we have shown that there is a marked tendency for the size of the ships to increase; and, moreover, at certain times there is a rush of business. It seems to us, therefore, that the alteration might very well be made at once, and would, at all events, render the arrangements for berthing more simple. When we recollect that it is precisely with the large ships that the danger occurs, it is obvious that they are the ships whose interests ought to be chiefly considered.

Temperature

Temperature at time of Loading.

Returning to the effects of the temperature at which the coal is loaded, the mean of the maximum temperatures of all the days of loading of the ships known to have heated is 75° Fahrenheit. It is therefore clear that this is too high a mean maximum temperature; how much too high we can hardly say. We may note that the highest mean maximum shade temperature of loading of any ship that fired is 88°, and the highest single maximum temperature 103°. With the greatest diffidence, therefore, we suggest that ships of 2,000 tons burden and upwards should not be loaded—except special precautions to avoid breakage are taken, and unless the coal arrives at the wharf in an exceptionally unbroken condition—on days on which the maximum shade temperature rises above 80°, or the maximum sun temperature above 110°. Of course we know that it will be said that the ships are often loaded at night, when the maximum night temperature is much lower. True; but the coal which has been standing all day, generally in sunshine, is still more or less hot through the greater part, if not the whole, of the night. In short, it may truly be said that there is no finite relation between the temperature of a mixed cargo of coal and the mean maximum temperature of the days on which it is loaded. The scientific method would be to take the temperature of each waggon-load of coal as it came under the cranes; but this, we fear, is quite impracticable. Again, of course, we recognise that it does not matter how cold the greater part of the cargo is if 200 or 300 tons, or even less, is hot. The fact is that the process of loading large ships with coal at Newcastle during the summer months, with the existing appliances, is necessarily fraught with considerable risk. At what temperature the risk vanishes we are unable, with the present limited data at our command, to exactly determine. The temperatures of 80° and 110°, which we have fixed upon, are certainly as high as can be allowed, and it is probable that isolated cases of heating will still occur, even if our suggestion is acted upon. To fix a lower limit would give rise to vast inconvenience.

SUMMARY OF CONCLUSIONS.

Liability to Dangers.

Ships carrying coal cargoes are peculiarly liable to the two following dangers:—

- (1) Spontaneous heating of the coal cargo.
- (2) Shifting of the coal cargo.

(1) Spontaneous heating. The cause of this is to be sought in the absorption of oxygen by coal. This absorption increasing both with the initial temperature of the coal, the fineness of its state of division, the depth of the cargo, and the length and mean temperature of the voyage.

(2) The cause of the shifting of cargo is to be sought in imperfect and insufficient trimming, and the absence of shifting-boards.

Means for preventing Spontaneous Heating.

(1) We recommend that the cranes be altered so as to admit of the waggons being lowered down the hatchways of ships, with a view to prevent the excessive breakage of coal which has hitherto taken place. We are aware, however, that the system of loading at present in vogue at Newcastle must be regarded as antiquated, and that the loading of ships cannot be placed on a satisfactory footing until the system is entirely reorganised.

Among the systems which we have considered, Lewis and Hunter's appears to us most suitable, and we should have recommended that this system be adopted at Newcastle were it not for the enormous expense which would be involved in establishing it. For this reason it appeared to us to be desirable that every effort should be made to improve the existing system before incurring the expense of abolishing it.

(2) We recommend that very large ships should not be loaded with the existing appliances on days at which the maximum shade temperature rises above 80° F., or the maximum sun temperature above 110° F.

(3) We recommend that, as at present, surface ventilation only should be employed in connection with cargoes of coal.

Shifting

Shifting of Coal Cargoes.

(4) With regard to the trimming of coal cargoes, we are unable to recommend that any form of Government inspection or licensing of trimmers should be adopted, as it has been abundantly shown that it is in the power of the masters of ships to secure adequate trimming.

We are of opinion, however, that no iron or steel ship should engage in the coal trade without shifting-boards being provided.

It is right that we should here acknowledge the assistance we have received from the Secretary of the Commission, who prepared, single-handed, the laborious returns contained in this Report and Appendix.

RICHARD THRELFALL, M.A., A.M.I.C.E.,
President.
EDWARD F. PITTMAN, Assoc. R.S.M.

WALTER WILSON,
Secretary,
28/4/97.

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APPENDIX A.

TABLE I.

CASES of Spontaneous Combustion in the Cargoes of Coal-laden Vessels which sailed from Newcastle, New South Wales, between the years 1888-(30 Sept.) 1896.

Date of Sailing	Name of Vessel.	Wood, Iron, or Steel.	Year built.	Depth of Vessel	Tonnage.	Port of Destination.	Tonnage of Coal Cargo.	Colliery from which cargo was obtained.	How loaded—by Crane, Shoot, &c	Dates of Loading.	Maximum shade temperature on dates of loading.	Rainfall recorded at 9 a.m.	Extent of Casualty.	Referred to in Evidence.	
1888. July 19	Kilkerran	Iron..	1871	23·4	1,199	Valparaiso ...	1,757	Ducker field	Crane.....	Day and night. { 1888. July 14 63·8 " 15 62·8 " 16 62·8 " 17 63·8 " 18 62·3	1888. July 14, 0·01 " 15, — " 16, — " 17, 0·02 " 18, 0·17 " 19, —	.....	.....	Reported to have been burnt after arrival at one of the ports on the west coast of South America. (Omitted in statistical treatment.)	
1892. Dec. 23	King James ...	Steel	1892	...	2,200	San Francisco.	3,489	Wallsend	"	Night* { 1892. Dec. 5 76·0 " 6 78·0 *(500 tons.) Day and night. { Dec. 16 75·5 " 17 74·5 " 18 67·5 " 19 68·5 " 20 69·0	1892. Dec. 5, — " 6, — " 7, 0·05 " 16, — " 17, 0·20 " 18, 1·85 " 19, 1·40 " 20, 1·27 " 21, 0·18	Burnt—total loss	Q. 937, 1799 to 1810.	Had 50 tons of dirty Welsh coal in bottom of ship, which had been on board for seven months previous to sailing.	
1893. Mar. 5	Cedarbank	"	1892	24·5	2,800	"	4,283	"	"	Night* { 1893. Feb. 14 73·0 " 15 91·0 *(500 tons.) Day and night. { Feb. 25 76·0 " 26 77·0 " 27 81·5 " 28 74·0 Mar. 1 79·5 " 2 80·5	1893. Feb. 14, 0·02 " 15, — " 16, 0·01 " 25, — " 26, — " 27, — " 28, — Mar. 1, — " 2, — " 3, —	Arrived on fire ...	Q. 2059-69	Had to put back after leaving Newcastle, and was six weeks in Sydney effecting repairs.	
Nov. 4	Hawaiian Isles	"	1892	23·6	2,027	"	3,300	Duckenfield	"	Day ... Oct. 20 79·0 Day and night. { Oct. 26 71·0 " 27 72·0 " 28 75·0 " 29 75·0 " 30 64·0 " 31 64·0	Oct. 20, — " 21, — " 26, — " 27, — " 28, — " 29, 1·30 " 30, 0·18 " 31, 0·40 Nov. 1, 0·02	Cargo heated in No. 3 hatch.	.....	(See letter from master, Appendix "B.")	
1895. June 13	Royal Forth ...	Iron	1893	25·6	2,988	"	4,558	Pacific Co-operative...	"	Day ... { 1895. May 28 59·0 " 29 65·5 June 8 64·0 " 9 68·5 " 10 64·0 " 11 57·0 " 12 61·5 " 13 58·0	May 28, — " 29, — " 30, — June 8 — " 9, — " 10, 0·18 " 11, — " 12, — " 13, — " 14, 0·27	Arrived with cargo heated.	Q. 3237-42		

* Stiffening coal.

Date of Sailing.	Name of Vessel.	Wood, Iron, or Steel.	Year built.	Depth of Vessel.	Tonnage.	Port of Destination.	Tonnage of Coal Cargo.	Colliery from which cargo was obtained.	How loaded — by Crane, Shoot, &c.	Dates of Loading.	Maximum shade temperature on dates of loading.	Rainfall recorded at 9 a.m.	Extent of Casualty.	Referred to in Evidence.	
1895. Sept. 7	West Glen.....	Iron..	1876	18 6	700	Tortoralillo...	1,086	Wallsend	55 tons from lighter. Crane	1895. Aug. 27	72·0	1895. Aug. 27, — " 28, — Sept. 2, — " 3, — " 4, —	Arrived at Valparaiso on fire.		
" 19	John Ena	Steel..	1892	25 0	2,568	San Francisco	1,257	Pacific Co-operative	"	Day† ... { Sept. 6 " 7 †(1,500 tons.) Day and night. { Sept. 10 " 11 " 12 " 13	77·0 77·0 80·0 78·0 69·0 69·0	Sept. 6, — " 7, — " 8, — " 10, — " 11, — " 12, — " 13, — " 14, —	On fire during voyage.	Q.3243-46	Part cargo jettisoned. (See Appendix C.)
Dec. 10	Garsdale	Iron..	1885	23·0	1,645	Valparaiso ..	2,490	Wallsend	"	Night† ... Nov. 27 †(400 tons.) Day and night. { Dec. 3 " 4 " 5	79·0 93·0 99·0 82·0	Nov. 27, 0·17 " 28, 0·01 Dec. 3, 0·20 " 4, — " 5, — " 6, 0·51	Cargo heated on voyage.		Heat decreased and vessel arrived.
" 10	Hollinwood ...	Steel..	1889	21 2	2,606	San Francisco	4,060	West Wallsend.....	"	Day† ... { Nov. 22 " 23 †(1,270 tons.) Day (one night till midnight). { Dec. 4 " 5 " 6 " 7 " 8 " 9	75·0 78·0 99·0 82·0 93·0 72·0 76·0 80·0	Nov. 22, — " 23, 0·01 " 24, 0·07 Dec. 4, — " 5, — " 6, 0·51 " 7, 0·04 " 8, — " 9, — " 10, 0·06	Cargo heated....	Q.1743-53, 2086.	Put into Lyttleton, N.Z., and discharged part cargo.
" 27	Alexandra.....	Iron..	1863	23·9	1,297	Los Angeles ..	1,798	*South Wallsend (620 tons) and Northern Extended (1,178 tons).	"	Night† Dec. 2 †(250 tons) Day ... { Dec. 19 " 20 " 21	83·0 81·0 87·0 91·0	Dec. 2, 0·05 " 3, 0·20 " 19, — " 20, — " 21, 0·77 " 22, 0·26	Arrived at San Francisco on fire.	Q.2070-90, 2481, 2513, 2117, 2704.	Ship scuttled. Fire originated under No. 3 hatch to mainmast.
1896. Jan. 22	Republic	Steel	1891	24 0	2,347	San Francisco	3,770	Co-operative	"	1896. Day† ... Jan. 2 †(600 tons.) Day and night. { Jan. 13 " 14 " 15 " 16	77·0 93·0 103·0 79·0 74·0	1896. Jan. 2, — " 3, — " 13, — " 14, — " 15, 0·02 " 16, 0·07 " 17, 0·01	Burnt—total loss.	Q. 47-53, 2083-90.	Fire originated in No. 2 hatch. (See Appendix "D.")

* Now Cardiff.

† Stiffening coal.

Date of Sailing.	Name of Vessel.	Wood, Iron, or Steel.	Year built.	Depth of Vessel.	Tonnage.	Port of Destination.	Tonnage of Coal Cargo.	Colliery from which Cargo was obtained.	How loaded by Crane, Shoot, &c.	Dates of Loading.	Maximum shade temperature on dates of loading.	Rainfall recorded at 9 a.m.	Extent of Casualty.	Referred to in Evidence.	
1896. Jan. 31	Brablock	Steel	1889	24.2	2,000	San Francisco	3,154	*South Wallsend (1,167 tons), Northern Extended (1,785 tons) and Pacific Co operative (202 tons).	Crane	1896. + Jan. 14 " 15 " (750 tons.) + Jan. 23 " 24 " 25 " 26 " 27 " 28	103.0 79.0 80.0 90.0 102.0 73.0 75.0 78.0	1896. Jan. 14 — " 15, 0.02 " 16, 0.07 " 23, 0.01 " 21, — " 25, — " 26, 1.02 " 27, 0.01 " 28, — " 29, 0.01	Cargo on fire	Q. 2083-90, 2117, 2704.	Vessel beached and filled with water at destination.
Feb. 2	Knight of St. Michael.	Steel	1883	21.1	2,191	Valparaiso	3,206	Wallsend	"	Day ... + Jan. 17 + (400 tons.) Day and night. { " 28 " 29 " 30 " 31	85.0 78.0 90.0 72.0 ...	Jan. 17, 0.01 " 18, — " 28, — " 29, 0.01 " 30, — " 31, — Feb. 1, —	Cargo heated	Q. 271-287, 2095-97, 32-35.	Put into Sydney and discharged part of cargo. (See Appendix "E.")
...	Morna	Iron	1877	23.0	1,437	...	*608 (stiffening)	"	Baskets	Feb. 21	79.8	Feb. 21, 0.19 " 22, — " 25, 0.05 " 27, 0.03 " 28, — " 29, —	*	Q. 93-123, 171, 2100.	*Stiffening coal loaded at Sydney from coasting vessel, heated in Newcastle Harbour, in the square of the main hatch, where the coal was small and dusty. (150 tons removed).
...	Invermay	Steel	1895	21.7	1,330	...	+400 (stiffening)	"	"	(At Sydney.) Mar. 9 " 10 " 12	78.7 75.1 78.9	Mar. 9, — " 10, 0.71 " 11, — " 12, — " 13, —	+	Q. 129-141, 172.	Stiffening coal loaded at Sydney from coasting vessel heated in Newcastle Harbour in the square of the main hatch, the coal being finely powdered and damp. (40 tons removed).
April 30	Ellen A. Read.	Wood	1884	24.0	1,750	Manila	2,553	West Wallsend (2,053 tons) and Waratah (500 tons).	153 tons by baskets. Crane	April 9 Day and night. { April 22 " 23 " 24 " 25	85.0 71.0 68.0 73.0 71.0	April 9, — " 10, — " 22, — " 23, 0.07, " 24, — " 25, — " 26, 0.34	Cargo on fire on surface.	Q. 26-30, 686-99, 706-26, 1760-3, 1877-95, 3177-8.	Put into Sydney. Fire near the main hatch (probably due to cause other than spontaneous heating. Omitted in statistical treatment).
" 22	Flora P. Stafford.	"	1883	23.8	1,250	"	1,964	Seaham	154 tons by baskets. Crane	April 8 Day ... { April 15 " 16 " 17 " 18	80.0 68.0 68.0 67.0 68.0	April 8, — " 9, — " 15, — " 16, — " 17, — " 18, — " 19, —	Burnt—total loss.	.....	Fire originated in main hold on June 6. (See Appendix "E.")
Aug. 25	Rhuddlan Castle.	Iron	1883	21.6	2,093	San Francisco	3,100	Wallsend	"	Night and Day { Aug. 5 " 6 " 20 " 21 " 22	60.0 59.0 57.0 63.0 60.0	Aug. 5, — " 6, 0.01 " 7, 0.03 " 20, — " 21, — " 22, — " 23, —	Cargo heated in after hatch—10 tons jettisoned.	.....	.....

* Now Cardiff. † Stiffening coal.

SYNOPSIS OF TABLE I, SHOWING CARGOES THAT HEATED.

(1.)

VESSELS classified according to size of Cargoes, also Port of Destination.

Under 500 tons		500 and under 1,000 tons.		1,000 and under 1,500 tons		1,500 and under 2,000 tons.		2,000 and under 2,500 tons.		2,500 and under 3,000 tons.		3,000 and under 3,500 tons		3,500 tons and over.	
Name of Vessel.	Destination.	Name of Vessel.	Destination.	Name of Vessel.	Destination.	Name of Vessel.	Destination.	Name of Vessel.	Destination.	Name of Vessel.	Destination.	Name of Vessel.	Destination.	Name of Vessel.	Destination.
Invermay ..	(Stiffening coal only, heated at Newcastle.)	Morna ...	(Stiffening coal only, heated at Newcastle.)	West Glen.	Tortoralillo.	Alexandra	Los Angeles.	Garsdale ..	Valparaiso	....	...	King James	San Francisco.	Cedarbank ..	San Francisco.
						Flora P. Stafford	Manilla.					Hawaiian Isles ..	do	Royal Forth ..	do
												Brablock	do	John Ena	do
												Kt. of St. Michael	Valparaiso.	Hollinwood ..	do
												Rhuddlan Castle	San Francisco.	Republic	do

(2.)

YEAR in which Vessels sailed and Colliery from which Cargo was obtained.

Name of Colliery.	1892.	1893.	1895.	1896.
Wallsend	King James	Cedarbank	{ West Glen. Garsdale.	{ Kt. of St. Michael. Morna. Invermay. Rhuddlan Castle.
Duckenfield	Hawaiian Isles..	.....	.....
Pacific Co-operative	{ Royal Forth. John Ena. Hollinwood.	.....
West Wallsend
Co-operative	Republic. Flora P. Stafford.
Senham	Alexandra.	.....
South Wallsend and Northern Extended	Brablock.
South Wallsend, Northern Extended and Pacific Co-operative.

(3.)

EXTENT of Casualty.

Burnt—Total loss.	On Fire.	Cargo heated.
King James.	Cedarbank.	Hawaiian Isles.
Republic.	West Glen.	Royal Forth.
Flora P. Stafford.	John Ena.	Garsdale.
	Alexandra.	Hollinwood.
	Brablock.	Kt. of St. Michael.
		Morna (Stiffening only).
		Invermay do
		Rhuddlan Castle.

TABLE II.

MISSING Coal-laden Vessels which sailed from Newcastle, New South Wales, between the years 1888—(30 Sept.) 1896.

Date of sailing.	Name of vessel.	Wood, iron, or steel.	Year built.	Depth of vessel.	Tonnage.	Port of destination.	Tonnage of coal cargo.	Cellery from which cargo was obtained.	How loaded—by crane, shoot, &c.	Dates of loading.	Maximum shade temperature on dates of loading.	Rainfall recorded at 9 a.m.	Shifting boards.	Referred to in evidence.
1888.										1888.		1888.		
Dec. 26	Suakim	Iron	1886	23.0	1,618	Wilmington	2,532	Lambton (246 tons)	By basket from lighter.	Dec. 6 ...	81.3	Dec. 6, —		
								Stockton	Shoot	" 7 ...	94.8	" 7, —		
										" 19 ...	76.3	" 19, —		
										" 20 ...	79.8	" 20, 0.22		
										" 21 ...	87.3	" 21, —		
										" 22 ...	93.3	" 22, 0.11		
												" 23, —		
1889.										1889.		1889.		
Jan. 17	Ningura	Wood	1865	14.9	292	Noumen	500	Lambton	Crane	Day and night { Jan. 14 ...	81.8	Jan. 14, —		
										" 15 ...	100.3	" 15, —		
Feb. 22	Lucknow	Steel	1883	22.5	1,440	San Francisco	1,843	Greta, and Homeville, Greta.	Crane	*Feb 7 ...	83.3	Feb. 7, 0.01		
										* (450 tons.)		" 8, 0.09		
										Feb. 15 ...	90.8	" 15, —		
										" 16 ...	78.8	" 16, 0.69		
										Day. { " 17 ...	76.8	" 17, —		
										" 18 ...	77.3	" 18, 0.01		
										" 19 ...	76.3	" 19, —		
												" 20, 0.01		
June 1	County of Carnarvon.	Iron	1877	22.5	1,267	Valparaiso	1,880	Wallsend	208 tons by baskets.	May 21 ...	70.3	May 21, 0.01		
									Crane	" 23 ...	66.3	" 22, 0.03		
										Day and night { " 29 ...	67.8	" 23, 2.21		
										" 30 ...	66.8	" 29, 0.61		
										" 31 ...	67.3	" 30, 0.07		
												June 1, —		
1890.										1890.		1890.		
Mar. 26	Hawarden Castle.	Iron	1869	21.0	1,101	Valparaiso	1,521	Wallsend	152 tons from lighter.	Mar. 15 ...	73.8	Mar. 15, —		
									Crane	" 19 ...	70.8	" 16, —		
										" 20 ...	72.8	" 19, —		
												" 20, —		
												" 21, 0.22		
1891.										1891.		1891.		
May 30	Taramung (steamer).	Iron	1880	16.5	1,281	Melbourne	1,572	Lambton Newcastle C. M. Co. Burwood	Crane	Day May 30 ...	64.5	May 30, —		
Dec. 11	Theophane	Iron	1868	23.7	1,519	Mollendo	2,118	Duckenfield	Crane	*Nov. 26 ...	74.5	Nov. 26, —	No.	
										* (430 tons.)		" 27, —		
										Day and night { Dec. 5 ...	75.5	Dec. 5, 0.07		
										" 6 ...	88.5	" 6, —		
										" 7 ...	76.0	" 7, —		
										" 8 ...	70.5	" 8, 0.11		

* Stiffening coal.

Date of sailing.	Name of vessel.	Wood, iron, or steel.	Year built.	Depth of vessel.	Tonnage.	Port of destination.	Tonnage of coal cargo.	Colliery from which cargo was obtained.	How loaded—by crane, shoot, &c.	Dates of loading.	Maximum shade temperature on dates of loading.	Rainfall recorded at 9 a.m.	Shifting boards.	Referred to in evidence	
1892. Mar. 14	Osman Pasha	Wood	1878	...	497	Mauritius	747	Duckenfield	Crane	1892. Day and night, Mar. 10	80.5	1892. Mar. 10, — " 11, —	.....	.....	Believed to have foundered in a hurricane off Mauritius.
Sept. 22	Friars Crag	Steel	1892	..	1,335	Iquique	2,322	"	200 tons by baskets at Sydney.	Sept., between 6th and 16th.	.....	.....	.....	.....	Was seen in a gale 60 miles from Sydney.
.. 22	Minnie Young	Wood	1884	70	80	Townsville	130	A. A. Co.'s	Shoot	Sept. 15... " 16... " 17... " 18... " 19...	66.0 69.0 64.5 66.0 72.5	Sept. 15, — " 16, 0.04 " 17, — " 18, — " 19, — " 20, 0.08	.....	.....
Dec. 5	Colwyn	Iron	1887	21.3	1,160	Valparaiso	1,614	Wallsend	Crane	*Nov. 22... *(400 tons.) Day and night { Nov. 29... " 30...	72.0 76.0 80.0	Nov. 22, 0.02 " 23, — " 29, — " 30, — Dec. 1, —	.....	.....
1893. Feb. 15	Gowanburn	Steel	1889	23.7	2,079	San Francisco	2,971	West Wallsend	"	1893. Day..... { Feb. 8... " 9... " 10... " 11... " 12... " 13...	79.0 81.0 84.0 75.0 76.0 75.0	1893. Feb. 8, 0.20 " 9, — " 10, — " 11, 0.02 " 12, 0.85 " 13, 3.70 " 14, 0.02	Yes.....	.....	Supposed to have been in collision; wreckage washed ashore at Kaipara Heads, New Zealand.
.. 21	Lamorna	Iron	1867	22.7	1,258	Honolulu	1,905	Duckenfield	"	*Feb. 9... *(80 tons.) Day and night { Feb. 15... " 16... " 17...	81.0 91.0 79.0 75.0	Feb. 9, — " 10, — " 15, — " 16, 0.01 " 17, — " 18, 0.08	.....	.....
June 14	Woolton	"	1885	24.9	2,101	Valparaiso	2,807	Wallsend	"	*May 26... *(150 tons.) Day and night { June 2... " 3... " 4... " 5...	63.0 64.0 58.0 60.0 63.0	May 26, 0.01 " 27, 0.01 June 2, 0.01 " 3, 3.80 " 4, 0.01 " 5, — " 6, 0.01	No.....	.....	150 casks of tallow on board.
Sept. 19	Evelyn	"	1863	23.0	1,202	Lyttleton	1,699	Newcastle Coal Mining Co.'s	"	Day..... Sept. 9... Day and night { " 15... " 16...	60.0 66.0 71.0	Sept. 9, 0.04 " 10, — " 15, 0.01 " 16, — " 17, —	No.....	.....	Wreckage found, October 3; believed to have foundered.

* Stiffening coal

Date of sailing.	Name of vessel.	Wood, iron, or steel.	Year built.	Depth of vessel.	Tonnage.	Port of destination.	Tonnage of coal cargo.	Colliery from which cargo was obtained.	How loaded—by crane, shoot &c.	Dates of loading.	Maximum shade temperature on dates of loading.	Rainfall recorded at 9 a.m.	Shifting boards.	Referred to in evidence.	
1894. Mar. 16	Colintraire.....	Steel..	1,892	23'0	1,747	San Francisco	3,003	Wallsend ...	177 tons, from lighter	1894. Mar. 5 ...	79'0	1894. Mar. 5, 0'06 " 6, 0'12 " 7, 3'32 " 8, 0'01 " 10, 0'02 " 11, 2'80 " 12, 1'42 " 13, 0'05 " 14, — " 15, 0'03	.....	.....	(See Appendix "G.")
1895. Jan. 26	Florence.....	Iron...	1,869	19'5	809	Panama	1,140	Duckenfield	"	1894. *Dec. 31 ...	74'0	1894. Dec. 31, 1'35 1895. Jan. 1, 1'80 " 21, 0'23 " 22, 3'00 " 23, 5'70	Yes.		
Feb. 23	Cumbras	Steel..	1894	21'7	1,356	Valparaiso ...	1,679	Co-operative	"	Day and night. { Mar. 10 ... " 11 ... " 12 ... " 13 ... " 14 ...	80'0 76'0 76'0 80'0 78'0	Feb. 15, 0'06 " 16, 0'01 " 17, 0'03 " 18, — " 19, 0'04 " 20, —	Yes ..	Q. 1523-37 1548-9	310 casks tallow (153 tons) and 503 tons shale loaded in Sydney.
" 16	Menai	Iron...	1880	22'0	1,296	Tocopilla	2,029	Wallsend	"	*Feb. 12 ... *(350 tons.) Day and night. { Feb. 20 ... " 21 ...	78'0 78'0 80'0	Feb. 12, — " 13, 0'01 " 20, — " 21, 0'01 " 22, —	Yes.		
June 25	Noddleburn ...	"	1883	20'0	1,053	"	1,507	"	"	*June 8 ... *(400 tons.) Day and night. { June 19 ... " 20 ...	64'0 60'0 59'5	June 8, — " 9, — " 19, 0'01 " 20, — " 21, —	Yes.		
July 1	Lady Lawrence ..	"	1868	23'6	1,384	Valparaiso ...	1,500	"	"	*July 2 ... *(400 tons.) Day and night. { July 6 ... " 7 ... " 8 ... " 9 ...	56'0 56'0 58'0 59'5 58'0	Feb. 2, — " 3, — " 6, — " 7, — " 8, — " 9, — " 10, —	Yes ...	Q. 924-6, 2,271-5.	200 tons of tallow and 400 tons of shale on board. (See Appendix "H.")
Dec. 3	Prince James ..	"	1868	...	499	"	815	"	"	*Nov. 23 ... *(215 tons.) Day and night. { Nov. 27 ... " 28 ...	78'0 79'0 67'0	Nov. 23, 0'01 " 24, 0'07 " 27, 0'17 " 28, 0'01 " 29, 0'02	No.		
1886 Feb. 18	Trinidad.....	"	1866	19'0	676	Caldera	1,034	Aust. Agricultural Company's.	Shoot	1896. Feb. 7 ...	74'0	1896. Feb. 7, — " 8, 0'01 " 13, 0'09 " 14, — " 15, 0'30 " 16, 1'42	No ...	Q. 415, 429.	

* Stuffing coal.

SYNOPSIS OF TABLE II, SHOWING MISSING VESSELS.
VESSELS classified according to Size of Cargo, also Port of Destination.

Under 600 tons.		500 and under 1,000 tons.		1,000 and under 1,500 tons.		1,500 and under 2,000 tons.		2,000 and under 2,500 tons.		2,500 and under 3,000 tons.		3,000 and under 3,500 tons.	
Name of Vessel.	Destination.	Name of Vessel.	Destination.	Name of Vessel.	Destination.	Name of Vessel.	Destination.	Name of Vessel.	Destination.	Name of Vessel.	Destination.	Name of Vessel.	Destination.
Minnie Young.	Townsville.	Niagara Osman Pasha Prince James	Noumea. Mauritius. Valparaiso.	Florence Trinidad	Panama. Caldera.	Lucknow County of Carnarvon Hawarden Castle Taramung (s.s.) Colwyn Lamorna Evelyn Cumbrae Noddleburn Lady Lawrence	San Francisco. Valparaiso do Melbourne. Valparaiso. Honolulu. Lyttleton. Valparaiso. Tocopilla. Valparaiso.	Theophane Friar's Crag Menai	Mollendo. Iquique. Tocopilla.	Suakim Gowanburn. Woolton	Wilmington. San Francisco Valparaiso.	Colintraive	San Francisco.
America		1		2		7		3		3		1	
Mauritius		1				1							
Honolulu						1 (s.s.)							
Noumea		1				1							
Melbourne													
Lyttleton	1												
Townsville													
Total		3		2		10		3		3		1	

America
Mauritius
Honolulu
Noumea
Melbourne
Lyttleton
Townsville
Total

YEAR in which Vessel sailed and Colliery from which Cargo was obtained.

Name of Colliery.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.
Wallsend		County of Carnarvon	Hawarden Castle		Colwyn	Woolton	Colintraive	{ Menai Noddleburn Lady Lawrence Prince James }	
Duckenfield				Theophane	{ Osman Pasha Friar's Crag }	Lamorna		Florence	
Stockton	Suakim								
Lambton		Niagara							
Lambton, Newcastle, and Burwood				S. S. Taramung					
Greta and Homeville, Greta									
A. A. Company		Lucknow			Minnie Young				Trinidad.
West Wallsend						Gowanburn			
Newcastle						Evelyn			
Co operative								Cumbrae	

TABLE III.

KNOWN cases of Shifting of Cargo of Coal-laden Vessels which sailed from Newcastle, New South Wales, between the years 1888 and (30 September) 1896.

Date of Sailing.	Name of Vessel.	Wood, Iron, or Steel.	Year built.	Tonnage.	Colliery.	Tonnage of Coal Cargo.	Port of Destination.	How Loaded.	Shifting Boards.	Referred to in Evidence.	
1893. June 6.....	Girvan	Steel ...	1895 ...	1,277 ...	Wallsend	1,979	San Francisco	Crane...	No .....	.....	Vessel abandoned. (See Appendix I.)
1894. March 7 ...	Parthia	Iron ...	1874 ...	1,022 ...	„	1,573	Valparaiso.....	„ ...	Yes.....	.....	Arrived dismantled.
„ 24 ...	Cambrian Chieftain	„ ...	1885 ...	1,453 ...	Duckenfield	2,090	Coquimbo .....	„ ...	.....	.....	Arrived at Tal Tal dismantled.
Aug. 29 ...	Auchencairn	Steel ...	1891 ...	1,925 ...	Wallsend	3,072	San Francisco .....	„ ...	.....	.....	Arrived at destination.
Sept. 24 ...	Poltalloch	„ ...	1893 ...	2,139 ...	Seaham and West Wallsend	3,689	„	„ ...	No	Q 916, 1833-4, 2394.	Returned to Newcastle and cargo retrimmed.
1895. April 19 ...	County of Flint	Iron ...	1877 ...	1,083 ...	Wallsend	1,603	Valparaiso	„ ...	Yes ...	.....	Vessel nearly lost; cargo retrimmed and vessel arrived at destination.
Feb. 27 ...	Cambrian Queen	„ ...	1868 ...	1,900 ...	Duckenfield	1,400 coal, 142 coke.	Mollendo	„ ...	„ ...	Q 3500-25...	Cargo retrimmed.
July 18 ...	Indian Empire	„ ...	1865 ...	1,515 ...	„	2,060	„	„ ...	„ ...	Q 676	Put into Callao dismantled.
1896. Aug. 22 ...	Patrician	Wood...	1879 ...	1,213 ...	Hetton	1,944	Lyttleton	„ ...	No .....	.....	See Appendix "J."

TABLE IV.

CASES of Casualty to Coal-laden Vessels which left Sydney between the years 1888 and (30 September) 1896.

Date of Sailing	Name of Vessel.	Wood, Iron, or Steel.	Year built.	Depth of Vessel.	Tonnage.	Port of Departure.	Port of Destination.	How loaded.	Colliery.	Tonnage of Coal Cargo.	Referred to in evidence.	
1888. Oct. 20	Bay of Cadiz	Steel ...	1878 ...	22'7 ...	1,626 ...	Sydney	San Francisco	By baskets	Bulli Coal Co.'s	2,212 ...	.....	Missing.
1889. Feb. 20	Pacific Slope.....	Wood...	1876 ...	16'7 ...	799.....	do	Shanghai .....	.....	Mt. Pleasant.....	1,119 ...	.....	„
1893. 1895.	Argo	Iron ...	1875 ...	22'8 ...	935.....	do	Valparaiso .....	.....	Metropolitan Coal Co.'s ...	1,450 ...	Q 36-39...	Explosion on board, in Sydney harbour, 22 July, 1893. (See Appendix "K.")
	Prosperity.....	Wood...	1868 ...	9 feet...	125.....	do	Richmond River ...	Crane ...	do do ...	180 ...	Q 40-46...	Explosion on board, in Sydney harbour, August, 1895.

TABLE V.

COAL-LADEN Vessels to which Casualties of other kinds than those named in the foregoing Tables have occurred.

Date of Sailing.	Name of Vessel.	Port of Destination.	Nature of Casualty.
1888.			
26 February	Henry James	San Francisco	Ashore.
12 July	Respigadera	Wilmington	"
9 January	Dallam Tower	Probolingo	"
1889.			
	Altmore	San Francisco	Wrecked.
11 July	Malligate	"	Ashore.
20 June	Garston	"	Wrecked.
10 August	Windhover	Batavia	Ashore.
1890.			
21 July	Volga	Negapatam	"
1891.			
1 October	Aikshaw	Tocopilla	"
6 November	Ferndale	Portland	Wrecked.
1892.			
3 July	Golden Horn	San Pedro	"
1894.			
20 January	Hiio	Honolulu	"
15 February	Jennie Parker	Iio Iio	Struck on a reef, put into Brisbane, and condemned.
17 March	Loch Eck	Antofagasta	Dismasted in a gale.
20 July	Richard Parsons	Manila	Wrecked.
25 August	Elsinore	Honolulu	Put into Sura leaky, and condemned.
1895.			
10 January	M. A. Doran	Pictou	Dismasted.
12 "	Sarah S. Ridgeway	Singapore	Wrecked.
25 "	Curadoc	Manila	Put into Sydney leaky.
18 May	Arkwright	San Francisco	Put into Noumea leaky, and condemned.
27 July	Bells	Wellington	Leaky; part cargo jettisoned.
2 September	Zeno	"	Foundered.
1 November	Tamerlane	Valparaiso	Dismasted.
23 "	E. A. O'Brien	Mollendo	"
13 December	Grasmere	Wellington	Wrecked.
1896.			
18 February	Seminole	San Francisco	Leaky.
10 March	Sonoma	Honolulu	In collision.
13 September	Scottish Lochs	Antofagasta	Dismasted.
9 December	Carrick	Valparaiso	Foundered.

B.

Letter from the Master of the "Hawaiian Isles."

Newcastle, 2 November, 1896.

Walter Wilson, Esq., Secretary, Royal Commission on Coal Cargoes,—

Dear Sir.

Acting upon your request to write a statement on the heating of a coal cargo taken from this port on board the ship "Hawaiian Isles," I herewith enclose the following:—

On November 1, 1896, the ship was loaded with 2,230 tons best screened coal, 1,070 tons screenings, and 2 tons shale in bags. About 800 tons screenings were dumped in hatch No. 3, and the balance in hatch No. 4. In hatch No. 3 the screenings were levelled off to a depth of 14 feet, and then filled with coarse coal, making in all a depth of 22 feet. The screenings in No. 4 hatch had no coarse coal on top, and laid to a depth of 15 feet. The shale was in the 'tween decks forward. I would mention here that the 800 tons screenings were taken on board in very wet weather; the balance of the cargo was taken in moderate weather, with occasional showers.

On December 28, in latitude 22° 01' N. and longitude 167° 28' W., and the fifty-third day of the passage, smoke was seen issuing from hatch No. 3. On turning the lumps of coal over near the surface the under side was found to be hot. An iron testing-rod was driven into the coal, and after being allowed to remain a few minutes it became so hot as to burn a man's hand. No coals of fire, however, were found.

The rod was driven into the coal in all the other hatches, but no signs of heated coal were discovered.

The steam-pumps were started, and water was pumped into hatch No. 3 for about four hours; the water, when poured on the coal, had the immediate effect of cooling it off. Two days after the pumps were again started, the water being led in trenches over the heated parts and worked for about four hours. After this there was no further need for alarm during the remainder of the voyage.

From the above experience I should say there is little danger of carrying a cargo of Newcastle coal if the ship is properly trimmed with shifting-boards, and at least two of the hatches piped for temperature measurements, and these should be attended to every day and entered in a book kept for that purpose. Then with ordinary care no captain would find his ship on fire as the first intimation that something had gone wrong.

I remain, &c.,

O. KUSTEL,

Master, Ship "Hawaiian Isles," 2,041 tons.

C.

Report of Inquiry of the Marine Surveyor, Sydney Underwriters' Association, in the case of the "John Ena."

I, the undersigned Marine Surveyor, made enquiries to try and ascertain the cause of the fire which broke out in the cargo on board the four-masted barque "John Ena," while on a passage from this port to San Francisco, and report that the four-masted barque "John Ena," 2,568 tons, built at Glasgow in 1892, of steel, sailed from the port on 19th September, 1895, loaded with 4,257 tons of Pacific Co-operative Steam Coal Co's Ltd. (formerly the Great Northern) coal.

About 1,200 tons of stiffening coal was put in Nos. 2 and 3 holds on the 6th and 7th September. She commenced loading on the 10th, and finished on the 13th September, 1895.

According to the Government railway records, the stiffening coal arrived at the dyke on the 2nd, 4th, 5th and 8th days of August, and the balance of the cargo arrived at the dyke on the 4th, 7th, 10th, 11th, 12th, and 13th days of September.

The weather reports kept at the Marine Board Office show rain to have fallen on the following dates, viz. :— 6th August, 2 points; 7th, 7 points; 8th, 4 points; 9th, 1 point; 10th, 1 point; 12th, 2 points; 14th, 20 points; 17th, 13 points; 18th, 1 point; 19th, 1 point; 21st, 20 points. Total rainfall during August, 72 points.

THOMAS LAIDMAN,

Marine Surveyor,

Sydney Underwriters' Association.

D.

D.

"Republic."

FINDING AND ORDER OF A NAVAL COURT held at the British Consulate-General at San Francisco, on the 30th day of April, and 1st, 2nd, and 4th days of May, 1896, to investigate the circumstances attending the abandonment of the British sailing barque "Republic," of Liverpool, official number 99,314, when on a voyage from Newcastle, Australia, to San Francisco, and the cause of such abandonment, and to inquire into the conduct of the Master, Certificated First and Second Mates, and crew of such vessel.

The "Republic" was a steel vessel, barque rigged, of 2,347 tons registered tonnage, official number 99,314, built at Sunderland in 1891, and belonging to the port of Liverpool.

It appears from the evidence given before this Court that she sailed from Newcastle, Australia, on or about the 22nd January, 1896, bound for this port of San Francisco with the cargo consisting of 3,770 tons of Wallsend coal, mined from the Co-operative Colliery at Newcastle, New South Wales, and a crew of 30 hands all told. After leaving Newcastle fair weather, with but unfavourable winds, was experienced, and the vessel in consequence made poor progress.

The ventilators were kept open continually, and all the hatches were removed during the daytime, the temperature of the hold being taken each day with great regularity by the First Mate. No indication of any heating of the cargo was discovered until the 10th of April, when steam was found to be coming from No. 2 hatch.

This subsided during the day, but increased in volume on the 11th. The master then ordered all the hatches to be removed, and made an examination of the cargo, testing it with iron rods in several places.

He jettisoned from 20 to 30 tons of coal from hatch No. 2. A very large quantity of water was then pumped into the hold on this and the following days.

The heat in the tubes was found to be normal, and this continued to be the case until the 16th. Some of the crew were set to work to dig down in order to get at the seat of the fire, but could not continue the work on account of the smoke and gas, which overcame several of them.

On the 16th a heavy explosion took place, blowing off several of the hatches. On the 17th a sail was sighted, which proved to be the British ship "Hollinwood," and in response to signals made by Captain Hughes, the master, Captain Kidd came on board and promised to stand by the "Republic" and take off the crew in case she had to be abandoned.

Finding it impossible to subdue the fire, which continued to spread, despite the efforts made to control it, the vessel was finally abandoned on the 19th April, and all hands were transferred to the "Hollinwood," the two vessels being at the time in latitude 34 degrees, 44 min. north longitude, 127 degrees 15 min. west.

When the crew left the "Republic" the foremast was settling down and the deck had begun to sink, flames were hursting out of the hatches, and everyone on board, as well as the master of the "Hollinwood," considered it highly dangerous to remain longer on board. All hands were safely landed at this port of San Francisco by the ship "Hollinwood" on the 24th April.

The Court having carefully considered the evidence, finds the "Republic" was well found and seaworthy at the time of her departure from Newcastle, and was fully provided with all the apparatus necessary; that the cargo was well and properly stowed, the ventilation was good and sufficient, and that the vessel was not overloaded; that the master, Seth Hughes, navigated his vessel in a proper and seamanlike manner; that every care was observed on board in attending to the ventilation and in noting the temperature; that the officers and crew behaved in an exemplary manner, and that perfect discipline was maintained on board; and that everything was done that could be done to get the fire under.

In the opinion of the Court the master deserves great praise for the manner in which he performed his duty.

The master and officers are therefore exonerated from all blame.

The Court thinks that if the "Republic" had been provided with facilities for discharging steam into the hold there would have been a possibility of saving the ship and cargo.

The expenses of this Court, fixed at £22 18s. 6d., are approved.

Dated at San Francisco, this 4th day of May, 1896.

J. W. WARBURTON, President of Naval Court and British Consul-General.

F. W. HARVEY, Master Mariner.

JOHN A. BROMLEY, Master of the British ship "Comishead," of Workington.

THE MERCHANT SHIPPING ACTS, 1854 TO 1894.

At a Naval Court, held at the British Consulate-General, at San Francisco, on the 30th day of April, 1896, Seth Hughes, master of the British barque "Republic," of Liverpool, official number 99,314, being called, sworn, and examined, deposed as follows:—

How long have you been on the "Republic"? Two years.

When and where was she built? Sunderland, 1891.

She was an iron ship? No; steel.

How much coal was put on board at Newcastle? 3,770 tons.

Were you present at the time the ship was loading? Part of the time; but I was sick in the hospital most of the time.

How was the cargo put on board? Tipped into the hold from the coamings of the hatch.

What condition was it in as to size? Mostly large; but some small, mostly in the fore hatch.

What was the state of the weather? Fine dry weather the whole time.

Was the coal wet or dry when it came from the colliery? As far as I saw, quite dry.

What kind of coal was it? It is called Wallsend coal, and came from the Co-operative Colliery.

Do you know whether it came direct from the colliery or not? Direct.

How long was the ship loading? Including the stiffening, about fourteen days.

Had you a full cargo of coal? Yes.

Was that the first cargo of coal you have taken from Newcastle? I have taken five cargoes; four in other ships and one in this.

Were they from the same colliery? Two from the same colliery—one of them in the "Republic."

Had you any trouble with the two previous ones? None whatever.

Did you use shifting-boards; if so, how were they secured? Yes; I had efficient shifting-boards, both in the lower hold and between decks, roved between stanchions.

Did you use rope to secure them? Yes; Manilla ropes in the lower hold only.

Had she a permanent between deck? Permanent, with hatches in midships and along the sides.

Had she any bulkheads? Only one collision bulkhead.

Will you describe the ventilation? Seven ventilators altogether—three forward and four aft.

How many hatches? Four.

Had you surface ventilation? Yes, ample, and mast ventilation.

What appliances had you for taking the temperature of the coal? Three tubes between the hatches.

How many thermometers had you? Two.

Who took the temperature daily? The chief officer.

When was it taken? At noon.

Was it entered in the log daily? Yes.

Was it taken in all three tubes? Yes.

Up to the 10th April, was there any unusual variation in temperature? No.

Do you remember the average temperature up to that date? It was high at Newcastle and shortly after leaving, but rapidly decreased at sea, and was at its lowest just before the 10th.

Was the temperature taken high up or low down? Different places from the bottom to the top of the tube.

What passage did you make? The northern passage.

What sort of weather did you experience after the 10th? Fine weather, but unfavourable winds.

Did you keep the fore and aft hatches open for ventilation? Yes; both all day, and occasionally the aft hatch at night.

When

When was the first indication of increased heat? On the 10th April, when steam was detected.
 What steps were taken on this discovery? The hold was examined, but no heat was detected.
 Did you personally examine the hold? Yes.
 In what part of the ship was the steam detected? The fore hatch.
 Was any increase of temperature detected anywhere? No.
 On the 11th of April, when you found the coal much heated in No. 2 hatch, and signs of smoke oozing out, what steps did you take? The coals in the square of the hatch were jettisoned.
 What quantity did you jettison? About 25 tons.
 When you had taken these 25 tons out, did you find any increase of temperature? Yes.
 How did you test it? We drove iron rods down about 10 feet.
 How long did you keep them down? About ten minutes.
 What state did you find them in? Much heated.
 To what distance to the bottom would the rods reach? About 9 feet.
 What did you do then? We put on two force-pumps.
 What condition were the pumps in? Good order.
 How long were you pumping the water in? Until night—about twelve hours.
 Why did you not use the steam-pump? We thought the others were sufficient.
 After you had finished pumping, did you sound the bell to see what quantity of water was in the hold? About 11 inches, which increased during the night to about 19.
 Was all the water pumped in No. 2 hatch? Yes.
 Did you jettison any more coal after that? No.
 On the 12th you stopped pumping in water at night—why was that? I thought I had got the fire under.
 On the 13th, when you found a considerable amount of smoke coming up, did you make any attempt to get at the seat of the fire? The men could not work on account of the heat and smoke.
 Did they attempt to do so? Yes; and two or three were overcome, and had to be hauled up and became insensible.
 On the 14th you set the steam-pump to work to pump the water out of the ship;—did you at the same time pump water into her? Yes; with the three pumps, one of which was a steam-pump.
 When did you cease pumping water in? At 8 a.m.
 Why did you stop then? We thought the fire was under.
 Did you take the temperature again at this time? Yes.
 What was it? After tube, 70°; middle, 76°; forward, 72°.
 What did you do on the 15th? We kept all battened down.
 Why was that? We thought we could smother the fire out.
 Were the ventilators closed? Yes; masthead and all.
 Were you pumping water in? No.
 Why not? Because she was all closed up, and we thought we could smother it out.
 Did you try the temperature that day? Yes; several times during the day, in all the tubes.
 How did you find the temperature? The after tube, 70°; the middle tube, 75°; and the forward tube, 72°.
 You say in your protest that there was a great quantity of smoke and gas, especially in the fore part of the hold;—how did you ascertain this? Before we battened it down.
 What time did you batten it down? About 8 o'clock a.m., in consequence of the temperature being slightly lower than the day before.
 Had you any explosion that day? No.
 What did you do on the 16th? Nothing before 2 p.m.
 Where did you detect the smell of gas? Coming out of the lazarette.
 Could you have used your steam-pump to inject steam? I thought of doing so, but I had no connection.
 On how many occasions did the crew work in order to get at the seat of the fire? Several times. I cannot say how often, for they were driven back by smoke and gas.
 How did the officers and men behave? Very willingly.
 You say a heavy explosion took place at 7 a.m.;—was it possible for anyone to have gone down into the hold with a light or match which could have caused the explosion? It was quite possible.
 Did you take the temperature at 7 and midnight? Yes, continually.
 Can you remember what the temperature was? A hundred in the fore tubes immediately after the explosion, and the same as before in the other tubes.
 Was the temperature continually rising? Yes, in the fore tube; no change in the other.
 Did you see any fire after the explosion? No; but the flames of the explosion burnt the main bunt-line.
 After the explosion, did you pump any more water in? No; it would have been no use to do so.
 In your opinion, could anything have been done to save the ship after this explosion? No more could be done than was done.
 What do you think was the cause of the fire? I have no idea.
 Was the ship insured? I have no knowledge.
 Had you any interest in it? None whatever.
 When did you sight the "Hollinwood"? On the morning of the 16th.
 What was your object in pumping water on the coal after midnight on the 17th? Because we saw the flames from the burning coals for the first time, and I had hopes of keeping the fire down until I could get into port.
 Did it appear to have any effect? It put the flames out for a time.
 Seeing the fire had got so much ahead, did you take the precaution of shutting off the sea-cock? Yes.
 Supposing you had wanted to flood the hold through this sea-cock, would it have been possible? No; because I had no sluice-valve in the collision bulkhead.
 Where was the intake for the donkey engine? From the same source.
 From the time the "Hollinwood" came alongside, was any further attempt made to flood the cargo? No; because the donkey steam-pump had broken down, and the fire had got too much of a hold for the other pumps to have been of much use, and there were explosions taking place all over the ship.
 Had you a steel deck under your wooden deck? Yes.
 Do you think when you first communicated with the "Hollinwood" that the combined efforts of the two crews could have saved the ship? I do not think anything could have saved her.
 If the "Hollinwood" had not been in sight, would you have been compelled to leave the vessel as soon as you did? Yes.
 How long was the "Hollinwood" in company with you? Three days from the time we signalled.
 When you held a consultation with the crew, were they all of the same opinion that it was no longer safe to remain on board? They were all unanimous.
 How was the discipline on board? All behaved well.
 Was anyone materially injured during the fire? There were several injuries—nothing serious.
 Can you think of anything you wish to add to your protest, or to the evidence you have given the Court? No.
 How long have you been in command? Fourteen years.
 What certificate do you hold? Extra master's certificate.
 Are you a member of the Naval Reserve? Yes, with the rank of lieutenant.

SETH HUGHES.

I hereby certify that the foregoing is the evidence of Seth Hughes, taken before the Court as above described, and duly signed by the witness before me,—

J. W. WARBURTON, President of Naval Court and British Consul-General.

[At 4 p.m. the Court adjourned until the 1st day of May, at 11 o'clock in the forenoon.]

THE MERCHANT SHIPPING ACTS, 1854 TO 1894.

At a Naval Court held at the British Consulate-General at San Francisco on the 2nd day of May, 1896, W. Williams, first mate of the British barque "Republic," of Liverpool, official number 99,314, being called, sworn, and examined, deposed as follows:—

What certificate do you hold? Ordinary master's.

What is the date of your certificate? 1869

Have you ever been in command of a ship? Yes, sir.

How long have you been on board of the "Republic"? From the time she left home—about eleven months.

Will you state what took place from the commencement of the loading up to when the ship was abandoned? We were about fourteen days loading, including the stiffening; the coal was chiefly large, but a good deal of small in the fore hatch. The coal was quite dry, and the weather warm and dry during the whole time. I was in charge of the loading, and saw most of the coal put in. We had a fine passage all the way, with light winds, fair weather, and everything went well until the 10th of April. On that day we first noticed steam coming up from the fore hatch. At first we didn't think much of it, and opened all the hatches and examined all the cargo. On the 11th we saw steam and smoke in greater quantities coming. We then jettisoned some of the cargo—about 20 to 30 tons—out of No. 2 hatch, and then pumped in water. We thought the measures that had been taken had been effectual, and on the following day we found steam and smoke again, but the temperature was not excessive, and then we pumped water again until night, and then battened down. On the 13th the smoke was coming up in considerable quantities, and we continued pumping water in all day. On the 14th we found much heat and smoke. We kept on pumping until 8 o'clock in the morning. On the 15th there was considerable heat and smoke, and the hatches were kept battened down, and on this day we first saw the "Hollinwood." On the 16th strong smell of gas was perceived, and we opened the ventilators to let it escape for fear of explosion. At 7 p.m. a heavy explosion took place, blowing off the hatches. We then closed the hatches with boards, and left some of the ventilators open for fear of explosion of gas. On the 17th we signalled the "Hollinwood," and the captain came on board in the afternoon, and promised to keep company until after we abandoned her.

By the Court: Have you had any experience carrying coal? Yes; I have carried cargoes many times.

Have you ever carried this Newcastle coal before? Yes; this is the third cargo.

Have you ever had any trouble with fire before? No; but I had one cargo that heated.

Was that Newcastle coal? No.

You were attending to the loading of the ship? Yes.

At any time during the loading, was there any rubbish or sweepings of the deck thrown amongst the coal? No.

In clearing up the hold after your cargo was discharged, was there any ballast left in? No.

Do you remember what sort of lights the trimmers used? Candles.

Do you think it possible some of these candles could have been covered over with coal, say a bunch of them? No.

Do you remember how your shifting-boards were secured in the lower hold? They were lashed with Manilla rope.

Had you a good supply of shovels and coal-baskets? Yes.

When the trimmers finished the cargo, what space had you between the deck and the coal? About 2 feet space amidships, and much more at the ends.

Had you thermometers? Yes.

Were they in good order, and how many? Two, in good order.

Did you yourself take the temperature daily? Yes, throughout the passage.

During the passage, had you any perceptible increase in the temperature until the smoke or steam appeared? No.

Was the temperature about usual, the same as in other ships? About the same.

Had you no indications of any heat? No.

How many ventilators had you? Seven—six large and one small.

As the chief mate of the ship, did you particularly attend to the ventilation of the ship? Yes.

Did you pay attention to taking the hatches off? Yes.

In lifting any of the hatches off during the voyage, did you feel any heat? No.

At any time during the voyage, were any of the men down with lights? No, not to my knowledge.

Were any of the men found smoking down below? No, never.

How many pumps had you on board of the ship? Two force-pumps, worked by hand, and one steam-pump.

Were they in good condition? Yes; splendid pumps.

Had you long rods of iron for probing the coal? Yes.

Did you use these rods at any time before the heating? No.

After the heating, did you probe these coals? Yes.

Where did you probe these coals? In each hatch.

Where did you locate the heat? In the middle of No. 2 hatch.

Is this the hatch where you had most of the small coal? Yes; that and the fore hatch.

Was there no perceptible heat in the fore hatch? We found no heat in the fore hatch with the rod.

When you were loading, do you remember any coals being tipped down the fore hatch? Yes.

What did you do when you found an increase of heat in the cargo? Pumped water into the hold.

Which hatch did you pump water into? No. 2 hatch.

Do you know the greatest amount of water you had in the ship? From 18 to 19 inches.

Did you pump any water out the night before? Yes; about five hours.

How many hours were you occupied altogether pumping water out of the ship? About eighteen hours, with double pumps worked with steam.

What sort of pumps had you? Very large double-action pumps.

What time did you yourself give up hopes of saving the ship? After the second explosion on the 16th of April, as the fire had got beyond our control, unless we could get into port and scuttle her.

Were you during all this time making as much sail as possible? Yes; all sails were set except the mainsail, which was over the seat of the fire.

In your opinion, was everything done that could possibly be done? Yes.

How was the discipline on board? First class; everyone worked well.

It is in evidence that the donkey-engine broke down? Yes.

From what cause? The lower gallaway tubes burnt.

Does your exhaust steam-pipe discharge over the ship's side? Yes.

Do you think you could have managed to turn that steam into the hold? I do not see how it could have been done.

WILLIAM WILLIAMS.

I hereby certify that the foregoing is the evidence of William Williams, taken before the Court, and duly signed by the said witness,—

J. W. WARBURTON,

President of Naval Court and British Consul-General.

[NOTE:—Evidence corroborative of the foregoing was given by other witnesses.]

E.

REPORT of the Government Geologist on the Heating of the Cargo of the "Knight of St. Michael."

Geological Survey Branch, Department of Mines and Agriculture,

Sydney, 27 February, 1896.

Sir,

I have the honor to report that I have made two inspections, on the 25th and 27th instant, of the coal cargo of the ship "Knight of St. Michael," and have to report as follows:—

Previous to my visit the cargo had been inspected several times by the Marine Surveyors, copies of whose reports are herewith. From these reports it will be seen that the ship left Newcastle on the 1st February with a cargo of 3,210 tons of Wallsend coal. On the 2nd February the Master took the temperature at intervals between 8 a.m. and noon, and found

found that in No. 2 hatch it rose from 96 deg. to 104 deg. He therefore put into Sydney Harbour, and on the 4th February the cargo was surveyed, and the temperature in No. 2 hatch was found to be 105 deg. The surveyors thereupon recommended the discharge of 300 tons of coal from this hatch.

On the 6th February the surveyors made a second inspection, after the 300 tons had been nearly discharged, and, finding the coals still much heated on the surface, they recommended the discharge of a further quantity of about 500 tons, or until the ceiling was left practically clear.

The cargo was again inspected by the surveyors on the 11th, 12th, and 14th instant, and on the latter date they were of opinion that all the heated coal had been taken out, and that the remainder was fit to be carried on.

On the 14th instant the captain reported that the temperature of the coal in No. 3 hatch was rising; the surveyors confirmed this on the 17th, and also found a slight increase of the temperature in the coal in No. 4 hatch. They therefore recommended that the coal be shifted from hatches Nos. 3 and 4 into No. 2, until the heated coal was reached, and that the heated portion be then removed and sold. On the 21st they reported, after another inspection, that there were no signs of heating in the remainder of the cargo, and it was therefore assumed that the difficulty had been overcome.

Subsequently, however, it was ascertained that the temperature was again rising in No. 2 hatch, and I was then requested to report on the matter.

At about 9.30 a.m. on the 25th instant I found a temperature of 84 deg. Fah. in the centre of the coal, immediately underneath No. 2 hatch, while in the hold near the side of the vessel the temperature was only 77 deg. It was noticeable that the coal contained a large proportion of smalls and dust.

At about 9.45 a.m. on the 27th February I found that the temperature had risen to 88 deg. Fah. in the centre of the coal under No. 2 hatch, while in the hold near the side of the vessel it was 76 deg. At the same hour the temperature of the coal in No. 3 hatch was 79 deg., and in No. 4 hatch it was 73 deg., while the shade temperature on deck was 69 deg.

It is clear from the foregoing remarks that the temperature of portions of the cargo is at the present abnormally high, and there is reason for believing that, if left alone, it would continue to increase until spontaneous combustion ensued. Samples of the coal taken by me have been analysed by Mr. J. C. Mingaye, in the Departmental laboratory, with the following results:—

From No. 2 Hatch.		
Hygroscopic moisture.....	1.	2.
.....	2.65	2.81
Volatile hydrocarbon	35.80	35.32
Fixed carbon.....	55.30	54.47
Ash.....	6.25	7.40
	<hr/>	<hr/>
	100.00	100.00
	<hr/>	<hr/>
Sulphur.....	0.535	0.453
From No. 4 Hatch.		
Hygroscopic moisture.....		2.45
Volatile hydrocarbons		37.55
Fixed carbon.....		52.30
Ash		7.70
		<hr/>
		100.00
		<hr/>
Sulphur.....		0.508

It may be stated, therefore, that the cargo consists of semi-bituminous coal of good quality, but containing a large proportion of dust and smalls. The coal was, I am informed, screened at the pit-mouth, and its present condition is, I presume, due to the subsequent handling.

From the investigations of eminent European authorities, such as Richters, Fayol, Lewes, and others, there can be little doubt (1st) that the principal cause of spontaneous combustion in coal is the absorption of oxygen by the coal, and (2nd) that the most favourable conditions for the self-heating of coal are a mixture of pieces and dust, an elevated temperature, a large mass or volume of coal to act as a non-conducting covering, and a certain volume of air.

These conditions are precisely those that exist in the "Knight of St. Michael's" cargo. The cargo was, I understand, loaded during the abnormally hot weather which prevailed at the end of January, and it is probable, therefore, that it reached the hold with an initial temperature of from 120 deg. to 150 deg. Fah. In loading from the trucks at Newcastle a considerable proportion of smalls and dust has been produced by the fall and by the process of trimming: by the filling up of the hold the volume of coal necessary to form a non-conducting covering has been provided, while just about sufficient air has access to the hold to complete the necessary conditions.

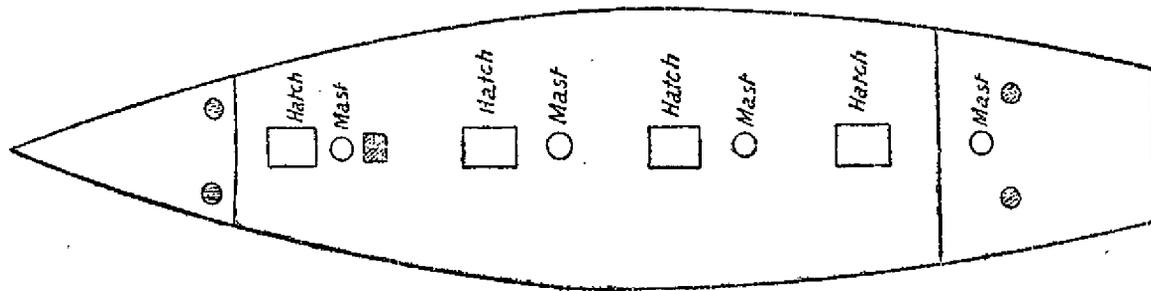
I am of opinion, therefore, that the heating of the cargo of the ship "Knight of St. Michael" is due, firstly, to the fact that the coal contains a large proportion of smalls and dust, and, secondly, to its having been loaded during the abnormally hot weather.

The proportion of "smalls" and "dust" has no doubt been increased by the shifting operations which have taken place since the arrival of the ship in Port Jackson, and I am of opinion that considerable risk would be incurred if the "Knight of St. Michael" were allowed to put to sea with her cargo in its present condition.

I have, &c.,

EDWARD F. PITTMAN,
Government Geologist.

The Under Secretary for Mines and Agriculture.



Ventilating shafts shown thus  

The Government Geologist to The Under Secretary for Mines and Agriculture. Further report on the cargo of the ship "Knight of St. Michael."

I HAVE the honor to report that I have this morning again inspected the cargo of the ship "Knight of St. Michael."

As will be seen by the report of the marine surveyors, a further quantity of coal (about 500 tons) has been removed, leaving only about 1,500 tons in the ship. About ten days have elapsed since the reduced cargo was trimmed. I find that the coal still contains a considerable amount of dust and smalls, though the proportion is certainly less than on my previous visit. The temperature in the test tube (No. 3 hatch) is 74 deg. I could detect no sensible increase of temperature in the iron rods, and I may add that the conditions which existed on the date of my previous visit have also been modified by the removal of a considerable amount of the mass of overlying coal.

E. F. PITTMAN,
Government Geologist.

28/3/96.

F.

F.

Extract from *Daily Telegraph*, 7 September, 1896.

The loss of the "Flora P. Stafford."

In the *Daily Telegraph* on Saturday the loss of the British ship "Flora P. Stafford" was announced. Yesterday the details of the disaster were received from Manila. The ship was loaded with 1,964 tons of Seaham coal, from Newcastle to Manila, for Messrs. M'Leod & Co., and caught fire in the Pacific Ocean.

The captain states that at 2 a.m. on the morning of June 6th one of the crew discovered a fire in the main hold. Immediately the matter was reported to the captain efforts were made to extinguish the outbreak, but after two days' heavy work it was discovered that the flames were gaining on the vessel, and that nothing could be done. On the 8th the ship had to be abandoned, and the crew took to the boats, the captain and five men in one, the boatswain and six men in another, and four men in the third. They all steered towards St. Augustine's Island, but next morning encountered a typhoon, and the boats parted company. After several days' exposure the captain's boat sighted land, which proved to be the island of Papua.

G.

"COLINTRAIVE."

Merchant Shipping Act, 1894.

In the matter of a Preliminary Inquiry before Captain John S. Castle, Inspector for the Board of Trade, into the circumstances attending the supposed loss of the British sailing ship "Colintraive," of Ardrossan, which has not been heard of since leaving Newcastle, New South Wales, for San Francisco, on the 16th day of March, 1894.

Report.

In pursuance of my appointment, dated the 4th day of March, 1895, I held a preliminary inquiry as to the cause of the supposed loss of the above-named vessel, on the 12th day of March, at the Waterloo Rooms, Glasgow. Mr. D. McNiven appeared for the Board of Trade, and Mr. James Mackenzie represented the owner, Mr. Hugh Hogarth. Having heard and carefully considered the evidence, I beg to report as follows:—

The "Colintraive" was a British sailing vessel, built of steel in 1892, by Messrs. A. Rodger, & Co., of Port Glasgow, and was registered at Ardrossan, her dimensions being as follows:—Length, 265·3 feet; breadth, 40 feet; and depth of hold, 23 feet; whilst her tonnage was 1,907·44 gross and 1,747·17 tons net register. Her official number was 97,566. She was rigged as a ship, and was the property of Mr. Hugh Hogarth and several others whose names appear on the transcript of the register, Mr. Hugh Hogarth being the managing owner.

There were six ventilators, viz.:—One through the fore-castle into the hold, made of wood, 2 ft. 6 in. by 2 ft. 6 in.; one through the forward deck-house, of similar construction, reaching into the hold; one in pump-well with cowl, and shipped on malleable iron coamings, 3 feet in height; one through fore part of after-house leading into after-hold; and two leading through poop-deck into after-hold, 10 inches in diameter. The wooden ventilators were fitted with skylights on top and canvas covers; whilst those made of iron had wooden plugs and covers. The three iron masts were also fitted as to serve for ventilation when carrying grain cargoes. There being then a few holes in each mast in the hold, each hole being 2 or 3 inches in diameter; and there were caps at the masthead.

The vessel was provided with four boats, two of which were lifeboats, carried aft on beams near deck-house with davits, and two cutters carried on fore deck-house.

In October, 1892, the "Colintraive" commenced to take in her first cargo, which was composed of 3,000 tons of coal and a small quantity of general cargo for San Francisco. She sailed from Glasgow on the 14th, and arrived at San Francisco on the 8th of February, 1893. The coal was secured by shifting-boards which had been supplied by the builders of the vessel, and they extended between the fore and main hatchways from the upper deck beams to the lower beams, and before the fore hatchway and abaft the after hatchway, where the coal was sloped towards the ends of the vessel, they were carried much lower.

Mr. Hogarth stated in his evidence that he considered the use of shifting-boards in coal-laden sailing ships to be very necessary, particularly so in modern ships. I may here state that testing tubes were fitted in the fore and main hatchways, and thermometers were also supplied.

An abstract of the log of that passage has been produced, proving that the temperature of the holds had been carefully taken and registered, showing very little difference from the temperature of the deck in the shade.

From San Francisco she carried a cargo of 3,050 tons of wheat and barley to Liverpool, and then proceeded to Bary, where she loaded 3,070 tons of coal for Cape Town. Captain Raymond, in writing to his owners from Bary, 3rd October, 1893, said:—"I think a thousand long tons might do for ballast: it is just little enough. With 1,019 tons she draws 12 feet only. If we get overweight, no doubt it would do. I think that little enough draught. I shall be careful of shifting-boards." This letter alludes to the ballast to be taken in at Cape Town, before sailing for Newcastle.

The "Colintraive" left Bary for Cape Town on the 20th of October, 1893, and there can be no doubt but that at that time the ship was in a good and seaworthy condition, and she was then valued by her owner at the original cost of £17,920, and insured for that amount, whilst the freight was insured for £2,100, the premium for the two policies amounting to £1,249 for twelve months. She was under the command of Mr. William E. Raymond, who held a certificate of competency as master, No. 39,625, with a crew of twenty-seven hands all told, viz.:—1 master, 2 mates, 1 boatswain, 1 carpenter, 1 cook, 1 steward, 14 able seamen, and 6 apprentices; two of the latter had been fifteen months at sea, and the four others were on their first voyage, two of them having had premiums paid. For a ship of her tonnage, 1,907·44 tons gross, it appears to be a small crew, but taking into consideration that she appears to have been a handy vessel, having double top-gallant yards, no royal masts or yards, with a short bowsprit, and labour-saving appliances on board, I think that she was properly and sufficiently manned. Very little more has been heard of the ship from those on board, but Captain Raymond writes on March 3rd from Newcastle, stating that "he had experienced a fearful hurricane after leaving the Cape, but that he had got out of it all right, and that the ship had behaved splendidly."

Several affidavits which were taken at Newcastle, New South Wales, have been put in. Mr. Herbert Cross states, "He has been several years head manager of the Newcastle Wallsend Coal Co.; that the 'Colintraive' loaded 3,070 tons of that company's coal for San Francisco on the 10th to 14th of March, 1894, during part of which days it rained a good deal. This coal is hard, bright, and bituminous, possessing good qualities for either gas, house, or steam, is free from moisture, and will stand considerable pressure without crumbling, and is therefore well adapted for shipment. It has for the last thirty years been largely shipped to California and West Coast of South America."

"The seam is worked entirely with naked lights, therefore free from dangerous gases; 1 ton weight as broken up for stowage will measure 45 to 46 cubic feet."

Mr. Augustus Bertram, shipping inspector, Newcastle, New South Wales, states, "The Colintraive's draught of water on leaving port to have been 20 ft. 9 in. forward and 21 feet aft, with a freeboard of 4 ft. 10 in. centre of disc awash," and he further states that "she would rise 2 inches on getting into salt water." Under these circumstances she cannot be said to be overladen, but had sufficient freeboard.

With reference to the stowage of the cargo, Johannes Bertram states that "he was the master coal-trimmer of that port, and had been so for many years. I superintended my gang in trimming this vessel; she had no between-decks, but half-deck forward and aft. She took 3,070 tons of coal. There was a space left in the two ends of the vessel for about 700 or 800 tons, and the coal was levelled down there. The coal was taken in by three hatchways, and it was carefully trimmed and in amidships right up to main hatches and deck. There were no other spaces left, save those in the fore and after hold. No shifting-boards were used." If this cargo was stowed, as stated by the above-mentioned Johannes Bertram, with those spaces in the ends of the vessel without shifting-boards, it was not properly stowed, and in the event of the vessel meeting with bad weather there would be nothing to prevent the coal from running at either end whilst the ship was either pitching heavily or scending, and it would naturally go over to the lee side of the vessel, which would give her a list, and thus further increase the cause of the shifting. I have some doubt as to the fact of the vessel having no shifting-

boards. The declaration was made some six months after the "Colintraive" sailed, and it is quite possible the master coal-trimmer may have been mistaken. Mr. Hogarth, the owner, states that "he is confident that the master would not have neglected the precaution of having them put up, as he has known Captain Raymond for twenty-five years, and had the greatest confidence in him." The boards were on board, and some of them had been used with the ballast, and it appears to be almost incredible that an experienced master should fail to use those means to secure the cargo when he had them at hand. The vessel was taken to sea on the 16th of March, 1894, by John Leonard Sweet, a Government pilot, who left her the same day about 4 miles E. by N. from Nobby's Lighthouse.

The cause of the loss of the ship I am unable to account for. It may have occurred through the shifting of the cargo, or by spontaneous combustion, caused, first, from the coal having been shipped in a wet condition; secondly, by the through ventilation from the downcast from the ventilator in the pump-well and up the iron masts; but this must be a matter of mere conjecture.

20th March, 1895.

JOHN S. CASTLE,
Inspector.

H.

REPORT and Decision of the Local Marine Board, Newcastle, New South Wales, in the matter of the missing ship "Lady Lawrence," Official No. 58,906.

AN inquiry was held by the Board into the condition of the "Lady Lawrence" when she last left this port, and they ascertained that she was an iron ship, of 1,382 tons, twenty-six years old, built in Sunderland, and owned by R. N. Smith & Co., Liverpool, and commanded by Richard Cook, No. certificate, Board of Trade, 92,500, crew twenty-seven all told.

She arrived here from Sydney with 400 tons shale, 200 tons tallow in casks, and about 500 tons general cargo, which latter was landed here.

She took in 1,532 tons of Wallsend coal and left for Valparaiso, but has not since been heard of.

Before commencing to take in her cargo of coal she was visited by the Board inspector and Captain Laidman, marine surveyor for the Sydney Underwriters' Association, who all advised the master, Richard Cook, to shift the shale and tallow out of the bottom of the ship and put it at the ends of her or in the between decks. This he declined to do on the plea that he was acting under his owners' instructions. He was also written to by the Local Board, sending him a copy of surveyors' report, and informed that if he took the vessel to sea under the circumstances it was on his own responsibility.

The vessel was in good trim, the centre of disc being $2\frac{1}{2}$ clear of the water; she was well fitted with shifting-boards, and had three surface ventilators and a freeboard of 5 feet, and to all appearances the ship was properly equipped.

Office of the Local Marine Board, Newcastle, 15th January, 1896.

W. F. WEATHERILL,
Secretary.

I.

REPORT and Decision of the Marine Board of New South Wales in the matter of the abandonment of the "Girvan," Official No. 99,938.

AN inquiry was held by the Marine Board into the cause of the abandonment of the above-named vessel, and they ascertained that she was a steel barque of 1,230 tons, owned by Mr. David Hunter, and registered in Ayr.

The "Girvan" left Newcastle on the 5th June, with 1,979 tons of coal on board, on a voyage to San Francisco. On the 10th a heavy easterly gale, with heavy cross-sea, was experienced, and the ship laboured very much. At about 5:30 a.m. the next day a very heavy sea struck the vessel, shifting the cargo, throwing her on to her beam ends, and she never recovered herself. The water was over halfway up the main hatch, and heavy seas were washing on board, breaking up to the weather bulwarks.

Efforts were made to get the ship before the wind without avail; the masts were then cut away. At this time Thomas Corigale, carpenter, was washed overboard and drowned.

At 3 p.m. the barque "George Thompson," bound from Sydney to Puget Sound, hove in sight, and she stood by her three nights and two days, and when the weather moderated sufficiently the "Girvan" was abandoned, as there was no prospect of saving her—in fact, when last seen she appeared to be fast settling down.

The crew were landed at Norfolk Island on 22nd June, and subsequently brought to Sydney by the New South Wales Government steamer "Thetis," which was despatched to the island for that purpose.

The Board reported that the abandonment of the "Girvan" was justifiable, inasmuch as the said vessel was in a sinking condition, her cargo having shifted during the exceptionally heavy weather she encountered the previous day.

The evidence at the inquiry alleges that her coal cargo was properly trimmed and stacked at Newcastle; but shifting-boards were not used.

No evidence was adduced upon which to found a charge of default against Joseph Angus, the master, or any other person on board.

In connection with this report the Board wishes to record its appreciation of the meritorious conduct of Captain George Munro, of the barque "George Thompson," for standing by the sinking vessel so long; and also of the mate, Mr. Oscar Jonas Smith, and the boat's crew, who, in three trips, rescued the shipwrecked people when the weather moderated sufficiently to enable them to do so.

Sydney, 11th September, 1893.

GEO. S. LINDEMAN, R.N.,
Secretary.

J.

REPORT on a Shipping Casualty to the "Patrician."

To the Honorable the Minister having charge of the Marine Department of New Zealand.

I, THE UNDERSIGNED, Edgar Hall Carew, Stipendiary Magistrate, one of Her Majesty's Justices of the Peace in and for the Colony of New Zealand, having been on the seventh day of September, 1896, applied to by Charles Wilford Seymour Chamberlain, Esquire, Collector of Customs at the port of Dunedin, N.Z., for a formal investigation, pursuant to section 240 of "The Shipping and Seamen's Act, 1877," and other provisions of the said Act, respecting the loss of a certain American ship called the "Patrician," of the port of New York, U.S., America, on the twenty-eighth day of August last, in the Tasman Sea, between Newcastle, New South Wales, and Lyttelton, New Zealand, did duly proceed with the said investigation, to wit, on the eighth day of September instant, and had before me and examined on oath divers persons and witnesses, to wit, Edward Robert Sterling, master mariner; John Wilson, master mariner; George Russell Harris, chief mate, "Patrician"; Herbert Martin, second mate; George Ross, chief mate, "Fifeshire"; William Shwatz, A.B.; Charles Petersen, A.B.; the original depositions of whose evidence are hereunto annexed, signed by me, being assisted therein by William Thompson, J.P., master mariner, holding a certificate of competency from the Board of Trade, who was duly appointed by me to act as assessor; and upon such investigation and examination of witnesses as aforesaid, I find and report as follows, that is to say,—

- I. That the official number of said ship called the "Patrician" is 150,171, of which Edward Robert Sterling was master, who holds a certificate of competency, and which ship belonged to Edward Robert Sterling and others, of New York, U.S., America.
- II. That the loss or damage herein more particularly mentioned happened on the twenty-eighth day of August, 1896, on a voyage from Newcastle, New South Wales, bound for Lyttelton, New Zealand, and about latitude $39^{\circ} 8'$ south and longitude $158^{\circ} 11'$ east.
- III. That the loss or damage appears by the evidence to have been caused by tempestuous weather.
- IV. That the nature of the loss or damage done was the abandonment of the said vessel, then on her beam ends in a leaky, helpless, and sinking condition. That the insurance on the said vessel is not known here. That the "Patrician" was ship-rigged. Her port of registry New York, U.S., America; her registered tonnage, 1,213. That one person was washed overboard and drowned. And

And I, the said Stipendiary Magistrate, further state my opinion on the matter aforesaid to be as follows:—

That the "Patrician," a wooden vessel of 1,213 tons register, and laden with a cargo of 1,944 tons coal, carrying a crew of fifteen men all told, left Newcastle, New South Wales, on the 22nd August, 1896. According to the evidence, she was then in good seaworthy condition and well found. The coal cargo had been stowed by stevedores, but the vessel carried no shifting boards. On the 25th August the weather became threatening, increasing on the following day to a heavy gale with a high confused sea. The sea swept the decks and heavy spars, one lashed on each side of the deck, broke away from their lashings and washed to and fro athwart ship, striking the stanchions and splitting the covering boards, letting water into the ship's hold. The vessel was on the port tack and was found to be gradually settling down with a list to starboard, and all the pumping which could be done under great difficulties could not get the water down. The gale continued on Thursday, the 27th August, with heavy seas breaking on board, and the ship taking longer and longer to recover herself. The upper spars were cut away to relieve the vessel, and in coming down carried away the mainmast head and fouled the mizzenmast, with the result that the ship became a helpless wreck. On Friday, the 28th August, the gale still continued. The vessel was sighted by Captain Wilson of the steamer "Fifeshire," who bore down upon the "Patrician" and rescued all hands, the ship being abandoned in a sinking condition, and from the evidence there can be no doubt that she would go down within a few hours after the rescue of the men. I am of opinion that the loss of the "Patrician" was due to the heavy gale of wind and high sea and to whatever cause the list of the ship may be attributed.

I recommend that the Government pay the costs of this investigation.

Given under my hand, this sixteenth day of September, one thousand eight hundred and ninety-six, at Dunedin, New Zealand.

(Signed) E. H. CAREW, S.M.

I concur in the above report, and after duly considering the evidence, with the advantage of having had nine years' experience in the coal carrying trade, I am of opinion that Captain Sterling, in not making use of shifting boards in the 'tween deck and lower hold, did not fully preserve the seaworthiness of his vessel to safely encounter the tempestuous weather in which she was wrecked. The cargo, without shifting boards, was right for ordinary weather only. Although it did not appear in evidence that the cargo was seen to have shifted, still it was shown that the vessel was noticed to be gradually listing over, accounted for by the captain to be caused by the water in the hold; but if that had been the cause, the vessel when put upon the opposite tack, as was done, would have gone quickly over on the other side, which she did not do, therefore a sure index to the coal having shifted.

It appears to me that there is as much need for a compulsory shifting board regulation for the safety of vessels carrying coal and grain cargoes as for the compulsory "Free-board rule." I also suggest that a rocket apparatus should form part of the equipment of vessels, in order to project lines in cases of distress, when communication by boat is impossible.

WM. THOMSON,
Nautical Assessor.

We desire to express our admiration of the gallant conduct of the Chief Mate of the "Fifeshire," George Ross, Boatswain Mouatt, and Quartermaster Martin, who manned the boat that rescued the officers and crew of the "Patrician," and of the assistance rendered to the rescue party by the skillful management of the "Fifeshire," and generally the courage displayed on all sides.

E. H. CAREW, S.M.

K.

EXPLOSION ON BOARD THE "ARGO."

New South Wales, }
to wit.

PROCEEDINGS OF INQUEST.

AN inquisition indented taken for Our Sovereign Lady the Queen, at the house of Alfred Denson, known as the "Croydon Hotel," George and Argyle Streets, in the city of Sydney, in the said Colony of New South Wales, on the 24th day of July, in the fifty-seventh year of the reign of Our Sovereign Lady Queen Victoria, by the Grace of God of the United Kingdom of Great Britain and Ireland, Queen, Defender of the Faith, and in the year of Our Lord 1893, before John Chadwick Woore, gentleman, Coroner for the district and city of Sydney, on view of the body of Robert Arfsten, lying dead at the North Sydney Morgue, in the said district of Sydney, upon the oath of Arthur Pollard, Stafford H. Barnes, John Robertson, Richard McIntyre, William Keppie, William Cordingley, William Fitzgerald, William Mitchell, Peter McGlinchey, Richard B. Goff, Joseph Fox, Patrick Fahey, good and lawful men of the said Colony, duly chosen, and who, being then and there duly sworn, and charged to inquire for Our said Sovereign Lady the Queen, when, how, and by what means the said Robert Arfsten came by his death, do upon our oath say, we find that the said Robert Arfsten, on board the barque "Argo," then lying at Neutral Bay, Port Jackson, in the said Colony, on the 22nd day of July, A.D., 1893, died from the effects of injuries accidentally received on the same day through an explosion of coal gas on board the said barque "Argo" on that day.

In witness whereof, as well as the said Coroner, the Jurors aforesaid have hereunto set their hands and seals the day and year first above written.

J. C. WOORE, J.P., City Coroner.	W. CORDINGLEY, WILLIAM MITCHELL, WILLIAM FITZGERALD, JOHN ROBERTSON.	R. MCINTYRE, W. KEPPIE, JOSEPH FOX, PATRICK FAHEY, P. MCGLINCHHEY.
R. B. GOFF, Foreman.	ARTHUR C. POLLARD,	
STAFFORD H. BARNES,		

New South Wales, }
to wit.

INFORMATION of witnesses severally taken and acknowledged on behalf of Our Sovereign Lady the Queen, touching the death of Robert Arfsten, at the house of Alfred Denson, known as the "Croydon Hotel," Argyle-street, in the city of Sydney, in the said Colony of New South Wales, on the 24th day of July, in the fifty-seventh year of the reign of Our Sovereign Lady Queen Victoria, by the Grace of God of the United Kingdom of Great Britain and Ireland, Queen, Defender of the Faith, and in the year of Our Lord 1893, before John Chadwick Woore, gentleman, Coroner for the district and city of Sydney, on an inquisition then and there taken on view of the body of the said Robert Arfsten, lying dead at the North Sydney Morgue, in the said city of Sydney, as follows:—

To wit,—*Albert Schatz*, on oath, states:—I am captain of the barque "Argo," now lying at Neutral Bay; she is coal-laden; she was bound for Valparaiso; the dead body I have viewed in the presence of the City Coroner and jury at the North Sydney Morgue is that of Robert Arfsten; he was 49 years of age; he was born on an island called Fohr, off the coast of Germany, near Heligoland; he was married, leaving a widow and three children; I don't know whether he left any property; he was a man of temperate habits; he was chief officer of the barque, and held the position about two years; I have been captain of the barque since 1st December, 1892; the barque was lying at Pymont Wharf when she was loaded; I put some coal on board at Dalton's Wharf, 170 tons on last Thursday week; last Saturday week I moved to Pymont and started taking in coal, and on Thursday last the ship was full; no dispute arose with the stevedores; the coal was supplied by the Metropolitan Coal Company; I do not know how long the coal had been lying at the wharf; I had no other cargo; I had no explosives on board; the ship was finished at 1 p.m., on Thursday, and I moved away the same day to Neutral Bay, where the vessel now lies; the hatches were left off for ventilation until Friday night; about 4 p.m., on Friday, I put on the after hatch and main hatch, leaving the forward hatch open; I also had three ventilators and gas pipes placed in the main and after hold; I intended to proceed on my voyage on Friday night, but as I could not get my papers I had to wait until Saturday; on Saturday, the 22nd instant, I went ashore about 9 a.m.; everything was well on board when I left, and the deceased was on board quite well and uninjured; I spoke to him as I left; the crew, consisting of seventeen and a passenger, were on board when I left; I got the crew at Hamburg; there was no alteration in the crew here; I had no disagreement with anyone on board during the whole voyage out or here; when I left on Saturday the fore hatch and ventilators were open; I heard something after I had been on shore about twenty minutes; I went on board, and got there about 10.15 a.m.; I found the vessel then in the condition

condition she is now; I did not see the deceased; he had been removed; I did not hear the explosion; from the appearance of the vessel it appeared to be there had been a serious explosion; I cannot account for the damage done; during the time I've been master of a ship this is the second cargo of coal I've had; I did everything that could be done for the safety of the vessel; I do not blame anyone for the explosion; the decks were blown up fore and aft and the fittings destroyed; I cannot estimate the damage done; the vessel was insured for £5,200 in Hamburg; I do not know whether the freight was insured.

By Foreman: There were no holes in the pipes put down.

By Jury: I was down when the ship was loaded, and saw everything was safe, and so was the deceased and second officer.

By Coroner: I am sure no lights were left below.

Sworn and made, at Sydney, 24th July, 1893, }
before me,—

J. C. WOORE, J.P., City Coroner.

ALBERT SHULZ.

*Daniel Robertson, on oath, states:—*I am manager of the Metropolitan Coal Company's mine at Helensburg, 28 miles from Sydney; last Friday or Saturday week some coal was forwarded, to be placed on board the "Argo," and some was forwarded last Monday; the coal was sent direct from the mine, direct from the pit, and sent on to Sydney; there have been no explosions in the pit; all precautions are taken to prevent explosions; we use safety lamps; this coal gives off more gas than some other coal in the Colony, and it is for that reason we take all necessary precautions.

DANIEL ROBERTSON.

Sworn and made at Sydney, 24th July, 1893, }
before me,—

J. C. WOORE, J.P., City Coroner.

*Thomas Brentnall, on oath, states:—*I am manager of the Metropolitan Coal Mining Company, corner of Pitt and Bridge Streets, Sydney; I reside at Ashfield; I remember some coal being sent to load the "Argo"; it was sent to Darling Harbour, the first of it last Monday; previous to that she had 170 tons of stiffening; the rest of it was sent direct from the mine, and put on board; none of the coal was lying exposed for any time; it was put on board as fast as she could take it in; it is usual to bring the coal direct from the pit in hoppers, and put it into the ship straight away.

THOS. BRENTNALL.

Sworn and made at Sydney, 24th July, 1893, }
before me,—

J. C. WOORE, J.P., City Coroner.

*William Muggford Hamlet, on oath, states:—*I am Government Analyst, and reside at Mossman's Bay; this morning, in company with the City Coroner and jury, I went on board the barque "Argo," now lying at Neutral Bay; I saw the decks had been lifted fore and aft, and great damage had been done to the vessel internally; I am of opinion that damage was done by an explosion; it may have been due to three causes: first, the combustion of the occluded gases in the coal, or it may have been due to the chemical changes of the brassy or sulphides in the coal, and the third cause may have been the ignition of coal dust by means of a spark, which might have been spontaneous; in my opinion it was not due to other causes than those I have mentioned; I saw that the vessel was coal-laden; I looked at and examined the coal; I could not tell from its appearance what mine it came from; I heard the evidence of Mr. Robertson and Mr. Brentnall; I heard them both say the coal was brought direct from the pit and put into the vessel as soon as possible; I have made an examination of the gases from the coal of the Metropolitan Coal Company from the mine at Helensburgh; the gas I made the analysis of was of a fiery character and contained fire-damp; I've analysed coal from other mines in the Colony; if the coal had been taken direct from the pit and put into the vessel without being exposed it would be more likely to explode; coal of this nature—the coal I speak of is something similar to coal at Cardiff, South Wales, which I have known to explode; it would be a great advantage to have the coal exposed before loading—for some days before loading; the analysis I made of the coal was about two years ago.

By Mr. Robertson: The occluded gases are lighter than air and naturally ascend; if the occluded gases had free access to the air there would not be any accumulation of the gases; the fore-hatch being open the gases would naturally ascend towards there; there might still have been an explosion in the hold; since I was on board I have been to the observatory; I have inspected the barograph indicating the pressure of the atmosphere from midnight on Friday to mid-day on Saturday last, and there was no depression to account for the accumulated gas; a spark might ignite coal dust; I've heard of occasions when it happened sometimes from blown-out shots; I say the explosion may have been due to either of the three causes I've mentioned; it generally takes considerable time for spontaneous combustions to take place; I made an analysis of the Metropolitan coal gas; it was of a fiery character and contained fire damp; in consequence of the nature of gases the Company adopted safety lamps; in my report I said that the gas contained carbonic acid and carbonic oxide which neutralised the explosive character of the gas.

By Coroner: A lighted candle or smoking in the hold would be likely to cause the explosion.

By Jury: If there was carbonic acid in sufficient quantity it would put a lighted candle out, but fire damp would ignite the gas.

By Mr. Robertson: Fire-damp may be breathed for a short time; a man could not remain for any time in it.

WILLIAM M. HAMLET.

Sworn and made at Sydney, 24th July, 1893, }
before me,—

J. C. WOORE, J.P., City Coroner.

Evidence given through Mr. Michel, Interpreter:—

*Martin Anderson, on oath, states:—*I am a carpenter on board the "Argo"; that was the dead body of Robert Arfsten, who was chief officer of the "Argo," that I saw this morning in the presence of the City Coroner and jury, at the North Sydney Morgue; I was on board the "Argo" on Saturday morning last; I saw the captain go away after breakfast; he went on shore; the deceased, and the remainder of the crew, remained on board; I last saw the deceased alive on the fore part of the ship, after the captain left; deceased was not smoking; about a minute after there was an explosion, bursting up the decks fore and aft; I didn't see deceased at moment of the explosion; I was in the fore part of the ship, forward of the fore hatch; I was standing alongside the cook when the explosion took place; I saw the cook in the fore hatch; he was there about ten minutes, and came up a very short time before the explosion; the cook was not smoking; he had no light; the hatch was open; I didn't see anyone else down there that morning; I had not been down that morning; I do not know what caused the explosion; I saw the deceased dead on the poop just after the explosion at the spot where some blood was shown to the Coroner and jury this morning; I helped to get the body out; I helped to carry the body to the steamer; there was no one but the crew and the passenger on board at the time the explosion took place; there had not been any quarrel between the captain and any of the crew.

By Jury: There was no quarrel between the crew and the trimmers.

MARTIN ANDERSON.

Sworn and made at Sydney, 24th July, 1893, }
before me,—

J. C. WOORE, J.P., City Coroner.

Evidence given through the interpreter, Mr. Michel.

Herman Huening, on oath, states: I am a cook on board barque "Argo," now lying at Neutral Bay; that was the body of Robert Arfsten I saw this morning at the North Sydney morgue in the presence of City Coroner and jury; I was on board on Saturday morning last with the crew when the captain went on shore after breakfast; I went down the fore-hatch after the captain left; I was down about five minutes; I went to get some potatoes; they were immediately under the hatch; I went up as soon as I got the potatoes; there was one passenger; I did not see any of the crew or the passenger down the hold that morning; I was not smoking when I was down; when I came up I went forward to the pump to wash the potatoes; I saw the deceased forward of the main hatch; he was on deck, forward of the fore hatch; he was not smoking; I saw him go aft; while I was washing the potatoes the explosion took place; I did not see deceased then; I was not knocked down by the explosion; Hansen was in the fore-castle; I saw deceased after the explosion on the mid deck, where there is blood; that was pointed out to the coroner and jury; he was quite dead; I helped to remove him; there had not been any quarrel between the ship's crew and the stevedores or wharf labourers, or between the ship's crew and the captain; the crew came with the ship from Hamburg; there were no strangers on board when the explosion took place; I do not know there was any cotton waste on the vessel; I cannot account for the explosion in any way.

By Jury: There were a few flames of fire at the explosion; there was a fire in the galley.

HERMAN HUENIG.

Sworn and made at Sydney, 24th July, 1893, }
before me,— J. C. WOORE, J.P., City Coroner.

Evidence given through the Interpreter, Mr. Michel.

Christian Hansen, on oath, states:—I am a sailmaker of barque "Argo," now lying at Neutral Bay; that was the dead body of Robert Arfsten I saw at the North Sydney morgue this morning in the presence of the City Coroner and jury; I and the crew and one passenger were on board on Saturday morning when the captain went ashore; he went ashore after breakfast; I was standing on the fore-castle hatch; the fore hatch was open; I remained there until the explosion took place; the explosion took place from half-an-hour to an hour after the captain went ashore; I did not see the deceased at the time; I saw him forward near the fore hatch and about two minutes after the explosion took place and lifted the deck; I did not see the passenger; I saw the passenger taken out of the water after the explosion; after the explosion I saw deceased lying dead aft near the mizzenmast; no one had been down to the hold where the coal was that I know of; I can't account for the explosion; there had not been any quarrel with the captain and the crew or the crew and the wharf labourers; I saw a quantity of smoke when the explosion took place.

CHRISTIAN HANSEN.

Sworn and made at Sydney, 24th July, 1893, }
before me,— J. C. WOORE, J.P., City Coroner.

APPENDIX.

L.

TABLE I.

NUMBER of Sailing Vessels and Tonnage of Coal Shipped from Newcastle to Foreign Ports in each of the Years 1888 to (30 September) 1896. (Compiled from Stokes & Co.'s "Monthly Circular" for 1888 and 1889, and R. B. Wallace's "Monthly Report" for 1890 to 1896.)

Year.	San Francisco.		Other Ports on the West Coast of America.		Ports North of Australia.		Sandwich Islands.		Mauritius, Madagascar, and South Africa.		India and Ceylon.		New Caledonia.		South Sea Islands.		Totals	
	No. of Shipments.	Tons of Coal.	No. of Shipments.	Tons of Coal.	No. of Shipments.	Tons of Coal.	No. of Shipments.	Tons of Coal.	No. of Shipments.	Tons of Coal.	No. of Shipments.	Tons of Coal.	No. of Shipments.	Tons of Coal.	No. of Shipments.	Tons of Coal.	No. of Shipments.	Tons of Coal.
1888	81	174,145	181	267,165	86	50,198	24	23,510	6	2,929	4	6,801	12	6,063	4	2,137	348	532,957
1889	105	245,421	164	242,803	135	195,280	26	30,470	21	13,242	7	15,158	15	8,420	3	3,822	476	754,025
1890	46	117,120	136	226,04	35	52,280	26	27,666	4	1,708	2	5,372	13	5,208	2	3,076	264	439,039
1891	109	244,898	187	299,690	38	63,534	32	35,164	14	12,134	1	2,350	23	13,079	3	3,303	407	674,352
1892	65	169,617	159	285,616	35	62,070	30	36,854	7	8,044	6	15,593	23	15,392	7	6,533	332	602,323
1893	62	157,677	113	219,409	17	33,607	27	34,183	5	7,903	1	4,560	10	5,859	4	2,004	229	404,952
1894	69	206,502	138	396,870	36	63,565	41	40,960	6	9,644	..	..	10	6,210	..	..	350	734,761
1895	73	204,064	221	433,012	24	46,224	32	44,440	4	8,144	1	2,980	3	1,572	..	..	353	742,248
1896 (to 30 Sept.)	42	128,233	158	334,923	25	52,608	22	34,355	5	7,408	..	..	2	1,460	1	1,744	255	635,806
Totals	642	1,643,417	1,507	2,710,202	381	626,066	200	313,607	72	70,916	22	52,820	111	63,276	24	21,739	3,019	5,501,103

TABLE II

NUMBER and Tonnage of Shipments by Sailing Vessels to Foreign Ports, classified according to size of cargoes. (Prepared from C. F. Stokes & Co.'s "Monthly Circular," 1888 and 1889, and R. B. Wallace's "Monthly Report," 1890 to 1896.)

Year.	Under 500.		500 and under 1,000.		1,000 and under 1,500.		1,500 and under 2,000.		2,000 and under 2,500.		2,500 and under 3,000.		3,000 and under 3,500.		3,500 and over.	
	No. of Shipments.	Tons of Coal.	No. of Shipments.	Tons of Coal.	No. of Shipments.	Tons of Coal.	No. of Shipments.	Tons of Coal.	No. of Shipments.	Tons of Coal.	No. of Shipments.	Tons of Coal.	No. of Shipments.	Tons of Coal.	No. of Shipments.	Tons of Coal.
San Francisco.																
1888	1	350	5	3,945	8	9,709	19	34,617	21	47,210	18	48,607	7	22,204	2	7,443
1889	..	..	2	631	11	14,903	26	46,619	18	41,790	33	89,905	14	44,406	2	7,207
1890	..	..	1	1,634	3	3,280	3	5,467	12	27,622	12	32,500	10	31,693	4	14,913
1891	..	..	4	3,063	16	19,730	27	48,904	23	51,840	17	46,487	16	62,288	6	22,511
1892	..	..	..	..	3	3,894	14	25,395	13	40,551	10	27,394	8	26,920	12	45,523
1893	..	..	..	..	..	..	..	5,778	6	13,258	17	47,352	14	44,730	12	46,450
1894	..	..	1	513	..	2,020	6	10,848	6	18,006	14	37,923	10	31,938	23	85,254
1895	..	..	..	..	1	1,489	11	19,515	15	34,336	17	46,852	13	41,388	16	61,384
1896 (to 30 Sept.)	1	430	1	741	..	..	8	15,137	..	4,742	7	21,620	12	38,468	11	42,006
Totals	2	780	14	10,432	44	54,965	117	212,340	123	279,355	146	398,716	110	354,010	87	332,730
Other Ports on the West Coast of America.																
1888	..	..	32	26,035	70	89,659	53	90,028	19	41,727	..	13,150	2	6,575	..	..
1889	1	435	25	21,300	61	77,093	57	94,016	13	38,942	2	5,520	..	..	..	..
1890	1	430	15	12,930	32	30,499	50	56,734	20	62,580	8	21,301	1	3,120	..	..
1891	2	935	21	18,290	64	80,302	61	106,030	23	61,044	8	21,126	1	3,311	2	8,133
1892	..	..	10	4,199	45	56,719	51	82,067	31	69,806	15	41,463	5	16,099	2	7,657
1893	..	..	6	5,030	28	35,330	30	53,099	30	65,969	7	19,003	6	28,753	3	11,566
1894	..	..	3	2,757	33	41,742	42	74,007	65	144,911	27	71,337	11	35,411	7	26,205
1895	..	..	9	7,950	51	65,807	66	113,997	55	123,635	27	73,463	9	29,635	5	19,435
1896 (to 30 Sept.)	..	..	11	8,940	18	22,246	11	72,614	43	95,147	23	61,640	14	44,755	8	29,548
Totals	4	1,820	142	111,330	402	503,300	450	786,091	318	703,761	122	328,558	52	167,069	27	102,593
Total Shipments to the West Coast of America.																
1888	1	350	37	30,980	78	99,359	72	124,645	40	88,937	23	61,817	9	28,779	2	7,443
1889	1	435	26	21,731	72	91,993	83	140,235	36	80,732	35	95,495	14	44,406	2	7,207
1890	1	430	17	14,564	35	42,719	53	92,301	41	90,202	20	53,867	11	34,818	4	14,913
1891	2	935	25	21,368	80	100,032	83	165,063	51	112,854	25	67,603	17	55,999	8	30,094
1892	..	..	10	8,199	48	60,553	65	114,062	49	110,857	25	68,602	13	48,019	14	53,180
1893	..	..	6	5,030	28	35,330	33	59,477	36	78,227	24	66,355	23	73,602	15	58,015
1894	..	..	4	3,270	35	45,762	43	84,855	73	162,917	41	109,760	27	87,340	20	111,469
1895	..	..	9	7,950	62	67,296	76	133,512	70	157,971	44	120,305	22	71,023	21	80,819
1896 (to 30 Sept.)	1	430	12	9,690	18	22,246	49	87,731	45	99,889	30	83,280	26	83,223	19	71,642
Totals	6	2,600	146	121,812	446	503,356	607	998,431	441	983,116	207	727,274	102	521,718	114	433,373
Philippine Islands, East Indies, Hong Kong, Malay Peninsula, &c.																
1888	2	750	8	5,464	3	10,515	15	26,201	2	4,109	..	..	1	3,150	..	..
1889	2	622	31	24,648	45	54,373	33	60,257	20	43,740	..	..	4	11,131	..	..
1890	1	375	10	8,108	6	6,175	11	19,250	7	15,194	..	..	1	3,182	..	..
1891	..	..	3	3,833	12	15,618	15	26,091	7	16,682	1	2,705	..	..	..	..
1892	1	493	1	906	7	8,966	18	32,208	5	11,307	2	5,196	..	..	1	3,595
1893	..	..	..	..	..	..	12	21,823	3	6,733	..	..	..	..	..	..
1894	..	..	3	2,526	6	7,851	12	21,946	11	24,201	2	5,347	2	6,664	..	..
1895	..	..	..	..	3	3,268	13	23,339	7	15,107	..	..	..	..	1	3,800
1896 (to 30 Sept.)	..	..	..	..	1	1,432	11	19,464	9	20,565	3	7,776	1	3,351	..	..
Totals	6	2,349	56	44,480	87	109,298	140	251,235	71	166,727	14	37,336	5	16,327	2	7,395
Sandwich Islands.																
1888	2	820	11	8,471	9	10,506	2	3,722	..	..	..	..	..	..	..	..
1889	..	..	7	5,033	14	16,575	5	8,212	..	..	..	..	..	..	..	..
1890	..	..	11	8,260	12	14,379	3	5,027	..	..	..	..	..	..	..	..
1891	1	413	12	9,134	13	16,468	5	8,012	1	2,097	..	..	..	..	..	..
1892	..	..	8	6,061	15	17,061	6	10,364	1	2,478	..	..	..	..	..	..
1893	..	..	7	5,691	14	17,392	5	8,994	1	2,099	..	..	..	..	..	..
1894	..	..	15	11,741	18	21,191	8	14,025	..	..	..	..	..	..	..	..
1895	..	..	5	3,020	17	19,079	3	8,327	4	8,093	..	..	1	3,221	..	..
1896 (to 30 Sept.)	3	2,431	5	6,039	9	16,299	5	10,586
Totals	3	1,233	79	62,341	117	138,537	48	81,972	12	26,263	1	3,221

APPENDIX.

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Year.	Under 500.		500 and under 1,000.		1,000 and under 1,500.		1,500 and under 2,000.		2,000 and under 2,500.		2,500 and under 3,000.		3,000 and under 3,500.		3,500 and over.	
	No. of Shipments.	Tons of Coal.	No. of Shipments.	Tons of Coal.	No. of Shipments.	Tons of Coal.	No. of Shipments.	Tons of Coal.	No. of Shipments.	Tons of Coal.	No. of Shipments.	Tons of Coal.	No. of Shipments.	Tons of Coal.	No. of Shipments.	Tons of Coal.
India and Ceylon.																
1888	..	..	1	796	..	..	1	1,575	2	4,430	..	..	..	..	..	..
1889	..	..	1	603	..	..	2	3,573	1	2,400	..	..	1	3,115	..	..
1890	..	..	..	..	..	..	..	..	1	2,413	1	2,950	..	..	..	..
1891	..	..	..	..	..	..	..	..	1	2,350	..	..	..	..	..	..
1892	..	..	..	..	1	1,408	..	..	2	4,201	1	2,523	1	3,892	1	4,008
1893	..	..	..	..	..	..	..	..	..	..	..	..	..	1	4,560	..
1894	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1895	..	..	..	..	..	..	..	..	..	1	2,980	..	..	..	..	..
1896 (to 30 Sept.)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	2	..	2	1,399	1	1,408	3	6,148	7	15,704	5	13,930	2	6,453	2	8,628
Mauritius, Africa, and Madagascar.																
1888	4	1,499	2	1,430	..	..	..	..	..	..	..	..	..	..	..	..
1889	8	3,411	11	7,583	2	2,243	..	..	..	..	..	..	..	..	..	..
1890	3	1,185	1	510	..	..	..	..	..	..	..	..	..	..	..	..
1891	4	1,476	7	4,615	..	..	2	3,490	..	..	1	2,553	..	..	..	..
1892	..	..	4	2,759	2	2,540	..	..	..	..	1	2,745	..	..	..	..
1893	..	..	1	926	1	1,106	2	3,500	1	2,062	..	..	..	..	..	..
1894	..	..	..	..	2	3,731	2	4,391	..	..	1	2,612	..	..	..	..
1895	..	..	..	..	..	..	2	3,750	2	4,324	..	..	..	..	..	..
1896 (to 30 Sept.)	..	..	2	1,244	..	..	1	1,944	2	4,280	..	..	..	..	..	..
	19	7,584	23	19,072	8	9,620	9	15,994	6	10,736	3	7,910	..	..	..	..
New Caledonia.																
1888	5	2,107	7	3,956	..	..	..	..	..	..	..	..	..	..	..	..
1889	8	3,321	6	3,913	1	1,195	..	..	..	..	..	..	..	..	..	..
1890	8	1,980	4	2,166	1	1,167	..	..	..	..	..	..	..	..	..	..
1891	7	2,457	15	9,379	1	1,243	..	..	..	..	..	..	..	..	..	..
1892	3	1,098	20	14,294	..	..	..	..	..	..	..	..	..	..	..	..
1893	3	1,113	7	4,746	..	..	..	..	..	..	..	..	..	..	..	..
1894	1	288	9	6,922	..	..	..	..	..	..	..	..	..	..	..	..
1895	1	414	2	1,158	..	..	..	..	..	..	..	..	..	..	..	..
1896 (to 30 Sept.)	..	..	2	1,460	..	..	..	..	..	..	..	..	..	..	..	..
	36	12,728	72	47,003	3	3,545	..	..	..	..	..	..	..	..	..	..
South Sea Islands.																
1888	2	394	1	709	1	1,034	..	..	..	..	..	..	..	..	..	..
1889	..	..	1	980	1	1,311	1	1,581	..	..	..	..	..	..	..	..
1890	..	..	..	..	..	..	2	3,076	..	..	..	..	..	..	..	..
1891	..	..	..	..	3	3,363	..	..	..	..	..	..	..	..	..	..
1892	2	734	3	1,939	2	2,860	..	..	..	..	..	..	..	..	..	..
1893	2	873	2	1,186	..	..	..	..	..	..	..	..	..	..	..	..
1894	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1895	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1896 (to 30 Sept.)	..	..	..	..	..	..	1	1,744	..	..	..	..	..	..	..	..
	6	2,006	7	4,814	7	8,568	4	6,351	..	..	..	..	..	..	..	..

TABLE III.

SHOWING Total Sailing Shipments from Newcastle to Foreign Ports between the years 1888 to (30 September) 1896, classified as in Table I. From this list New Caledonia and South Sea Island shipments are excluded as negligible.

Division.	No. of Shipments.	Percentage of Total Shipments.	Tons of Coal.	Percentage of Total Tons of Coal.
West Coast of America	2,149	74.51	4,353,679	80.38
North of Australia	381	13.21	625,066	11.54
Sandwich Islands	260	9.02	318,607	5.79
Mauritius, Madagascar, and South Africa	72	2.60	70,916	1.31
India and Ceylon	22	.76	52,820	.98
	2,884	100.00	5,416,088	100.00

TABLE IV.

SHOWING Total Steamer Shipments from Newcastle to Foreign Ports between the years 1888 to (30 September) 1896. (Excluding New Caledonia and South Sea Island Shipments.)

	No. of Shipments.	Tons of Coal.
West Coast of America	3	8,340
North of Australia	281	591,532
India and Ceylon	51	114,478
Mauritius, Madagascar, and South Africa	10	17,026
Sandwich Islands	1	815

TABLE V.

(A.)

SHOWING the relation of the Shipments to San Francisco to the Total Shipments to the West Coast of America for the years 1888 to (30 September) 1896.

	No. of Shipments.	Percentage of Total Shipments to America.	Tons of Coal.	Percentage of Total Tons of Coal to America.
San Francisco	642	29.89	1,643,417	37.75
Other ports—West Coast of America	1,507	70.11	2,710,262	62.25
	2,149	100.00	4,353,679	100.00

(B.)

	Total Shipments.	Shipments over 2,000 tons.	Percentage of Total Shipments in each case.	Shipments over 3,000 tons.	Percentage of Total Shipments in each case.	Shipments over 4,000 tons.	Percentage of Total Shipments in each case.
San Francisco.....	642	465	72.43	197	30.69	18	2.80
Other ports—West Coast of America	1,507	519	34.44	79	5.24	4	.27
	2,149	984	45.79	276	12.84	22	1.02

TABLE VI.

NUMBER of Shipments by Sailing Vessels (classified according to size of cargo) and Quantity of Coal Shipped by each Colliery to American Ports during the Years 1888 to (30 September) 1896. (Compiled from Stokes & Co.'s "Monthly Circular" for 1888 and 1889, and R. B. Wallace's "Monthly Report" for 1890 to 1896.)

Name of Colliery.	Under 500		500 and under 1,000.		1,000 and under 1,500.		1,500 and under 2,000.		2,000 and under 2,500.		2,500 and under 3,000.		3,000 and under 3,500.		3,500 and over.		Totals.	
	No. of Shipments.	Tons of Coal.	No. of Shipments.	Tons of Coal.	No. of Shipments.	Tons of Coal.	No. of Shipments.	Tons of Coal.	No. of Shipments.	Tons of Coal.	No. of Shipments.	Tons of Coal.	No. of Shipments.	Tons of Coal.	No. of Shipments.	Tons of Coal.	No. of Shipments.	Tons of Coal.
Wallsend	3	1,374	63	53,249	245	308,040	323	570,961	229	512,000	139	379,470	71	228,460	45	171,175	1,118	2,224,729
Duckenfield	32	27,000	83	100,065	88	163,927	76	169,589	34	91,259	23	80,869	17	65,754	355	699,903
Greta	21	18,068	46	69,781	49	85,695	51	112,301	32	87,105	31	99,716	22	82,457	252	545,923
A.A. Co.	2	876	6	4,289	23	29,223	16	27,554	22	48,829	11	29,952	3	9,410	1	3,643	84	163,756
Co-operative ..	1	350	2	1,775	7	9,157	8	13,941	17	38,172	15	41,241	12	38,235	12	40,233	74	189,104
Lambton	3	2,689	1	1,294	16	23,800	17	37,666	7	18,635	3	9,819	..	..	47	98,903
Stockton	5	3,471	11	13,777	7	12,353	7	15,430	4	11,126	1	3,468	..	..	35	59,625
New Lambton	6	4,350	5	6,307	11	18,441	6	12,709	5	13,323	..	..	..	..	33	55,830
West Wallsend	2	1,319	6	7,352	3	14,259	1	2,283	3	8,564	3	9,929	6	19,821	29	63,527
Hetton	4	4,598	8	14,889	4	9,647	5	13,070	5	15,837	1	3,554	27	61,715
Pacific (formerly Northern)	1	861	5	9,081	5	8,923	2	4,752	3	7,556	3	16,155	7	27,891	26	66,409
Seaham	1	613	2	2,495	5	8,840	1	2,448	4	11,171	2	6,771	1	3,689	10	35,927
Cardiff (formerly South Wallsend).	2	1,934	2	2,211	4	6,691	3	6,424	..	..	1	3,154	..	..	12	20,424
Burwood	1	971	2	2,605	4	6,711	2	4,140	2	5,335	..	..	..	..	11	19,822
Young Wallsend	2	2,181	3	14,464	1	2,200	..	..	..	..	..	..	11	18,846
Waratah	2	2,239	3	5,431	2	4,516	1	2,920	..	..	..	..	8	15,105
Newcastle	2	3,396	..	..	1	2,671	..	..	1	3,534	4	9,021
Wickham and Bullock Island.	1	834	..	..	1	1,630	..	..	..	..	2	6,375	..	..	4	8,799
East Greta	1	2,970	..	..	..	..	2	7,602	3	10,578
Northern Extended	1	1,963	..	..	..	..	..	..	..	..	1	1,963
	6	2,600	146	121,512	445	563,355	567	998,481	441	988,116	267	727,274	162	521,718	114	435,373	2,149	4,353,679

TABLE VII.

SHOWING the Number of Sailing Shipments from Newcastle to Foreign Ports for each year from 1888 to (30 September), 1896, classified according to size of cargo; and also the Number of Casualties from heating and from shifting of cargo, and the Number of Vessels missing.

Year.	Under 500 tons.	Fire or Heat.	Missing.	Cargo shifted.	500 and under 1,000 tons.	Fire or Heat.	Missing.	Cargo shifted.	1,000 and under 1,500 tons.	Fire or Heat.	Missing.	Cargo shifted.	1,500 and under 2,000 tons.	Fire or Heat.	Missing.	Cargo shifted.	2,000 and under 2,500 tons.	Fire or Heat.	Missing.	Cargo shifted.	2,500 and under 3,000 tons.	Fire or Heat.	Missing.	Cargo shifted.	3,000 and under 3,500 tons.	Fire or Heat.	Missing.	Cargo shifted.	3,500 tons and over.	Fire or Heat.	Missing.	Cargo shifted.	Totals.								
	Cargoes.	Fire or Heat.	Missing.	Cargo shifted.	Cargoes.	Fire or Heat.	Missing.	Cargo shifted.	Cargoes.	Fire or Heat.	Missing.	Cargo shifted.	Cargoes.	Fire or Heat.	Missing.	Cargo shifted.	Cargoes.	Fire or Heat.	Missing.	Cargo shifted.	Cargoes.	Fire or Heat.	Missing.	Cargo shifted.	Cargoes.	Fire or Heat.	Missing.	Cargo shifted.	Cargoes.	Fire or Heat.	Missing.	Cargo shifted.	Cargoes.	Fire or Heat.	Missing.	Cargo shifted.					
America.																																									
1888	1			97				78				72				40				23				9				2								202		1			
1889	1			28				72				83		2		36				35				14				2								269		2			
1890	1			17				25				53		1		41				20				11				4								182		1			
1891	2			25				80				88				51		1		25				17				6								206		1			
1892				10				48				65		1		49		1		25				14		1		14								224		1	2		
1893				6				28		1		33				36				24		2		23		1		15		1						165		2	2		
1894				1				33		2		45		1		73		1		11				27		1		20								257		1	4		
1895				3		1		52		1	2	76		3	1	70		1	1	44				32				21		3						291		6	3		
1896 (to 30 Sept.)	1			12				18		1		40				45				30				26		3		19		1						200		4	1		
	6			146		1		446		1	2	567		1	7	2	441		3	1	267		3		162		5	1	114		5				2,140		13	17	8		
Ports North of Australia.																																									
1888	2			8				8				15				2							1															36			
1889	2			31				45				33				20				4																		135			
1890	1			10				5				11				7							1															35			
1891				3				12				15				7				1																		39			
1892	1			1				7				18				5				2								1									35				
1893												12				3				2																		17			
1894				3				6				12				11				2				2														36			
1895								3				13				7												1										24			
1896 (to 30 Sept.)								1				11		1		9				3				1														25		1	
	6			56				87				140		1		71				14				5				2									381		1		
Sandwich Islands.																																									
For whole period	3			79				117				48		12						1																	260		1		
India and Ceylon.																																									
"	2			1				3				7				5				2				2														22			
Mauritius, Africa, and Madagascar.																																									
"	19			38				8				9				5				3																	72		1		

TABLE VIII.

SHOWING for each colliery the total sailing shipments to America, with the number of casualties from heating, and the number of missing vessels.

Colliery.	Total shipments to America.	Cases of firing or heating.	Number of missing vessels.	Total.	Total casualties as percentage of total shipments.
Wallsend	1,118	6	9	15	1.34
Duckenfield	355	1	3	4	1.13
Greta	252	...	1	1	.40
A. A. Co.	84	...	1	1	1.19
Cooperative	74	1	1	2	2.70
Lambton	47	...	...	...	...
Stockton	35	...	1	1	2.86
New Lambton	33	...	...	...	...
West Wallsend	28	1	1	2	7.14
Hetton	27	...	...	...	...
Pacific (formerly Northern)	26	2	...	2	7.69
Seaham	16	...	...	...	...
Cardiff (formerly South Wallsend)	12	(see foot note)	...	...	...
Northern Extended	1	...	...	...	...
Mixed .....	...	2*	...	2	...
Burwood	11	...	...	...	...
Young Wallsend	11	...	...	...	...
Waratah	8	...	...	...	...
Newcastle	4	...	...	...	...
Wickham	4	...	...	...	...
East Greta	3	...	...	...	...
	2,149	13	17	30	1.40

The data are too few in number to allow of much weight being attached to the actual numerical value of the percentages.

* These two shipments were made up as under, but in the reports from which the figures are compiled, they appear as from the Cardiff Colliery, and are included in the twelve shipments from that colliery.

	1.	2.
	Tons.	Tons.
Cardiff	920	1,167
Northern Extended	1,178	1,785
Pacific .....	...	262
	1,798	3,154

It has not been ascertained in how far the mixing of cargoes affects the above list in regard to the smaller collieries.

TABLE IX.

NUMBER of sailing shipments, under and over 2,000 tons, which left Newcastle for Foreign ports between the years 1888 and (30 September) 1896 :—

Destination.	Under 2,000 tons.	2,000 tons and over.	Total.
West Coast of America	1,165	984	2,149
Ports North of Australia	239	92	331
Sandwich Islands	247	13	260
Mauritius, Madagascar, and South Africa	64	8	72
India and Ceylon	6	16	22
New Caledonia	111	...	111
South Sea Islands	24	...	24
	1,906	1,113	3,019

TABLE X.

SHIPMENTS TO AMERICA.

AVERAGE Tonnage of Coal per Ship for each year from 1888 to (30 September,) 1896.

Year.	Tonnage of Coal to America by Sailing Vessel	No. of Ships.	Average Tonnage of Coal per Ship.
1888.....	441,310	262	1,684
1889.....	483,229	269	1,815
1890.....	343,784	182	1,889
1891.....	544,728	296	1,840
1892.....	458,252	224	2,046
1893.....	376,986	165	2,285
1894.....	663,372	257	2,548
1895.....	633,376	294	2,173
1896 (9 months)	458,162	200	2,291

TABLE XIII.

SHOWING the number of Sailing Shipments, classified according to size of Cargo, which left Newcastle for America during the seven cool months, April to October, and those during the five hot months, November to March, of years 1892-96; also the number of Casualties in each such Division.

Tonnage of Cargoes.	COOL MONTHS.										HOT MONTHS.																			
	April to October, 1892.			April to October, 1893.			April to October, 1894.			April to October, 1895.			Totals.			November, 1892, to March, 1893.			November, 1893, to March, 1894.			November, 1894, to March, 1895.			November, 1895, to March, 1896.			Totals.		
	No. of Shipments.	Fire or Heat.	Missing.	No. of Shipments.	Fire or Heat.	Missing.	No. of Shipments.	Fire or Heat.	Missing.	No. of Shipments.	Fire or Heat.	Missing.	No. of Shipments.	Fire or Heat.	Missing.	No. of Shipments.	Fire or Heat.	Missing.	No. of Shipments.	Fire or Heat.	Missing.	No. of Shipments.	Fire or Heat.	Missing.	No. of Shipments.	Fire or Heat.	Missing.	No. of Shipments.	Fire or Heat.	Missing.

America (all ports).

500 and under 1,000	3	1	3	6	13	8	16	12	7	1	1	18	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1,000 " 1,500	25	15	23	33	1	1	16	15	16	17	1	16	16	1	17	16	1	16	16	1	1	1	1	1	1	1	1	1	1	1	1
1,500 " 2,000	33	13	31	48	1	1	29	16	17	19	1	17	17	1	19	17	1	17	17	1	1	1	1	1	1	1	1	1	1	1	1
2,000 " 2,500	29	1	23	48	1	1	19	17	19	1	1	19	17	1	19	17	1	19	17	1	1	1	1	1	1	1	1	1	1	1	1
2,500 " 3,000	16	15	23	25	1	1	8	14	14	1	1	14	18	1	18	17	1	18	17	1	1	1	1	1	1	1	1	1	1	1	1
3,000 " 3,500	9	12	22	13	1	1	2	6	6	1	1	6	7	1	7	6	1	7	6	1	1	1	1	1	1	1	1	1	1	1	1
3,500 and over	13	7	21	17	2	2	2	1	4	1	1	4	5	1	5	4	1	5	4	1	1	1	1	1	1	1	1	1	1	1	1
	128	1	86	171	3	2	675	3	4	96	2	2	71	1	1	87	3	140	6	2	394	9	8								

San Francisco alone.

500 and under 1,000	2	1	1	1	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1,000 " 1,500	11	4	4	9	26	1	6	1	6	1	1	6	6	1	6	6	1	6	6	1	1	1	1	1	1	1	1	1	1	1	1
1,500 " 2,000	12	4	4	11	33	1	6	1	6	1	1	6	6	1	6	6	1	6	6	1	1	1	1	1	1	1	1	1	1	1	1
2,000 " 2,500	6	10	7	12	35	5	5	1	7	6	1	6	6	1	6	6	1	6	6	1	1	1	1	1	1	1	1	1	1	1	1
2,500 " 3,000	6	5	14	9	36	6	6	1	4	6	1	6	6	1	6	6	1	6	6	1	1	1	1	1	1	1	1	1	1	1	1
3,000 " 3,500	11	5	18	12	46	7	7	1	1	7	1	7	7	1	7	7	1	7	7	1	1	1	1	1	1	1	1	1	1	1	1
	48	28	50	54	180	2	25	2	1	14	1	1	10	1	21	2	2	79	6	2											

FIRE OR HEAT.

	Cool Months, April to October, of four years, 1892-1895.			Hot Months, November to March, of four years, 1892-1896.		
	Casualties.		No. of Shipments.	Casualties.		No. of Shipments.
	No.	Percentage of Shipments in each case.		No.	Percentage of Shipments in each case.	
San Francisco	180	2	1.11	70	6	7.59
Other ports, West Coast of America	395	1	.25	315	3	.95
	575	3	.52	384	9	2.28

MISSING.

	Cool Months, April to October, of four years, 1892-1895.			Hot Months, November to March, of four years, 1892-1896.		
	Casualties.		No. of Shipments.	Casualties.		No. of Shipments.
	No.	Percentage of Shipments in each case.		No.	Percentage of Shipments in each case.	
San Francisco	180	..	..	79	2	2.53
Other ports, West Coast of America	395	4	1.01	315	6	1.90
	575	4	.70	394	8	2.03

TABLE XIV.

SAILING Vessels which carried Cargoes of over 4,000 tons from Newcastle to Foreign Ports between 1888 and 1896 (to 30 September).

Date of Sailing.	Name of Vessel.	Tonnage of Cargo.	Port of Destination.	Colliery.	Remarks.
1891.					
11 June	France	4,468	Caldera	Wallsend.	
7 December	California	4,160	San Francisco	"	
1892.					
31 May	Palgrave	4,700	"	Greta.	
3 June	Lord Brassey	4,068	Bombay	New Lambton.	
1893.					
23 February	Falkland	4,122	San Francisco	Wallsend.	
5 March	Cedarbank	4,283	"	"	Arrived on fire.
20 May	Olivebank	4,260	San Diego	Duckenfield.	
20 June	Forteviot	4,560	Bombay	Lambton.	
15 November	John Ena	4,279	San Francisco	Duckenfield.	
1894.					
26 April	Forteviot	4,700	"	Wallsend.	
4 May	Osborne	4,800	"	Duckenfield.	
23 "	Crompton	4,223	"	Wallsend.	
24 October	John Ena	4,205	"	West Wallsend.	
4 November	Lyderhorn	4,099	"	Wallsend.	
4 December	Ditton	4,156	"	Cooperative.	
1895.					
6 May	Alice A. Leigh	4,318	San Diego	"	
11 "	Prince Robert	4,120	Panama	Duckenfield.	
2 June	Miltonburn	4,028	San Francisco	Greta.	
15 "	Royal Forth	4,558	"	Pacific	Cargo heated.
19 September	John Ena	4,257	"	"	On fire during voyage.
18 November	Celticburn	4,100	"	"	
10 December	Hollinwood	4,060	"	West Wallsend	Cargo heated.
1896.					
28 May	John Ena	4,200	"	Pacific.	
10 August	Windermere	4,257	"	West Wallsend.	
To America					22
" India					2
					24

TABLE XV.

SHOWING the increase in depth of vessels which has taken place with increase of tonnage. (This list was compiled by taking at random the names of vessels which actually sailed from Newcastle in different years.)

Date of Sailing.	Name of Vessel	Tons of coal carried.	Tonnage of vessel.	Depth.	Date when built.
June, 1888	John Gambles	1,540	1,066	21-0	1874
January, 1889	Remonstrant	1,633	1,078	21-3	1878
" 1890	City of Athens	1,746	1,199	22-8	1866
" 1888	Loch Lomond	1,654	1,249	21-5	1870
February, 1889	Rosdhu	1,905	1,370	21-0	1874
December, 1895	Thetis	1,973	1,352	21-6	1885
" 1888	Harold	2,076	1,376	21-3	1888
" 1895	Inveresk	2,328	1,415	21-7	1891
January, 1889	Loch Trool	2,055	1,438	21-5	1884
" 1891	Pallas	2,205	1,457	21-7	1888
" 1891	Falstaff	2,024	1,465	23-5	1875
March, 1888	Edinburgh	2,042	1,473	21-5	1885
January, 1896	Ballochmyle	2,020	1,511	22-7	1873
December, 1895	Timandra	2,300	1,561	22-4	1885
January, 1891	Great Admiral	1,753	1,576 wood	25-3	1869
February, 1889	Pass of Balmaha	2,313	1,571	22-5	1888
December, 1888	Caldera	2,260	1,617 wood	24-1	1884
January, 1888	Ventura	2,605	1,700	22-8	1886
June, 1890	MacCallum More	2,393	1,740	23-4	1873
February, 1888	Soudan	2,046	1,751	24-1	1885
January, 1896	Earl of Dalhousie	2,456	1,765	23-4	1884
" 1889	Province	2,640	1,842	23-1	1886
December, 1888	Greystoke Castle	2,757	1,878	23-6	1886
" 1895	Blairmore	2,932	1,917	23-5	1893
January, 1896	Lucipara	2,826	1,943	23-8	1885
February, 1889	Dymene	2,877	1,949	24-1	1882
July, 1888	Falls of Garry	3,120	2,088	23-9	1886
" 1890	Scottish Dales	3,060	2,107	24-5	1883
December, 1895	Wiscombe Park	3,308	2,228	24-0	1892
October, 1895	Elgmshure	3,350	2,229	24-7	1889
" 1895	Snaigow	3,630	2,384	24-1	1890
November, 1895	Fanny Kerr	3,585	2,426	24-5	1892
June, 1888	Drumcliff	3,683	2,525	24-2	1887
November, 1895	Celticburn	4,100	2,655	25-7	1892
December, 1895	Hollinwood	4,060	2,673	24-2	1889
October, 1895	Eulomene	3,931	2,725	24-5	1891
March, 1893	Cedarbank	4,283	2,825	24-5	1892
September, 1895	John Elna	4,200	2,842	25-0	1892
August, 1896	Windermere	4,257	3,050	25-7	1892
June, 1895	Royal Forth	4,558	3,130	25-6	1893

NOTE.—On the following comparison being instituted between the figures of the total quantity of coal shipped from 1888 to 30th Sept., 1896, to foreign countries, as obtained from the shipping reports of Messrs. R. B. Wallace and Stokes & Co. (from which the tables in this Appendix are compiled), and as shown in the Custom-house Return (see Appendix "S") discrepancies were seen to occur, and in answer to a question as to the explanation thereof, Mr. Wallace replied as under. We think the suggestion made by Mr. Wallace most probably accounts for the main difference.

	Total Tonnage of Coal shipped.	
	As in Shipping Reports.	As in Customs Return.
West Coast of America	4,362,019	4,326,599
North of Australia	1,216,598	1,234,227
Sandwich Islands	314,422	304,578
Mauritius, Madagascar, and South Africa	87,942	
Mauritius alone		91,547
India and Ceylon	167,208	314,215
New Caledonia	78,497	100,566
South Sea Islands	19,156	20,026
Other Countries (including a few shipments to American Ports)		114,369

Dear Sir,

I am in receipt of your note of yesterday, and really cannot understand the difference in the quantities of coal by my circular and Customs returns. My circular is compiled from the actual quantities of coal shipped by each ship, as per bill of lading, and I am certain is correct. I, however, do not include in the case of steamers the quantity of coal taken in bunkers for consumption on the voyage, and if steamers clear at Customs with both cargo and bunker coal this may account to some extent for the difference in the case of Ceylon, India, and New Caledonia, but I do not remember any steamers taking coal to Mauritius, and the export for that place should agree with my circular.

I regret I can give you no further explanation of the matter.

Newcastle, N.S.W., 7 January, 1897.

I remain, &c.,

ROB. B. WALLACE.

(p. H. NICKISSON.)

W. Wilson, Esq., Secretary, Coal Cargoes Commission, Sydney.

M.

REPORT of Inquiry held at the Chamber of Commerce, Newcastle, by the Committee on the 8th, 9th, and 10th October, 1891, to ascertain the best means of loading and stowing coal cargoes.

Gentlemen,

Chamber of Commerce, Newcastle, 29 October, 1894.

Owing to the reported shifting of the cargoes, notably of the "Poitalloch," "Cambrian Chieftain," and "Parthia," which were recently loaded with coal at this port, and the fact that during the last four years eight vessels have sailed from this port and been posted as missing, the Committee of this Chamber feel that prompt and effective measures are necessary to save the credit of Newcastle, and to this end have held an independent inquiry as to the best means of stowing coal cargoes loaded here for foreign ports. It was thought that by taking the evidence of captains, shipping agents, stevedores, trimmers, and others interested, some decision might be arrived at which would benefit all concerned. This has been done, and after carefully reviewing the evidence, the Committee have arrived at the following conclusion:—

1. That considerable laxity has been shown by captains, officers, stevedores, and trimmers.
2. That shifting boards and bulkheads, particularly in modern vessels, are absolutely necessary, and their adoption should be made compulsory.
3. That the trimming of all coal cargoes should be under the supervision of the Government.
4. That in no case (as is quite clear from the evidence) has any vessel sailing from this port, carrying Newcastle coal solely, been lost through spontaneous combustion, but by a lamentable degree of carelessness in the supervision of the trimming.
5. That the following resolution, which was unanimously adopted by the Committee, be conveyed to the Colonial Treasurer, viz.:—"That a deputation wait upon the Colonial Treasurer to ask the insertion of a clause in the Navigation Act of New South Wales (now before Parliament) making the use of shifting boards and, where necessary, bulkheads compulsory; and also that the Government supervise the stowage of coal cargoes here."

The Committee hope to inaugurate at an early date a better state of things at this port, and they trust that their action in endeavouring to investigate this matter, fully may meet with universal approval. In the meantime, they would urge all shipowners to give captains strict instructions that their officers supervise the trimming of all coal cargoes at Newcastle.

Yours faithfully

(For the Committee),

D. J. McLEAN,

President.

N.

WORKING RULES OF THE COAL-TRIMMERS' UNION.

Wages

1. All members of this union shall be paid for their labour at the following rates per hour:—

	DAY.	NIGHT.
Trimming Coal	1s. 3d., per hour.	1s. 9d. per hour.
Trimming Coke	1s. 6d. ,,	2s. 6d. ,,

Working meal hours, 2s. 6d., when members are actually working that hour: but in case an employer shifts into an empty hatch and runs it up during meal hour, then members shall be paid at the rate of 1s. 3d.

Chance Work.

2. Any "chance job" of work lasting three hours or less to be charged:—Day-work, 5s.; night-work, 7s.

Going out in the Stream.

3. All members of this union going out into the stream shall be on pay until they are landed on the wharf.

Working under Current Rates.

4. Under no circumstances shall any member of this union work for less than the current rate of wages.

Working on Sundays.

5. Any member of this union working at any time between the hours of 12 o'clock on Saturday night and 12 o'clock on Sunday night shall be paid at the rate of 5s. per hour.

Working on Holidays.

6. Any member of this union working on a holiday shall be paid at the rate of 5s. per hour from 6 a.m. to 6 p.m.

Tide work and Shift work.

7. All members of this union employed by foreman coal trimmers, captains of vessels, or other employers of labour at tide or shift work, shall be paid 10s. for the former and 5s. for the latter. The tide and shift money to be equally divided among the gang at work.

Running up Hatches.

8. Any vessel with an empty hold coming (in the day time) under the cranes or shoots to load a coal cargo (union labour being employed on board such vessel), the foreman coal trimmer is to be allowed the privilege of "running up" one hatch without employing a gang; but if the said vessel has coal cargo in a hatch besides the one working, then the full gang is to be set on when the first waggon of coal cargo goes into the hold. The words "coal cargo" shall be understood to mean coal, coke, kerosene shale, or any allied substances.

Vessels loading at night.

9. In the event of a vessel coming under to load empty at night, the boss may run one hatch, if he can, till 12 o'clock, or may call his gang out any hour before 12 o'clock; but in the event of him wanting his gang before 6 a.m. he must pay them from 12 o'clock. In the event of him shifting to another hatch he must pay his gang from the time of shifting to that hatch.

Full Gangs to be Employed.

10. At all times, day or night, a full gang of men must be employed.

Definition of the term "Gang."

11. This union does not specify what number of men shall compose a "gang." The term is to signify the full number of men required to do the job.

Men Discharged by Employers.

12. (1.) If any foreman coal trimmer discharges any man or men from the vessel whereon he or they are employed, the foreman coal trimmer may not substitute any man or men in the place of those so discharged.
- (2.) But if the foreman coal trimmer should afterwards require more labour he must reinstate those whose services he had dispensed with, and pay them from the time of being discharged.
- (3.) In the event of a boss not being able to get the men discharged he may employ others in their place, and pay them from the time he discharged the aforesaid men.
- (4.) If the loading of a vessel is supposed to be completed and the gang leaves, and the foreman coal trimmer afterwards receives orders to take in more cargo, he may in this case employ another gang to do the additional work.

Division of Labour.

13. In the event of a vessel coming under to load, and will take about 20 hours, the first gang must be relieved as near half time as possible, but should the job last (say) 30 or 40 hours a day, a night gang to be employed.

Non-Members.

14. (1.) No member of this union may work with a man who is not a member.
- (2.) No member of this union may work for an employer who does not employ union labour.

Assisting Employers to procure Union Labour.

15. All union men shall, so far as lay in their power, assist their employers to procure union men if the employer requires them.

Infraction of Rules.

16. Should it be proved before a general meeting that any member of this union has violated any of the foregoing rules, or committed any breach of the by-laws, he shall be fined the sum of 5s.

O.

STATEMENT handed in by Mr. F. W. Binney, Secretary of the Newcastle-Wallsend Coal Company, of the Number and Tonnage of Cargoes of Coal shipped from the various Collieries.

Colliery.	1887.		1888.		1889.		1890.		1891.		1892.		1893.		1894.		1895.		1896. (to 25 September.)		Total.	
	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.	Ships.	Tons.
Wallsend	158	261,302	136	235,194	181	325,397	142	263,447	166	310,224	111	223,035	86	192,901	128	280,213	132	282,571	78	181,587	1,318	2,555,871
Duckenfield	79	127,384	62	90,133	82	123,859	43	65,334	94	152,385	92	175,990	76	140,266	102	201,204	89	172,650	63	111,718	782	1,360,923
Greta	39	69,236	61	103,061	82	145,954	38	79,061	51	105,451	39	86,494	21	47,064	4	8,476	26	65,319	13	28,519	374	738,665
Lambton	23	36,110	22	41,383	60	93,710	19	30,188	20	39,626	6	11,720	5	14,451	26	60,525	19	38,866	9	18,913	268	385,492
New Lambton	29	30,744	26	39,022	32	42,506	20	28,390	26	36,088	20	32,432	1	1,094	14	26,415	5	10,254	5	9,431	178	256,376
Co-operative	2	1,010	5	5,752	3	3,550	4	6,191	3	3,924	2	2,511	6	17,359	27	65,671	29	71,395	20	52,763	101	230,066
A. A. Co.	3	1,614	2	1,713	4	4,825	3	1,698	6	6,007	13	23,072	8	16,725	17	32,159	24	44,944	13	23,043	93	100,800
West Wallsend .....	...	.....	1	1,503	1	1,792	3	4,043	10	14,490	11	20,808	8	18,038	8	17,060	10	23,551	15	38,032	67	139,317
Pacific (formerly Northern) .....	...	.....	6	10,150	5	7,303	2	3,435	13	24,710	3	6,434	1	845	8	14,121	14	30,434	13	28,434	65	125,916
Seaham .....	...	.....	...	.....	...	.....	...	.....	...	.....	3	4,780	11	23,844	24	49,318	8	17,346	10	20,900	56	116,158
Stockton	12	14,505	34	57,550	12	20,530	1	1,380	...	.....	...	.....	...	.....	...	.....	...	.....	1	1,615	60	95,530
Burwood	2	1,650	9	11,772	7	9,551	7	9,361	2	3,555	5	9,101	3	5,434	...	.....	3	5,853	8	17,516	46	73,793
Hetton .....	...	.....	...	.....	...	.....	...	.....	1	1,350	...	.....	2	2,413	5	10,577	7	12,896	15	37,434	30	64,670
Cardiff (formerly South Wallsend). Waratah .....	...	.....	...	.....	...	.....	...	.....	11	14,015	...	.....	2	3,261	6	8,751	6	12,459	3	6,183	28	44,669
Young Wallsend	17	25,071	2	5,416	4	6,699	5	7,823	2	4,521	1	1,870	...	.....	...	.....	...	.....	...	.....	31	51,400
Newcastle .....	...	.....	...	.....	...	.....	...	.....	12	20,340	3	3,932	...	.....	...	.....	...	.....	...	.....	15	24,932
Wickham	2	2,459	...	.....	2	2,360	...	.....	1	3,554	...	.....	1	1,666	3	6,552	4	4,978	...	.....	13	21,569
East Greta .....	...	.....	2	1,924	2	4,517	...	.....	...	.....	...	.....	...	.....	4	8,670	...	.....	1	800	9	15,911
Sundry collieries .....	...	.....	...	.....	...	.....	...	.....	...	.....	...	.....	...	.....	3	10,578	1	1,180	1	634	5	12,442
Sundry collieries	1	1,243	...	.....	1	1,170	...	.....	...	.....	4	4,033	4	4,157	...	.....	...	.....	1	1,258	11	11,861
	367	572,328	368	604,573	478	793,723	287	510,351	418	740,240	313	606,322	235	489,518	379	800,290	377	794,636	263	583,860	3,490	6,485,841

Some idea of the cost of working can be gathered from the unmentioned items of expenditure :—

The interest on the cost of the cranes, engine-houses, and machinery, jetties, electric light plant, railway line, and sidings, &c., at Bullock Island is, per annum	£	13,960
(The question has been raised that the Commissioners are not charged interest upon this capital expenditure, but it is necessary to point out that this expenditure has been incurred by the State and became invested in the Railway Commissioners under the terms of the Railways Act. It is, however, only a small set-off against the many unremunerative works which the Commissioners are called upon to administer, and which are debited to the railway account. It is the State that receives the benefits, as the Commissioners administer a State property).		
Amount paid for shipment of coal, repairs to cranes, &c., per annum, about		11,000
The traffic expenses (without cost of controlling staff, printing, &c.) and wages of the coal overseers, berthing masters, shunters, stores and supplies at Bullock Island, equal per annum		16,056
The Loco. expenses, including interest on the rolling-stock employed and cost of renewals and repairs, part interest on running-shed, cost of engine-drivers, firemen, &c., amount to per annum		20,857
The interest on the proportionate cost of the main line, together with cost of maintenance of line and sidings, interest on cost of duplication of line—Hamilton and Teralla—equal to, per annum		16,200
Working and maintenance of electric light plant, engine-house, hydraulic plant, &c.		3,600
Total	£81,673	
The total revenue for twelve months past was	£80,000	
The total cost of working was	£81,673	
Leaving only	£7,327	

towards cost of the renewal of the lines, &c.

Complaint was made that the rates have not been reduced for thirty years past, but as a matter of fact considerable reductions have been made, as, for instance, thirty years ago the rate for 1 mile was 11d., to-day it is 6d. for large or 5d. per ton for small coal. For 4 miles the rate has been reduced from 11d. to 9d. for large and 7d. per ton for small coal; for 7 miles, from 1s. 1d. to 10d. for large and 8d. for small coal; for 15 miles, from 1s. 4d. to 1s. 2d. for large and 11d. small; and for 20 miles, from 2s. to 1s. 3d. for large and to 1s. per ton for small coal.

The representative of the Waratah Company stated that they had two-thirds of all the traction, but did not get one single iota from the Commissioners, &c.

The Waratah Company have shared in the above general reductions, and they have also had special consideration. Four years ago the rate was reduced from 10d. to 9d., a 10 per cent. reduction, the condition applying that they were to send 50,000 tons of coal per annum, and under the general reduction made in March last year this was again reduced to 8d., equal to a 20 per cent. reduction within four years, and small coal, which four years ago was charged at 10d. per ton, is now charged at little more than 6d. per ton.

In addition to the great concessions that have been made in the rates, the accommodation and facilities for working the business have been greatly extended within recent years at the expenditure of a very large sum of money.

The first hydraulic cranes were put up in 1878. The hydraulic plant has been added to and the electric light has since been installed so as to enable shipping to be carried on in a satisfactory manner at night time. As an instance of the facility with which ships are loaded to-day as against thirty years since, it is represented that in 1868 the loading was about 900 tons in three days; in 1896 1,900 tons have been loaded in thirteen hours. It can readily be understood what enormous saving this must be to shipowners, and is of more practical benefit to the colliery owners in competing for business than even a great reduction in the coal-haulage rates, if it were possible to do more than has been done.

With regard to the complaint made that the coal receives rough treatment during traction, it may be mentioned, as already pointed out, that the wagons used are supplied by, and belong to, the collieries; but in many instances they have numerous defects, and for some time past the attention of a number of the companies has had to be very strongly drawn to defects that require attention.

S.

CUSTOMS HOUSE RETURN OF COAL EXPORTED FROM NEWCASTLE.

	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	To 30 Sept. 1896.
	tons.	tons.	tons.	tons.	tons.	tons.	tons.	tons.	tons.
Victoria	666,947	811,818	725,868	868,631	791,960	644,479	606,686	639,804	405,336
South Australia	74,250	181,411	130,073	252,986	138,186	127,223	167,799	127,191	157,540
New Zealand	138,007	156,172	154,773	160,158	154,276	154,294	160,244	154,869	102,634
Tasmania	33,514	61,585	51,909	67,350	69,042	62,005	55,099	57,235	39,243
Western Australia	11,814	14,780	14,902	34,457	24,652	19,980	31,430	37,960	80,840
Queensland	5,074	5,310	5,279	13,674	20,689	13,611	16,499	20,844	16,524
Fiji	7,259	10,960	7,446	11,796	11,614	6,265	3,060	4,975	2,900
Total—Intercolonial	936,865	1,242,051	1,090,250	1,409,052	1,210,419	1,027,857	1,040,817	1,042,878	805,017
Chili	115,453	149,849	167,726	187,458	192,734	141,940	266,541	305,830	247,650
United States of America	314,593	296,357	145,935	319,860	224,095	209,269	272,352	273,693	158,594
Phillipine Islands	33,084	45,026	28,603	52,782	45,878	33,239	86,679	47,982	55,365
Sandwich Islands	21,418	27,081	26,509	34,789	35,779	32,139	46,083	44,436	35,444
India	34,643	63,870	25,822	16,090	29,424	28,283	29,484	38,041	26,978
Peru	9,186	18,432	24,272	23,976	32,053	12,711	31,573	27,225	34,327
Singapore	17,879	39,057	20,904	44,194	31,833	9,900	10,100	25,276	20,832
Java	32,288	70,494	21,531	43,689	20,966	30,533	25,414	23,364	17,913
Hong Kong	36,953	79,826	41,185	36,037	15,696	20,110	25,723	21,608	19,284
Mauritius	7,081	15,422	7,009	17,429	8,440	5,841	12,334	11,257	6,734
New Caledonia	9,108	10,838	6,702	17,263	20,296	10,437	6,965	8,639	10,318
Panama .....	.....	.....	.....	.....	.....	2,346	16,265	18,812	12,470
Mexico	2,193	9,601	5,564	11,031	8,191	3,643	11,028	14,671	7,080
South Sea Islands	4,526	5,070	4,101	1,160	3,113	906	900	.....	250
Ceylon	1,685	2,438	.....	.....	6,171	2,700	.....	2,986	5,900
Other countries	3,382	16,115	9,223	29,910	9,615	12,028	8,516	13,680	11,838
Total—Foreign	643,472	849,506	537,788	835,677	684,316	556,025	850,837	877,500	670,986
Total—Intercolonial and Foreign	1,580,337	2,091,557	1,628,038	2,244,729	1,894,735	1,583,882	1,891,654	1,920,378	1,476,003

T.

RETURN of Coal-laden Vessels cleared at Newcastle in each year since and including 1888, and from 1st January to 30th September, 1896:—

Year.	Steam Vessels.		Sailing Vessels.	
	To Foreign Ports.	To Intercolonial Ports.	To Foreign Ports.	To Intercolonial Ports.
1888	39	318	359	200
1889	34	487	484	256
1890	32	417	273	172
1891	53	496	417	174
1892	34	448	325	168
1893	34	374	228	149
1894	37	394	353	148
1895	66	362	365	130
1896 (1 Jan. to 30 Sept.)	52	247	255	93
Total	381	3,543	3,059	1,490

NOTE.—The above Return comprises only those vessels which cleared from Newcastle direct. Vessels clearing *via* Sydney are included in the statistics of that port.

Custom House, Newcastle, 4th November, 1896.

C. C. POPE,
Sub-Collector.

U.

NUMBER of Sailing Vessels that used and did not use Shifting Boards at Newcastle from 1st January to 31st December, 1896.

Iron and Steel Vessels.	
Shifting Boards put up.	Shifting Boards not put up.
263	13
Wood Vessels.	
40	23

THOMAS LAJDMAN,
Marine Surveyor,
Sydney Underwriters' Association, 16/1/97.

V.

Testimony of Captain W. H. Eldred, Consul-General for Chile, forwarded to the Royal Commission on Coal Cargoes on the 20th November, 1896.

1. *Experience.*—I went to sea in 1830, commanded a vessel about fourteen years, and settled in Sydney as a merchant in 1854; I was soon after appointed Consul for Chile, and in 1879 was promoted to the higher office of Consul-General for Australia and New Zealand.

I have carried about a dozen cargoes of coal without any disaster. I never used shifting-boards or bulkheads, but was always careful to see the cargo well trimmed.

From 1854 to 1881 I shipped several (say over two hundred) cargoes of coal, more or less, at Newcastle and Sydney for foreign ports, and to the best of my recollection none of them became heated or shifted.

2. *Shifting-boards.*—With grain, especially linseed, I consider shifting-boards indispensable, but not with coal cargoes.

3. *Trimming.*—Coal having a low specific gravity of 1.330 is the liveliest deadweight cargo that is carried; the main body of the ship (unless she be exceptionally tender) should be quite filled by careful trimming close up to the decks to prevent shifting, and make the ship easy at sea; and it is the shipmaster's duty to see that his cargo is properly trimmed.

4. *Bulkheads.*—It is certainly a safeguard to have bulkheads at the extreme ends of the cargo, particularly in ships built with full round lines, but I have never used them, and consider that if the body of the ship is quite filled up to the decks, bulkheads are not absolutely necessary as a rule.

5. *Cause of Heating.* I am inclined to attribute the spontaneous combustion of some cargoes to be more frequently caused by the coal going direct from the mine to the ship's hold in a wet condition, battened down, and not properly ventilated than I do to the generation of gas.

6. *Explosions.*—This is a subject for scientists, and in which I have not had any experience, but I venture to express my strong opinion that the explosion on board the "Argo," in Sydney Harbour on the 22nd of July, 1893, was caused by an explosive that expends its force upwards, with a fuse attached, having been placed in the coal a few feet below the lower deck in the after hatchway. On that occasion the chief officer was killed, and Mr. Chamberlain, a passenger, was blown up and injured for life. My reasons for expressing this opinion are that the explosion occurred within the short space of time of about fifteen hours after the ship was loaded in Darling Harbour, during which period the fore hatch was left open, consequently the air was not excluded from the hold. Some time after the explosion I went on board the ship, when I saw a large hole 7 or 8 feet deep in the coal beneath the after hatchway, from which a few tons had been blown up, but the cargo was not disturbed elsewhere; the iron beams and coamings on the lower deck immediately over the hole were twisted and bent considerably, and the explosion in its natural course to the fore hatchway, which was open, lifted the upper deck with the beams fore and aft, and ruined the ship.

7. *Fired Cargoes.*—I produce from the records of my Consulate-General a list of fifteen coal-laden ships* that left Newcastle, from the 1st of January, 1890, to the 30th June, 1896, the cargoes of which were either burned or became heated. These casualties by fire appear to me to be very small considering the number of ships that sailed from Newcastle with coal during that period, and will, I think, compare favourably with similar losses of British coal.

8. *Missing Ships.*—I also produce a list of thirteen vessels* that left Newcastle with coal from the 1st of January, 1890, to February, 1896, inclusive, that have not been heard of since, and it is remarkable that six of these casualties out of the thirteen occurred during 1895, the same number that were missing during the four previous years.

9. *Overloading.*—Shipmasters in their anxiety to earn money for their owners sometimes overload their ships, meet with severe weather, and while scudding, a following heavy sea after passing the stern and lifting it considerably, the ship becomes immersed (say) between the main and mizzen masts, and when it happens to break on board at that moment its force and volume are so immense that the main hatches give way, everything movable on deck is washed overboard, the ship broaches too, and is doomed.

10. *Icebergs.*—It is only reasonable to suppose that some of the ships from Newcastle for Chile that take the Great Circle track collide with ice and are thus lost with all hands.

* Included in Appendix A.

W.

Letter from the Master of the ship "King David," to the Manager, Wallsend Coal Co., Newcastle.

Ship "King David," Valparaiso, Chile, 28 October 1896.

H. Cross, Esq., Wallsend Coal Co., Newcastle, N.S.W.,—

Dear Sir,

We arrived here all well on the 21st instant, after a rather long passage of sixty-two days, having met with a persistent south, south-east, and east winds for thirty days during our passage, between 39° and 44° south latitude, and 168° and 118° west longitude.

As I promised before leaving your port, I beg to forward you the attached sheets kept showing tests of temperature in a cargo of coal shipped by the Wallsend Coal Company, Newcastle, N.S.W., and carried in the ship "King David" to Valparaiso. On the 29th of July we received stiffening—300 tons in after hatch and 200 in fore hatch. This was shipped quite dry, and kept the same temperature until we commenced to load. We started to load on August 15th, and took in about 1,000 tons in main hatch. This lot had been on the line over night in very heavy rain, and was taken in very wet. At my request the waggons containing the above 1,000 tons were lowered right down the hold, and the first waggon emptied within 3 feet of the keelson. This could not be done aft or forward, the hatches being too small.

Yours, &c.,

ROBERT JONES.

Ship "King David" of Glasgow.—Tests of temperature in a cargo of coal of 3,600 tons, carried from Newcastle, N.S.W., to Valparaiso.

Date.	Lat.	Long.	Forehold.		Mainhold.		Afterhold.		Air.		
			a.m.	p.m.	a.m.	p.m.	a.m.	p.m.			
August 21	South.	East.	61	61	62	62	62	62	60	At Newcastle.	
" 22	33 29	153 50	61	64	61	64	61	64	64		
" 23	33 43	158 25	62	62	65	63	62	62	62		
" 24	33 18	162 28	60	60	60	61	60	61	61		
" 25	33 05	165 00	61	61	61	61	61	61	61		
" 26	32 49	167 34	60	61	60	62	60	61	62		
" 27	33 47	169 07	58	58	58	58	58	58	56		
" 28	33 38	170 02	58	58	58	58	60	60	60		
" 29	32 40	171 54	60	60	60	59	62	62	64		
" 30	32 34	174 18	59	59	58	58	62	63	62		
" 31	32 43	176 51	61	60	58	58	61	62	58		
September 1	33 46	178 59	60	62	60	62	62	62	61		
		West.									
" 1	34 22	178 37	62	62	62	61	64	63	60		
" 2	35 28	177 22	61	59	59	58	64	62	57		
" 3	35 13	175 34	59	59	58	58	62	62	57		
" 4	34 25	173 48	59	59	58	58	64	62	56		
" 5	34 29	172 21	59	58	56	56	64	62	55		
" 6	34 38	169 30	58	59	56	56	62	62	54		
" 7	35 00	169 00	58	58	56	56	62	62	54		
" 8	36 23	167 27	55	54	54	55	61	60	54		
" 9	39 04	165 00	53	54	53	54	60	62	53		
" 10	39 20	161 50	...	...	...	...	...	...	...
" 11	38 10	157 51	52	52	54	54	62	62	52		
" 12	39 24	155 33	54	54	54	54	61	62	48		
" 13	40 00	155 42	54	53	55	54	59	59	47		
" 14	39 25	151 00	55	54	54	54	57	57	44		
" 15	38 27	148 07	54	54	54	54	57	57	44		
" 16	38 04	144 08	54	54	54	53	56	57	44		
" 17	37 43	140 57	53	53	53	53	56	56	44		
" 18	37 17	139 02	53	53	53	53	56	56	44		
" 19	37 55	138 52	54	54	54	54	57	57	47		
" 20	38 49	138 55	54	54	54	54	57	57	48		
" 21	39 02	138 32	53	53	53	53	57	57	49		
" 22	39 01	137 06	52	53	53	52	57	56	52		
" 23	39 21	134 26	52	52	52	52	56	56	48		
" 24	38 45	130 55	52	51	52	52	56	56	46		
" 25	37 46	129 00	52	52	52	52	56	56	46		
" 26	37 26	127 21	52	52	52	52	56	56	46		
" 27	39 11	127 21	51	51	51	51	55	55	46		
" 28	39 25	127 21	50	50	50	51	55	54	45		
" 29	39 04	125 00	50	50	51	51	54	54	44		
" 30	39 12	124 30	50	50	50	50	53	53	44		
October 1	39 25	124 27	50	50	50	50	53	53	45		
" 2	40 28	124 20	50	50	50	50	54	54	47		
" 3	40 39	123 56	50	50	51	51	54	54	47		
" 4	41 21	121 19	49	49	49	49	54	54	48		
" 5	42 34	118 41	47	47	49	49	54	54	45		
" 6	43 09	118 00	46	46	47	47	51	51	44		
" 7	43 11	116 43	47	46	47	47	53	53	45		
" 8	43 00	113 56	44	44	44	44	53	53	43		
" 9	42 47	111 05	45	44	46	46	53	53	42		
" 10	42 51	107 39	44	44	45	45	52	52	42		
" 11	42 29	103 23	44	44	46	46	52	52	39		
" 12	41 39	99 56	44	44	46	46	51	51	42		
" 13	41 26	96 11	44	44	45	45	52	52	42		
" 14	40 54	92 46	44	44	45	45	52	52	42		
" 15	40 48	88 55	44	44	45	45	52	52	47		
" 16	40 49	85 00	44	44	45	45	52	52	46		
" 17	39 42	82 49	44	44	45	45	52	52	46		
" 18	37 40	79 17	45	45	46	46	52	52	47		
" 19	36 09	77 11	46	46	47	47	52	52	48		
" 20	35 08	75 00	47	47	48	48	53	53	53		
" 21	33 48	72 14	48	48	49	49	54	54	53		
" 22	49	49	51	51	55	55	57	At Valparaiso.	

Heavy S.W. gale—could not open pipes.

Valparaiso, 23rd October, 1896.

ROBERT JONES,
Master of ship "King David."

X.

Letter from the Master of the "Bracadale" to Mr. Doddmeade, Co-operative Coal Company.

Mr. Doddmeade, Co-operative Coal Company,—

Dear Sir,

San Francisco, Cal., 27 November, 1896.

I enclose with this a note of changes in temperature of the coal cargo shipped by you on the above vessel in August last. You will note that the temperature practically never exceeded that of the outside air, and this in spite of being shipped under what some regard as unfavourable conditions, the larger part having been drenched by torrents of rain while in transit from the pit and during shipment. I have never been quite able to accept the view that wet promotes combustion, and this instance should strengthen me. I believe we must seek elsewhere for the cause of heating of coal cargoes. You will note that I have only given five-day intervals; the daily readings seemed unnecessary.

You would perhaps like to make this public.

Yours truly,
H. YOULDEN,
Master "Bracadale."

Date.	Coal Temperature.		Outside Air Temperature.
	No. 2 Hold.	No. 2 Hold.	
Aug. 17.....	57	59	59
" 22.....	62	62	60
" 27.....	64	64	65
Sept. 1.....	66	65	62
" 6.....	65	64	64
" 11.....	65	65	65
" 16.....	66	66	68
" 21.....	73	73	76
" 26.....	77	79	78
Oct. 1.....	79	79	79
" 6.....	81	81	82
" 11.....	81	81	82
" 16.....	82	82	82
" 21.....	79	79	79
" 26.....	79	77	71
" 31.....	85	77	69
Nov. 5.....	86	76	68
" 10.....	75	72	67
" 24.....	67	69	58

Arrived at Frisco.
At anchor in Bay.

H. YOULDEN,
"Bracadale."

Y.

On the 17th November I inspected the operation of loading the ship "Frances Fisher" at Newcastle with the assistance of Harper's coal distributor. The "Frances Fisher" is a three-masted steel ship, capable of carrying a cargo of about 2,200 tons of coal; and the coal in this instance was supplied by the Wallsend Colliery.

The distributor was suspended by hooks and chains from the coamings of the main hatch, but owing to the size of the machine, and the position of the fixed vertical iron ladders at the ends of the hatchway, it was found impossible to raise the saddle of the distributor level with the coamings of the hatch. Moreover, the jib of No. 7 hydraulic crane, by which the loading was done, was not sufficiently long to allow of the hopper-wagons containing the coal being lowered through the hatchway on to the saddle of the distributor. The coal was therefore subjected to a fall of several feet on to the distributor when the bottoms of the wagons were opened, and this caused the production of a considerable amount of small coal, in addition to what had already accumulated in the wagons.

The "Frances Fisher" is provided with open 'tween decks, but the cross (steel) beams interfered considerably with the fixing of the distributor, and it was found impossible to extend the side-shoots of the latter under the 'tween decks. The coal was consequently here subjected to a further drop, equal to the height of the lower hold, with a corresponding increase in the production of smalls. Owing to the jib of the crane being too short, the wagons were discharged at one side of the cone which projects from the saddle of the distributor, and, under these circumstances, the cone not only failed to perform the function for which it was designed, but rather aided in the smashing of the coal.

The machine is rather unwieldy, and to this must be attributed the fact that two hours and twenty-five minutes were required to fix it in position.

The coal fell in heaps, both forward and aft of the main hatchway; and as these heaps increased in dimensions and assumed a conical form, the large coal rolled towards the fore and after hatchways, into the wings of the ship, and also into the space under the main hatchway. The distributor, therefore, has an advantage in that it does not produce a cone containing much smalls directly under the main hatch; but on the other hand, it is evident that it produces two such cones, one forward and the other abaft the main hatch. It may be that the coal was not quite so much broken as it would have been if dropped from the wagons without the assistance of the distributor, still, I have no hesitation in saying that there was more smashing of coal than there should have been in view of what is claimed for the machine.

EDWARD F. PITTMAN.

Sydney, 18th November, 1896.

Z.

Sir E. Leader Williams to the Agent-General.

Coal Shipping Appliances.

Dear Sir Saul Samuel,

"Grand Hotel," London, W.C., 3 March, 1897.

I have your letter and enclosure of yesterday's date.

In my opinion Lewis and Hunter's coal shipping appliances at the Roath Dock, Cardiff, which I have known for some time, and which were again carefully inspected by me when working a fortnight ago, are a most efficient arrangement of coal tips, and I consider they give the best known results in diminishing the amount of breakage while loading.

I have only this afternoon been able to get the information required to enable me to give you the cost of the cranes and their accessories.

The

The best and cheapest arrangement is to work the cranes in pairs, as it saves cost of additional accessories and provides for a loading berth 300 feet long. On this basis, two 18-ton movable hydraulic coaling cranes, with the necessary accessories, would cost, including packing and delivery F.o.b. English port, fourteen thousand eight hundred and seventy-nine pounds (£14,879).

The above estimate is exclusive of railway approaches, weighing machines, and the necessary engines, boilers, accumulators, and mains requisite to supply the necessary hydraulic power to work the cranes.

I trust this information will enable you to reply to the telegram, copy of which you enclosed with your letter. I hope to send you my report on Friday morning.

I remain, &c.,

E. LEADER WILLIAMS.

Sir E. Leader Williams to the Agent-General.

Coal Shipping Appliances.

Dear Sir Saul Samuel.

"Grand Hotel," London, 4 March, 1897.

Referring to your letter of the 2nd instant, and my reply of yesterday's date, I beg to report further on Lewis and Hunter's arrangements for shipping coal as used by the Bute Docks Company at their Roath Dock, Cardiff.

The shipments of coal at the Bute Docks, Cardiff, last year amounted to 7,690,205 tons, and in order to deal with such a great export efficiently, the Docks Company and their predecessors have from time to time spent large sums of money in putting down the then best-known means of shipping coal at their docks.

This resulted in their adopting, in the year 1887, the system of Lewis and Hunter, which has worked with so much satisfaction to the trade that they prefer that their vessels should wait to load at those tips rather than go to others, even though of modern date.

I have inspected these cranes several times, more particularly on the 18th February last, when I tested their working with a view to this report.

To give quick dispatch to steamers necessitates loading coal at several hatchways at the same time; and as the hatchways vary in their relative position to each other, only movable coal tips can comply with this requirement. On this system a number of cranes can be employed together, with the great advantage of loading a vessel at various points simultaneously, thus keeping the ship on an even keel.

The vessel under this arrangement does not require moving during the time of loading, and therefore no interference is caused to other ships that are moored adjoining at the quay. The advantage of a fixed quay berth enables import cargoes to be discharged from any hatchway while coal is being shipped at other points.

The result of using several cranes together on one vessel is obviously to give rapid dispatch, enabling steamers to be loaded at the rate of 300 tons per hour, or even quicker if necessary.

The waggons from the collieries are brought first to the dock storage sidings, and then to lines of railway at right-angles with the side of the quay; they are not dependent on fixed points and turntables as is usually the case. The cranes are capable of lifting 18 tons, and work on independent lines of rails of a gauge of 21 ft. 4 in., allowing two lines of railway of ordinary gauge to pass under the opening of the under structure of the crane.

On the upper part of this structure the crane is fixed, and works with a range of from 20 to 40 feet. The crane has a simple but effective derrick motion, which, in common with propelling it along the quay, hoisting, turning, and working the valves at the bottom of the carrying box, is all accomplished by hydraulic power—from 750 lb. to 800 lb. pressure.

Hydraulic capstans are provided, which bring the waggons to the tip-ups, of which there are three to each crane. Hydraulic power then tips the waggon, and the coal is passed with only a small average fall of 2 ft. 6 in. into the carrying boxes, which are of various sizes, the smaller being for bunkering purposes, and the largest (10 tons) for loading.

The crane lifts the box when filled and lowers it into the hold of the steamer until the box is close to the last coal deposited, when by means of the cone valve at the bottom of the box the coal can be deposited in any required position.

This arrangement at the bottom of the carrying box enables the coal to be spread over a wider area in the steamer's hold, expediting and equalising the loading, and diminishing the amount of trimming.

The different sizes of the coal are more uniformly mixed than when it is tipped in the ordinary method in a central heap, when the largest pieces of coal gravitate down the sides of the heap to the bottom of the vessel.

The advantage in the non-breakage of coal deposited by Lewis and Hunter's arrangement, as compared with the old system, is obvious. In some descriptions of coal the gases liberated by breakage form a source of considerable danger to the vessel, and in any case breakage diminishes the value of the coal.

Whether judged from the point of view of rapidity of loading, convenience of working, or maintaining the full value of the coal by non-breakage, I consider Lewis and Hunter's coal shipping appliances the best arrangement now in use.

I have, &c.,

E. LEADER WILLIAMS.

AA.

Secretary, Royal Commission on Coal Cargoes, to the Principal Under Secretary.

Sir,

14 December, 1896.

I am directed to request that you will be so good as to ask the Crown Solicitor to kindly favour this Commission with his opinion on the following point, viz. :—

Under the provisions of Act 45 Vic. No. 6 (Navigation Law Amendment) there is a system of inspection whereby ships are inspected so as to prevent overloading. Is it competent for the Government to extend the inspection to the trimming of the cargoes in the case of coal-laden vessels.—

- (1) In New South Wales owned ships?
- (2) In British ships?
- (3) In foreign ships?

I have, &c.,

WALTER WILSON,
Secretary.

The following letter from the Crown Solicitor was forwarded to the Commission by the Principal Under Secretary in reply :—

Sir,

Crown Solicitor's Office, Sydney, 7 January, 1897.

I have the honor to return herewith the papers numbered as in the margin relative to the question whether the Government can extend the inspection of ships under 45 Vic. No. 6 to the trimming of cargoes in the case of coal-laden vessels, forwarded for my opinion.

Sections 6 and 20 of the "Navigation Law Amendment Act of 1881" do not authorise the inspection of ships so as to prevent overloading.

A survey is authorised by those sections to be made only where the overloading has taken place, in which case the ship may be provisionally detained by order of the Marine or a local Marine Board, or, where there is no such Board, a Police Magistrate, and thereupon the Marine or a local Marine Board may appoint a person to survey the ship, and report thereon to the Board.

The present system of inspection to prevent overloading not being authorised by statute, it follows that the inspection cannot be extended to the trimming of cargoes in the case of coal-laden vessels.

I have, &c.,

GEO. COLQUHOUN,
Crown Solicitor.

The Principal Under Secretary.

BB.

BB.

COMPARISON of Shade Temperatures with Surface Temperatures of Coal (depth 3 or 4 inches) in the Small-coal Hopper, Wallsend Colliery.

Date.	Hour.	Shade Temperature.	Surface Temperature of Coal	Date	Hour.	Shade Temperature.	Surface Temperature of Coal
27/12/96 Sunday. Cloudless.	10·0	95·6	° Fah. 135·4	30/12/96 Wednesday. Cloudy.	9·30	74·1	° Fah. 95·4
	10·30	97·0	132·4		10·0	73·4	97·6
	11·0	94·4	134·4		10·30	73·4	100·4
	11·30	96·8	134·6		11·0	77·4	99·8
	12·0	100·8	136·6		11·30	78·0	111·2
28/12/96 Monday. Cloudless. Hot wind.	10·0	100·0	113·4	31/12/96 Thursday. Generally Cloudless.	9·30	78·6	95·4
	10·30	100·8	115·6		10·0	77·4	103·5
	11·0	103·0	116·8		10·30	79·0	107·8
	11·30	105·2	119·2		11·0	82·0	108·4
	12·0	105·2	122·4		11·30	83·6	109·4
	12·30	106·4	123·8		12·0	82·4	113·0
	2·0	107·4	131·0		12·30	83·4	117·5
	2·30	107·8	132·6	1/1/97 Friday. Cloudless	9·30	92·4	108·6
	3·0	107·0	133·0		10·0	96·2	111·4
	3·30	108·2	133·2		10·30	97·4	110·7
	4·0	107·4	133·2		11·0	98·2	120·2
4·30	106·8	133·1	11·30	101·0	119·7		
5·0	104·2	135·0	12·0	101·6	127·6		
5·30	102·6	132·6	12·30	88·5	112·4		
29/12/96 Tuesday. Cloudy at times.	9·0	79·0	96·8	2/1/97. Cloudless.	9·30	81·6	95·5
	9·30	77·4	100·4	10·0	84·2	99·6	
	10·0	79·4	102·8	10·30	87·0	104·0	
	10·30	82·4	102·2	11·0	88·4	109·6	
	11·0	82·2	110·2	11·30	86·6	111·4	
	11·30	83·4	115·8	12·0	86·8	114·6	
	12·0	82·2	118·8	12·30	88·6	119·8	
	12·30	80·6	120·2				

CC.

Summary of conclusions of the English Royal Commission appointed to inquire into the Spontaneous Combustion of Coal in Ships, 1876.

1. That certain descriptions of coal are intrinsically dangerous for shipment on long voyages.
2. That the breakage of coal in its transport from the pit to the ship's hold, the shipment of pyritic coal in a wet condition, and, especially, ventilation through the body of coal cargoes, conduce to spontaneous combustion, even though the coal may not be unfit for conveyance on long voyages.
3. That spontaneous combustion in coal cargoes would be less frequent if regard were had by shipowners and underwriters to these facts.
4. That when coal is being carried on long voyages the temperature in the various portions of the cargo should be tested periodically by thermometer, and registered in the log.
5. That, with a view to guard against explosion, free and continuous egress to the open air, independently of the hatchways, should be provided for the explosive gases, by means of a system of surface ventilation, which would be effective in all circumstances of weather.
6. That in order to make known the descriptions of coal liable to combustion, the Inspectors of Mines should be instructed to hold inquiry into all cases of spontaneous combustion occurring in cargoes of coal taken from their respective districts, exporters being required always to record on their specifications the denomination of the coals forming the cargo.
7. That no additional legislation with reference to the conveyance of coal by sea is required, unless for the purpose of giving effect to our proposals with regard to the inquiries by Inspectors of Mines, and to the fuller specification of coal entered outward at Her Majesty's Customs.

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DD.

ABSTRACTS AND TRANSLATIONS OF LITERATURE CONSULTED ON THE SUBJECT OF THE COMMISSION'S INQUIRY.

- (1.) Trans. Inst. Naval Architects, 1890, Vol. 31, p. 204: "The Spontaneous Ignition of Coal Cargoes;" and Journ. Socy. of Arts, 1892, Vol. 40, p. 352: "The Spontaneous Ignition of Coal and its Prevention." By V. B. Lewes.

From 1875 to 1883, 57 coal-laden vessels were known to be lost from spontaneous ignition of their cargoes, whilst during the same period 328 were missing from unknown causes, a large percentage of these losses being undoubtedly due to heating.

These, again, formed but a very small percentage of the cases in which the cargoes heated and fired, but in which the vessels were saved.

Influence of carbon in producing heating.

The least absorbent coal will take up one and a quarter times its own volume of oxygen, whilst with some coals more than three times their volume of the gas is absorbed.

The absorption is very rapid at first, but gradually decreases, and is influenced by temperature.

Mentions well known case of ignition of charcoal during grinding.

Air dry coal absorbs oxygen more quickly than wet coal.

Action of the bituminous constituents of the coal.

The absorbed oxygen begins to combine first with the carbon and hydrogen of the bituminous portions.

This activity increases with rise of temperature.

The effect of rise of temperature can be realised from the effect which it has in the ignition of oily waste or rag.

Mineral oils do not produce this effect.

It may be days before the rise of temperature becomes sensible, but when a sufficient temperature is reached the oxidation proceeds with remarkable rapidity, and in a few hours the point of ignition is reached and the mass bursts into flame.

Cotton, greasy with boiled linseed oil, ignited in 1 hour 15 minutes when kept at 54° to 76° C.

With olive oil the cotton ignited in 5 hours, at the same temperature; at a rather higher temperature the ignition was much more rapid.

Spontaneous ignition is not due to the exudation of heavy oils from bituminous coal.

Action of pyrites.

Considers that the pyrites theory is dead.

If the air is dry the pyrites undergoes but little change at ordinary temperatures, but in moist air it rapidly oxidises.

Some coals most prone to spontaneous combustion contain only eight-tenths of 1 per cent of pyrites, and rarely more than 1½ per cent. It is clear that this cannot be the only cause of ignition.

Pure iron pyrites is largely used commercially, and when free from carbonaceous matter may be kept in a state approaching to powder in heaps containing many hundred tons, and although undergoing continual oxidation, the author had been unable to trace a single case of heating, much less of a rise of temperature which would approach the igniting point of coal.

Whenever pyrites is mixed with finely divided carbonaceous matter, heating and ignition is of frequent occurrence.

The igniting point of various kinds of coal, as determined by the author, is as follows:—Cannel coal, 370° C.; Hartlepool coal, 408° C.; Lignite, 450° C.; Welsh steam coal, 477° C.

Considers that Richters under-estimates the effect of pyrites, in that he does not take account of the fact that under certain circumstances sulphur may be liberated, and the igniting point of sulphur is only 250° C.; so that the presence of free sulphur would lower the igniting point of the coal by considerably over 100°; in addition to this, of course, the pyrites causes the disintegration of the coal.

In same paper, read by the author in 1892, the following is inserted:—"Under certain conditions the oxidation of masses of pyrites first gives rise to the formation of ferrous sulphate and sulphur dioxide, with liberations of sulphur, and my early experiments led me to believe that, inasmuch as sulphur has an igniting point of 250° C., this free sulphur might play an important part in the action by lowering the point of ignition. Later experiments, however, show that this could only take place with large masses of pyrites undergoing oxidation, and that with the amount present in coal, if the air were present in sufficient quantity to oxidise the pyrites, the small trace of sulphur liberated would be oxidised to sulphur dioxide at temperatures as low as 60° C. This oxidation of sulphur at low temperatures is not a generally known action, but my experiments show that it takes place with considerable rapidity."

Notes the disintegrating process of carriage on the railway:—

"The coal first shot into the vessel, by reason of the distance which it has to fall, is broken down into small lumps, and having to bear the impact of the succeeding load falling upon it from a height rapidly becomes powdered into slack, whilst the succeeding loads falling in on the cone so formed get more or less broken down, so that by the time the cargo is all taken in a dense mass of small coal is to be found under the hatchway, and it is invariably at this point that heating takes place, as the large surface exposed fresh to the air by the breaking down of the coal causes rapid absorption of oxygen and consequent rise of temperature. This sets up chemical combination between the oxygen absorbed by the coal and the hydro-carbons and coal brasses.

"The combination of the brasses with oxygen causes the swelling of the oxidised mass and splitting up of the coal, fresh surfaces are exposed, and more absorption of oxygen takes place, and the igniting point of the sulphur-vapour and sulphur compounds distilled out of the pyrites is reached, and rapidly raises the temperature to the igniting point of the coal. It is only in cases where large quantities of dense coal-brasses are present that this latter action can take place, as in the ordinary case, where 1 or 2 per cent. only of pyrites are present, the sulphur-vapour distilled out from the pyrites is oxidised to sulphur dioxide at temperatures far below the point of ignition of sulphur-vapour, and in such cases the heat of absorption and oxidation of the bituminous portions of the coal is amply sufficient to raise the temperature to the requisite 400° to 500° C."

Quotes

Quotes statistical results of English Royal Commission, as to influence of size of cargo and destination. A most important cause of spontaneous combustion appears to be the exposure of ships to the heat of the tropics:—

"A well-loaded cargo of any coal would be safer than a cargo of Welsh steam coal in which a quantity of dust had been produced during loading.

"The idea that the percentage of pyrites present is any indication of the liability to spontaneous combustion must be entirely discarded, as experiment shows that many coals poor in pyrites frequently ignite, whilst others rich in them are perfectly safe.

"A much surer guide is to be found in the quantity of moisture present in an air-dried sample of coal, which is a sure index to the absorptive power; the higher the amount of moisture held by the coal after exposure for some time to dry air, the greater will be its power of absorption for oxygen, and the greater, therefore, its liability to spontaneous heating and ignition."

The chief causes of the firing of coal cargoes are the following:—

1. Increase in tonnage of the cargoes.
2. Shipping through the tropics.
3. The kind of coal of which the cargo consists.
4. Size of the coal; small coal being more liable to spontaneous ignition than large.
5. Shipping coals rich in pyrites whilst wet.
6. Ventilation of the cargo.
7. Rise in temperature in steam colliers, due to introduction of triple-expansion engines and high-pressure boilers. (Illustrated by some statistics).

Recommendations.

1. The coal should be as large as possible, free from dust, and with as little "smalls" as can be helped. It should contain when air-dried not more than 3 per cent. of moisture. (In his later paper he advances this very tentatively: "My own experience, however, leads me to think that if air-dry coal does not contain more than 3 per cent. of moisture, and when powdered and heated to about 250° F. in an oven for three hours, does not increase more than about 2 per cent. in weight, it may be looked upon as a safe coal to store in bulk.")
2. No coal should be shipped to distant ports until at least a month has elapsed since it was brought to the surface a the pit's mouth. Every precaution should be taken to prevent breaking up of the coal whilst being taken on board and on no account must any large accumulation of fine coal be allowed under the hatchways. When possible, the coal should be shipped dry, as external wet, by producing oxidation of the pyrites, causes disintegration.
3. Precautions to be taken on board coal-laden ships:—The coal compartments should be made gas-tight. When the coal has been taken in it should be battened down, and the hatches should not be again opened until the vessel reaches her destination, the only ventilation allowable being a 2-inch pipe just inserted in the crown of each coal compartment and led 12 feet up the nearest mast, the top being left open. This would be quite sufficient to allow free egress to any gases evolved by the coals, but would not allow undue access of air.

Recommends that alarm thermometers be introduced into the body of the coal.

Also that carbonic acid should be compressed at a pressure of 36 atmos. and condensed in steel bottles, which should be distributed amongst the coal. The bottles to be closed by fusible metal plugs.

100 cubic feet of gas can be condensed in the liquid state in a steel cylinder 1 foot long and 3 inches diameter, and it has been shown that a ton of coal contains air spaces equal to about 12 cubic feet; therefore, one of these cylinders would have to be put in for every 8 tons of coal, and these would be distributed evenly throughout the cargo.

It is no use to pour water on the top of a fired cargo, because the fire is generally near the bottom of the mass of coal. The most effective way to apply water would be to have four 3-inch pipes laid along the floor of the coal compartments, about 6 feet apart; these tubes having a $\frac{1}{2}$ -inch hole bored in the upper side every foot or so, and each pair of pipes coming through the bulk-head and connecting on to two 6-inch pipes passing through the side of the vessel, the sea water being prevented from entering by means of screw-valves. As soon as the alarm thermometer gave notice that heating had reached a dangerous point, these valves could be opened and the lower portion of the cargo drenched with salt water. This, evaporating rapidly, would give large volumes of water-vapour, which, passing up through the heated coal, would lower its temperature, but would not be nearly as effective as the carbonic acid method before advocated.

To prevent the heating and ignition of stores of coal on land, and ready for use in bankers, recommends the dressing of the coal with a little tar or tar oil.

Acknowledges indebtedness to Richters, the English Royal Commission, and Mr. Martels.

Discussion.

Prof. F. Elgar said that from 1875 to 1883, more than one-third of the lives lost on over-sea voyages from ships of 300 tons measurement and over, registered in the United Kingdom, were lost from coal-laden vessels.

With regard to the missing vessels, knew the difficulty that might arise from the fine coal and dirt choking the pumps when there was water in the hold of the ship, and the ship had perhaps a heavy list in consequence, so that the pumps could not be properly worked, and the vessel readily cleared and righted.

Between the years 1881 and 1883, there were twenty-three known losses of vessels from spontaneous combustion of coal, but only one of these was a steamer. A good many of the other vessels were built of wood. The effect of age and deterioration upon these old vessels may, therefore, in some cases, be accountable for their loss.

Suggests that one cause of heating in old wooden ships is the impossibility of keeping holds dry.

With the addition of the 23 vessels referred to, 86 coal-laden vessels were known as having foundered or were missing. Out of these 86, 33 were steamers, and out of the 33 steamers, 24 went down with all hands, so that it is not possible to know with certainty how the losses occurred.

With regard to the nine steamers, whose loss formed the subject of inquiries, it is known that none of them were lost from spontaneous heating.

Under the American law, all ships registered in the United States are obliged to be fitted with steam pipes throughout their holds, for the purpose of extinguishing fire.

Mr. E. Eckersley, Inspector of Machinery in the Navy, said his experience was that moisture was one of the great causes of loss at sea. One of the practical rules at the Admiralty was that you must not put your coal into the ship during wet weather.

Another practical question was that if you buy coal from your merchants, and there is 10 per cent. of water in it, instead of about 4 per cent., which is the ordinary thing, you pay a very large percentage for water, and that percentage will increase as the price of coal goes up; and if there is 10 per cent. in some of the coals which we buy abroad,—say in China, at £5 per ton—an enormous amount of money is spent on that which is really injurious.

Professor Lewes in reply.

As far as the absorption of oxygen goes, you find that moisture stops it to a very great extent, but there is no doubt that moisture makes the pyrites crumble up the coal and so exposes a larger surface; and you also find that moisture, when the coal has already got in its oxygen, may aid the action by bringing about closer contact between the oxygen and hydrocarbons of the coal, and under those conditions there is no doubt, as Professor Elgar has stated, that the moisture, after the occlusion of the oxygen has taken place, would be a distinct drawback.

With regard to the use of steam-pipes, considers it better than pouring water on top of the coal.

Mr. Stromeyer raised the following point: Why does not the rise in temperature of the coal cause the occluded gas to escape?

Lewes, in reply, admits that the problem is curious; but says that when the temperature rises the oxygen combines with the coal, so that the coal loses its store of oxygen, and it can then begin taking in fresh oxygen, and, therefore, though the tendency of a rise in temperature by itself is to cause the gas to be ejected, still, as a secondary result of a rise of temperature, namely, the conversion of oxygen into carbonic acid, the possibility of more absorption of oxygen is set up.

In the paper of 1892, Professor Lewes took advantage of the earlier one, to include some of the information collected on the firing of coal in bunkers, and it is noted that the temperature of the coal varies very considerably in regard to its proximity to boilers and the air channel round the funnel casing.

As to the liability of certain coals to heating, it is also said that "up to the present time the action has been so little understood that no such differentiation was possible; but with a clear conception of the causes which lead to heating, it should be quite possible to do so."

NOTE.—The general opinion expressed during the discussion of Professor Lewes' paper in 1890 was that his advice as to the preparation of the coal for loading was good, but that his carbonic acid scheme was impracticable.

(2.) Metallurgy: Fuel. By John Percy (1875).

Does not consider that moisture increases the absorption of oxygen, but it does increase the disintegration of pyrites.

It appears, from the experiments of Richters and Reder, that when there is no rise in the temperature of coal piled in heaps and left exposed to the air during nine or twelve months, it undergoes no sensible change in any respect, and that, on the other hand, when the coal becomes heated, it suffers precisely the same kind of change as was found by Richters to be effected in coal by heating it in contact with atmospheric air to a comparatively low temperature, namely, loss of carbon and hydrogen by oxidation, and increase in the absolute weight of the coal owing to the fixation of oxygen.

Richters' results quoted and discussed.

Richters found that the absorptive action of coal upon oxygen is very much greater when it is first mined.

The following table shows results of Richters' experiments:—

TABLE showing the Changes which take place in Coal, when it is heated to from 70° to 80° C., in contact with Atmospheric Air, and with Moisture.

Treatment to which the Coal was subjected.	Chemical Composition of the Coal per cent. calculated exclusive of Ash.			Ash per cent. in the Coal.	Per 1,000 parts by weight of Carbon.		Calorific power of Ash-free substance of the Coal.	Increase per cent. in—		Decrease per cent. in—	
	Carbon.	Hydrogen	Oxygen and Nitrogen.		Disposable Hydrogen.	Non-disposable Hydrogen.		Weight.	Oxygen.	Carbon.	Hydrogen.
I. (a) Before heating	82.90	5.25	11.85	5.70	45.48	17.85	7,922	...	...	...	...
(b) After heating in a water-bath during 14 days from 70° to 80° C.....	81.94	5.06	13.00	5.37	41.92	19.83	7,741	1.01	1.28	0.13	0.14
(c) After heating during 14 days in a water-bath, but during the day kept constantly moist	82.02	5.09	12.80	5.59	42.42	19.63	7,762	0.98	0.17	0.08	0.11
II. (a) Before heating	84.44	5.07	10.49	2.90	44.52	15.49	8,084	...	...	...	...
(b) After heating, as in No. 1 (b)	83.49	4.85	11.66	2.90	40.37	17.73	7,842	0.25	1.20	0.74	0.21
(c) After heating moist, as in No. 1 (c)....	83.81	4.90	11.29	2.91	41.63	16.75	7,893	0.14	0.82	0.52	0.16
III. (a) Before heating.....	90.73	4.25	5.02	0.87	39.92	6.92	8,508	...	...	...	...
(b) After heating, as in No. 1 (b)	88.80	4.07	7.13	0.31	35.82	10.02	8,201	0.20	2.12	1.76	0.16
(c) After heating moist, as in No. 1 (c)....	89.01	3.96	7.03	0.28	34.60	9.89	8,183	0.45	2.04	1.32	0.27

Nos. I and II were caking coals, but No. III was non-caking (Sandkohle), and did not yield coke, properly so called.

The caking power of No. I (a) being estimated at 1.4, that of No. I (b) was 1.4

The caking power of No. II (a) being estimated at 2.0, that of No. II (b) was 1.6

Nos. I (b, c), II (b, c), and III (b, c), did not sensibly differ from Nos. I (a), II (a), and III (a), respectively, either in the yield of coke or specific gravity.

The calorific value of Nos. I (b), II (b), and III (b), was reduced by about 2.62 per cent., 3.61 per cent., and 3 per cent. (2.28 per cent., 3 per cent., and 3.61 per cent.), respectively.

The coals operated upon by Richters were all from the carboniferous system in Silesia, and had previously stood for a long time in a loosely covered vessel.

Richters found that the quantity of oxygen absorbed by different coals, under the same conditions, is proportionate to the quantity of water which they absorb. He states, also, that from his own oft-repeated observations, sunlight lessens or retards the absorption of oxygen by coal.

"The oxidation of the organic substance of coal by atmospheric air appears to be generally impeded rather than promoted by the presence of moisture, if we admit that the results recorded in the last table under the head of 'Decrease per cent. in Carbon and Hydrogen, suffice to justify a conclusion on the subject, for in every instance, except one relating to hydrogen at the bottom of the last column on the right, less of those elements was oxidised by contact with atmospheric air in the moist than in the dry state. But, on the other hand, the oxidation of iron pyrites in coal by atmospheric air is favoured by moisture, if, indeed, moisture be not absolutely essential to that action at ordinary temperatures. Richters found that coal poor in sulphur absorbed less oxygen in the moist than in the air-dried state, and, on the contrary, that coal rich in sulphur absorbed less in the air-dried than in the moist state."

Ferrous sulphate is the first product of such oxidation, and this is gradually converted into ferric sulphate.

As shale, which consists largely of silicate of alumina, is intermixed with coal, the atmospheric oxidation of iron pyrites in the latter may give rise to the formation of feather-alum, a double sulphate of iron and alumina.

No coal in Great Britain is more liable to such ignition than the Ten-yard or Thick coal of South Staffordshire.

It is to be noted that this Ten-yard coal, which formed the subject of Percy's inquiries, contains only a small proportion of iron pyrites, usually not more than is equivalent to a half per cent. of sulphur.

"It was reserved for Richters to substitute fact for opinion, and to demonstrate by experiments, which, in my (Percy's) judgment, are conclusive, that, generally, the spontaneous ignition of coal is due to the heat developed by atmospheric oxidation of the organic substance of coal, and not to that resulting from the oxidation of iron pyrites."

(3.) Dingler's Poly. Jour., Vol. 239, 1881. "On the Spontaneous Combustion of Coal." By H. Hädicke, of Hagen.

Quotes Richters' papers in 1868-9-70, and his results.

Mentions the influence of pyrites in breaking up the coal, and traces the chemical changes which occur during the oxidation of pyrites.

Points out that the decomposing pyrites may act as a carrier of oxygen to the coal.

Describes long series of experiments made by author by passing pure oxygen over coal and over pyrites at a high temperature.

Notes that in pure oxygen pyrites catches fire at a temperature about 200° C.

Prepared his material by taking small coal and impregnating it with ferrous sulphide.

When the coal was tested alone it caught fire at from 260° to 300° C.

Experiment works if you use atmospheric air as well as if you use a mixture of steam and oxygen.

Using pure sulphate of iron the temperature of 200°C. was sufficient to produce lively combustion.

It appears from these experiments that sulphur plays the same part in the combustion of coal as it plays in the combustion of matches. It is satisfied with a lower temperature of ignition in the coal.

Mentions that coal in which small quantities of pyrites are finely distributed is more liable to spontaneous combustion than other coal.

Some speculation as to the role played by moisture in conjunction with pyrites on the spontaneous combustion, but this speculation is not supported by any facts.

Mentions that ventilation of coal cargoes has been found to be dangerous.

Also found that oily rags and similar matters sometimes placed in coal bunkers and holds form a source of danger.

- (4) Dingler's Polytechnisches Journal, vol. 247, 1883. "On the Spontaneous Combustion of Coal." (Abstract from the Comptes Rendus de la Société de l'Industrie Minérale, 1882, p. 66.)

Quotes Fayol. The temperature of ignition of dusty material is as follows:—Lignite, 150° C. : gas coal, 200° C. ; coke, 250° C. ; anthracite, over 300° C.

After heating pyritic coal at 200° C for four hours the coal had taken up 6 per cent. of oxygen, and the pyrites only 3½ per cent.

Made following experiment:—900 g. of powdered coal and 3,350 g. of powdered pyrites were heated together in same vessel, but in separate dishes. As the temperature rose to 150° C. they behaved equally, but the pyrites remained unaltered at this temperature while the powdered coal rose in temperature rapidly until in a few hours it spontaneously inflamed.

When heated above 200° C. the coal took fire in forty minutes.

Further experiment showed that addition of pyrites in no way increased the spontaneous combustion of the coal.

Large masses of coal were apparently free from heating.

- (5.) Transactions of the Fed. Inst. of Min. Eng., vol. 3. Paper by W. F. Clark and H. W. Hughes, on "The South Staffordshire Coal Field, &c.—Spontaneous Combustion," p. 45.

Three agencies at work—oxidation of organic constituents, iron pyrites, and pressure.

Iron Pyrites.

Influence merely indirect by raising temperature through oxidation and assisting in disintegration of coal.

Oxidation of Organic Constituents.

Refers to Richters as having proved the direct oxidation.

Absorption of oxygen is favoured by heating, moisture, fine division, and absence of light. (?)

Action of Crushing.

Small amount of heat generated; coal ground small and hence rendered more liable to direct oxidation.

As against the view that oxidation of iron pyrites is the primary agent in producing combustion, notices the fact that the "sulphur" coal of the South Staffordshire coal-field, which contains large quantities of iron pyrites, never takes fire spontaneously.

States it is in seams most free from iron pyrites that spontaneous combustion takes place.

Bituminous coal is more liable to spontaneous combustion than other varieties.

- (6.) Trans. Fed. Inst. Min. Eng., 1892, vol. 3, p. 789. "The Causes of Spontaneous Combustion of Coal, and Prevention of Explosions on Shipboard." By M. V. Jones.

In order to prevent the disintegration and trituration of the coal into small dust, and thereby to lessen the liberation of the hydro-carbon gases, and so to minimise the danger of explosion from the ignition of the gases and the formation of material for oxidation and spontaneous combustion, the author proposes that ships should be divided by a fore and aft bulkhead dividing the ship longitudinally in two halves, together with four or six transverse bulkheads. The idea is that in this way the rolling of the cargo of coal will be reduced.

The writer expresses an opinion in favour of the absolute necessity of careful stowage of cargo in smaller divisions in the hold, and consequently to prevent the formation of dust and gas by the disintegration of the coal.

Discussion.

Professor J. H. Merivale considers that Fayol had conclusively proved that the spontaneous combustion occurred among the small coal and not among the large coal.

With reference to the division of the cargo, Professor Merivale thought that was a matter of importance and a step in the right direction, but he was inclined to think that the depth of the bulk of the coal had a good deal to do with the matter, and if any great advantage was to be obtained from reducing the size of each separate compartment, the depth should be reduced as well as the breadth and width. The great depth produced crushing and consequent heating, and this would occur equally whether the breadth and width were small or large.

(Nothing of great importance contributed either in the paper or discussion.)

- (7.) Trans. Fed. Inst. Min. Eng., vol. v, 1892-3, p. 10. "Spontaneous Combustion in Coal Mines." By Joel Settle.

The paper and discussion deal entirely with gobfires and their prevention.

- (8.) Trans. Fed. Inst. Min. Eng., vol. v, 1892-3, p. 392. "The Spontaneous Combustion of Coal." By Herbert W. Hughes.

Conclusions similar to those in paper by the author, in conjunction with W. F. Clarke, vol. 3.

Refers to Mr. Durand as the only writer of recent years known to him, who attempts to prove that pyrites plays the most important part in promoting spontaneous ignition.

Quotes Richters, Leves, Percy, and Fayol.

Fayol determined order of inflammability as (1) lignites, (2) bituminous coals, (3) caking coals, and (4) anthracite.

"Fayol proved by experiments that when the size of the particles was 1 centimetre, the powder of lignite, bituminous coal, caking coal, and anthracite ignited at 400° C., but that when the size of the dust particles was reduced to ½ millimetre, combustion took place in the three former classes at 200° C. but not with anthracite. With particles of the last-mentioned size, bituminous coal ignited at as low as 150° C., and lignites at 100° C. When in the state of impalpable powder, he was able not only to ignite lignites, but also several varieties of the free-burning bituminous coals at a temperature of 100° C."

Soft, black, sooty coal is far more liable to fire than that of a harder nature.

Maximum effect of iron pyrites in disintegrating the coal and producing a slight rise in temperature is exerted when it occurs in the form of a dark amorphous powder finely disseminated through the coal.

Coals most liable to spontaneous combustion are the highly oxygenized semi-bituminous varieties, containing a large proportion of moisture.

(9.) Trans. Fed. Inst. Min. Eng., vol. iv, 1892-3, p. 481. "Spontaneous Combustion in Coal Mines." By Arnold Lupton.

"Any large heap of ordinary bituminous coal is liable to spontaneous combustion—say, one, 10 feet thick, and 30 or 40 feet square. The larger the heap and the smaller the coal, the greater the liability to fire."

A small heap of 3 or 4 tons of slack is likely to take fire in consequence of contact with a hot surface, such as that of a flue or steam pipe.

"It has been found by experiment that in some cases great heaps of shale, containing a large percentage of iron pyrites, have taken fire through the decomposition of the pyrites; but the amount of pyrites in the coal-mines is too slight to have any appreciable effect in heating the coal."

Discussion.

Dr. Bedson thought the influence of iron pyrites must be regarded as of an entirely secondary character, its oxidation and consequent disintegration aiding, inasmuch as this resulted in the increase of surface exposed to the air.

He had succeeded in igniting coal dust at 140° to 150° C.

Mr. Binns said the coals which belonged to the lignite and brown class were very much more liable to spontaneous combustion than bituminous coals in England, and that point was explained by Prof. Clowes, of Nottingham, in a recent lecture, in which he said the moisture in coal was a large and important factor in this relation.

He believed the first ignition was caused by certain hydrocarbons in the coal, which took fire at very low temperatures.

Mr. Smith believed the character of the roof had a great deal to do with gobfires, and he thought they were induced by a bind roof.

(10.) Instn. of Civil Engineers, 1890, vol. 101, p. 129. "The Barry Dock Works." By John Robinson.

Barry Dock is situated on the north shore of the Bristol Channel, between Barry Island and the mainland, 7 miles south-west of Cardiff, and 31 miles east of Swansea.

Contains a description of the hydraulic coal tips employed at the Barry Dock for the purpose of loading ships with coal.

High-level Tips.

At the commencement of shipping, an anti-breakage box is suspended at the end of the shoot from a hydraulic lifting and turning jib-crane, fixed near the top of the iron framing, at one corner next the dock. The coal drops into this box, which is lowered into the hold of the vessel, and emptied by the withdrawal of a bolt from a hinged flap at the bottom. To the bolt releasing the flap-door is fastened a chain fixed on deck, thus making the discharge of the box self-acting. By means of the box, a cone of coal is formed as high as the point of the shoot, so as to avoid breaking the coal by dropping from the shoot into the hold of the vessel. The anti-breakage box is then swung out the way, and the coal allowed to slide from the shoot on to the cone, and into the hold, where it is trimmed. The shoot is tapered towards the point, to check the sliding of the coal, and has a single door across, near the end, for regulating the same; and the butt end is pivoted to give the shoot a somewhat greater range with respect to the hatchway.

On the underside of the shoots, immediately below the screens, are hinged doors to allow of single screening, double screening, or the coal to pass unscreened. As much as 400 tons have been shipped in one hour at one of the high-level tips, in the ordinary course of working.

Low-level Tips.

When commencing to load a ship, the box is filled with coal from the shoot, and lowered into the hold. A cone is thus formed, which both preserves the bottom of the ship from damage and lessens the breakage of the coal.

In all arrangements for tipping South Wales coal, it is most desirable to prevent rapid motion of the coal, or its being dropped from a height, as this description of coal is easily broken, causing considerable loss in its value.

Mr. Robinson in reply to discussion on his paper.

Some of the steam-ships frequenting the Barry Dock were called self-trimmers. They had two large hatchways with feathered wings, and there was not much more to do in the way of trimming coal than levelling down. The carrying capacity of those vessels ranged from 1,200 to 1,800 tons.

The paper contains full drawings and explanations of the method of working the tips, and, together with the discussion, constitutes a most valuable contribution to the engineering of coal loading.

(11.) Trans. Am. Inst. Min. Eng., vol. 4, 1875-6, p. 54. "Fires in Mines: their Causes and Means of Preventing them." By R. P. Rothwell.

Refers to Richters as proving the absorption of oxygen and the formation of carbonic acid and water, while another portion of oxygen enters into an unknown state of combination with the coal and proportionately increases its weight.

It has also been found that the quantity of oxygen absorbed by different coals, under similar conditions, is proportional to the quantity of water they absorb.

Numerous experiments seemed to prove that sunlight always lessens or retards the absorption of oxygen by coal.

Quotes following table from Richters' work:—

Degree of self-inflammability.	Iron Pyrites %	Water %	Character of the Coal.
Class I. Difficultly self-inflam. ..	1. 1.13	2.54	Easily friable.
	2. 1.10 to 3.04	2.75	Very compact.
	3. 1.51	3.90	"
" II. Of medium self-inflam. ..	4. 1.20	4.50	Firm, schistose, bright.
	5. 1.08	4.55	Hard, but very brittle.
	6. 1.15	4.75	Moderately tender.
	7. 1.12	4.85	Outwardly very like (1).
" III. Readily self-inflam.	8. 1.00	9.01	Moderately tender, schistose.
	9. 0.83	5.30	" soft, "
	10. 1.35	4.85	" " "
	11. 0.84	5.52	Not stated. Yielded only 2.5 per cent. of ash. From the same pit as No. 10, but from a different seam, remarkable for its great self-inflammability.

Considers that spontaneous ignition of coal is greatly facilitated by, though not altogether due to, presence of iron pyrites.

The oxidation of iron pyrites splits up the coal and renders it more pervious to oxygen.

Refers to the unfavourable influence of coal dirt, rag, or cotton waste saturated with vegetable or animal oils.

(12-13.) Trans. Am. Inst. Min. Eng., vol. 8, 1879-80, p. 181. "On the Relations of Sulphur in Coal and Coke." By J. P. Kimball. (Paper which should be read by those about to analyse coal.) Followed by a paper on the "Atmospheric oxidation or weathering of coal," by same author.

Quotes Richters as having shown that the absorption of oxygen is in proportion to the available hydrogen present in the coal.

The condensation of oxygen is supposed by Richters to precede the chemical oxidation of the coal, and the amount of oxygen capable of being thus physically absorbed under the same conditions is to be measured by the amount of hygroscopic water which the coal is capable of absorbing after having been dried at 100° C. The

The oxidation of coal was proved to be accelerated by rise of temperature, and a moderate temperature long continued produces the same effect as a higher temperature for a shorter period.

According to Richters, coals possessing the highest power of absorption are those which oxidise most rapidly and evolve the greatest amount of heat.

Author considers Richters underestimated the possible heating effect of the oxidation of pyrites, and expresses a strong opinion of the importance of the pyrites action in heating.

- (11.) *Trans. Am. Inst. Min. Eng.*, vol. 12, 1883-4, p. 317. "On Differential Sampling of Bituminous Coal Seams." By J. P. Kimball, Lehigh University, Bethlehem, P.A.

Refers merely to matters of analysis and methods of sampling coal, which is a matter, it is said, requiring great care.

- (15.) *Chemical News*, vol. 30, 1874, p. 290. "On the Evolution of Heat during the Hydration of Clay-slate, Clay, and Coal." By W. Skey.

Refers to previous paper, dealing with clay-slate alone, in *Proceedings of the N.Z. Inst.*, vol. 4, p. 351. Observed a rise of temperature from 3° to 6° F. by wetting coal.

- (16.) "Fires on Coal Ships: their Causes and Prevention." By J. C. Firth. (Read before the New Zealand Institute, 6th July, 1896.)

This paper is largely compiled from the report of the Government Geologist of New South Wales on the "Knight of St. Michael," and from scientific papers by other writers.

The use of coal distributors for the prevention of the formation of coal-dust under the hatchways of ships is recommended, but no information is afforded in regard to the apparatus.

- (17.) "Spontaneous Combustion and Explosions occurring in Coal Cargoes, &c." By Thomas Rowan.

From a careful examination and comparison of the cases of spontaneous combustion of coal cargoes given in the report of the English Royal Commission of 1876, the author thinks "it is demonstrated that in the majority of cases, ignition has been inaugurated by the oxidation of the iron pyrites, commencing at some particular, although capricious spot; that the heat so generated has gradually accumulated and accelerated the oxidation, and that sufficient heat has been transmitted to start (it may be) carbonaceous oxidation as well: that in the confined conditions of the coal holds, where this had been taking place, the heat so produced has likewise determined, in parts of the cargo, the destructive distillation of the coal, evolving thus products of a highly inflammable and explosive nature; and these actions have often finally culminated in the cargo's suddenly 'bursting out into flames all over.'"

He recommends a system of "abstractors" scattered throughout the coal holds, at different levels, to draw off any gases evolved by chemical action.

- (18.) *Engineering*, 21st August, 1896.

Contains a description and drawings of machinery for loading coal, in use at the Erie Railway Docks of Cleveland, Ohio. The coal passes from a special cylindrical waggon tip through shoots, which, it would appear, enter the hold of the vessel some distance through the hatchways.

Extracts from "Science and Art of Mining," August, 1896, vol. 6, No. 25. (Received from Mr. John Dixon, Government Examiner of Coal-fields.)

Spontaneous Ignition of Coal.

(19.) "Professor Dr. Medem traces spontaneous ignition to the oxidation of iron pyrites, and as no coal is entirely free from this sulphide of iron, the cases the doctor brings under notice become all the more interesting.

"Professor Dr. Medem, in the course of a treatise on the spontaneous combustion of hay and coal, gives the following account of the causes of this phenomenon and methods that have been proposed for its prevention and suppression:—

"The simplest form of spontaneous ignition is exhibited by dry, spongy platinum, and is due to the absorption and condensation of oxygen in the pores of the metal. When exposed to a current of hydrogen gas, chemical combination immediately sets in, raising the temperature sufficiently to ignite the stream of hydrogen.

"In the case of charcoal a pyrophoric tendency is only manifested when some of the volatile hydrocarbons have been left behind in the distillation process and enter into combination with absorbed oxygen. If, however, such charcoal be freely exposed to air, the external portions speedily lose this property owing to the pores becoming saturated with air, but these will regain their pyrophoric character if powdered so that the internal layers are enabled to absorb oxygen.

"As the process of chemical combination only goes on in the interior of a heap, the best way to arrest it is to spread the charcoal out, since attempts at ventilation by blowing or drawing air through the mass will only result in increasing the combustion. Every time the charcoal is broken up the danger of ignition will recur, down to the time it is ground to powder; but the powdered charcoal once "killed" by exposure to air never regains its pyrophoric properties.

"Hard coals, brown coals, and the like are subject to two dangers—explosion and ignition—each having a separate cause. Explosion is due to the liberation of fire-damp following on a decrease in atmospheric pressure, whereas ignition results from the oxidation of the iron pyrites contained in the coal when exposed to the action of oxygen and moisture. The danger is the greater the finer the state of division of the coal, and coal stacked above ground is particularly liable. Attempts made to reduce the danger by ventilating the stacks have failed in this case also, on account of the increased amount of oxygen thereby introduced into the interior of the mass, and accordingly the coal is stacked as tightly as possible in order to exclude the air.

"Strangely enough, the practice of ventilating the coal-bunkers of ships has not been altogether abandoned, notwithstanding Liebig's impressive warning given as far back as 1806, and neglect in this particular has frequently led to lamentable fatalities. Since 1865 no less than ninety-seven coal-laden vessels have been destroyed, and the lives of some 2,000 seamen sacrificed through spontaneous ignition of the cargo."

Moisture in Coal.

(20.) "In a recent paper by R. S. Hale of Boston, on "Determining Moisture in Coal," the author recommended thorough experimental investigation of the matter, and the adoption of some standard method which will be used in testing boilers, and claimed that there were many errors in previous examinations. He cited several tests in detail, and gave the following as his conclusions:—

1. That if we use a large sample we must dry it a long time to dry the interior, and before the interior will begin to oxidise.
2. If we allow lumps to remain in the sample, the lumps will not have lost their moisture when the fine coal has begun to oxidise.
3. If we pulverise the coal, this will of itself cause a certain loss. It has not been thought necessary to experiment on this.
4. If moisture corrections are to be allowed, a standard method should be adopted, giving the method of selecting the sample, the method of crushing the lumps in it, the size screen it must finally pass through, the precautions to be taken if any time elapses between its selection and the moisture determination, the size of the sample on which the determination is finally made, the method, temperature, and time of drying."

- (21.) Lloyd's Rules and Regulations for the Construction and Classification of Vessels.

Examined in connection with the suggestion regarding the alteration of ships' hatchways to enable coal waggons to be lowered down the hold.

(22.) "Etudes sur l'Altération et la Combustion spontanée de la Houille exposée à l'air," H. Fayol, (Bulletin de la Société de l'Industrie Minière). Vol. VIII (2nd Series, 1879.)

M. FAYOL, as Engineer Director of the Collieries of Commentry and Montvicq, has had unusual opportunities for the study of the behaviour of coal on a large scale, and has collected in this paper accounts of a vast number of experiments made on large quantities of material, and hence possessing a quite unique value.

The memoir, of which the following is a very brief abstract, professes to be no less than a complete treatise on all that concerns the coal industry. The first part of the paper is devoted to the study of the alteration of coal when exposed to air at different temperatures. The second part refers to a variety of experiments on the action of gases, water, and various reagents upon coal. The third part deals with a study of the action of heat in the absence of air.

The coal of Commentry, on which the majority of the experiments were made, is a coal used in the manufacture of gas. It comes from a seam free from fire-lamp. The ash content of the coal averages about 7 per cent., but as the coal is not very homogeneous, the maximum and minimum ash contents are 15% and 5% respectively. The impurities are (1) clay, (2) sulphate of lime, (3) pyrites. The content of pyrites is on an average less than 1 per cent., but in special samples it may rise to 5 per cent. The colour of the ash is white or grey. The slack produced at the mine is converted into coke, and the coke ovens afforded the desired opportunity for maintaining large quantities of coal for experimental purposes at various high temperatures. The slack contains in the main from 12 per cent. to 13 per cent. of ash, which is reduced by washing to about 7 per cent. The washed slack gives 62 per cent. to 63 per cent. of coke, which is sufficiently hard to be employed in high furnaces.

Besides the coal of Commentry, a large number of other coals were examined by M. Fayol. These samples were obtained from other collieries in France, from England, and from Germany.

Experiments on the action of air at different temperatures.

This is probably by far the most extensive series of experiments that has ever been made upon this subject, extensive not only in the number of samples examined, but in the length of time during which the samples were under examination. The examination was extended to the following points:—

- (1.) The change of weight of the coal.
- (2.) The coking power.
- (3.) The agglomerating power.
- (4.) The gas-making quality.
- (5.) The illuminating property of the gas.

Complete series of experiments were made on thirteen samples of coal.

With regard to change of weight, each sample was examined for 240 days at temperatures of 50°, 100°, 200°, and 400° C.

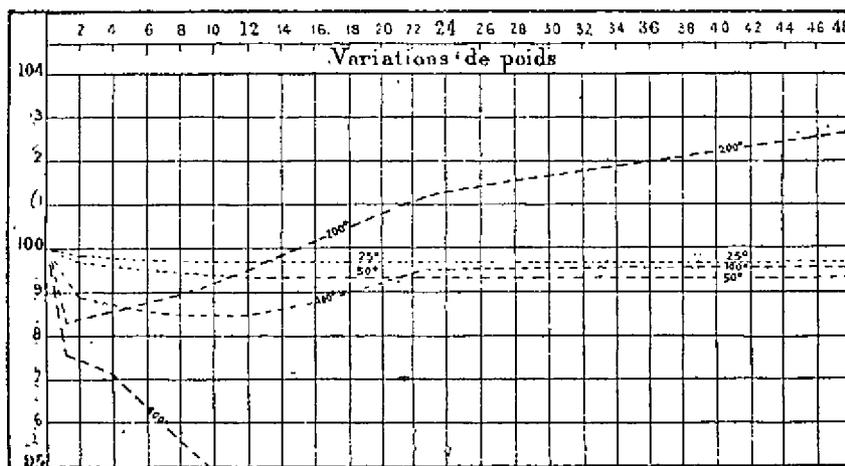
The coking power was examined over a period of 240 days and after exposure to temperatures as above, and similarly with regard to the other observations.

The results of this enormous work are illustrated by a number of diagrams which make the history of each sample singularly clear and complete. It is impossible to do justice to these researches in this abstract, and we must limit ourselves to a consideration of the summary of results obtained, which appears in M. Fayol's paper under the title of Article 3.

Under the action of air between 25° and 400° C. all the coals examined behaved in a similar manner as to change of weight—(1) They began by losing a small portion of their weight; (2) they soon recovered this and often attained a weight considerably exceeding the initial weight; and (3) finally, after a certain time, at the upper temperatures, the weights began to diminish again and to then go on decreasing indefinitely. The losses and increments of weight are not the same for all coals; but the nature of the coal has no sensible influence on the time history of the variations. We find that anthracites, gas coal, and lignites appear in the same class. The state of division of the coal has a considerable influence on the change of weight. These changes are produced in proportion more slowly as the coal is presented in larger fragments. The temperature plays the chief part in these changes. Each of the three periods indicated above is in proportion shorter and in proportion more strongly marked as the temperature becomes higher. There is an extraordinary parallelism of the effect of air upon all the samples of coal examined, so much so that these effects may be represented by a "general diagram."

These results may be illustrated by the following diagrams —

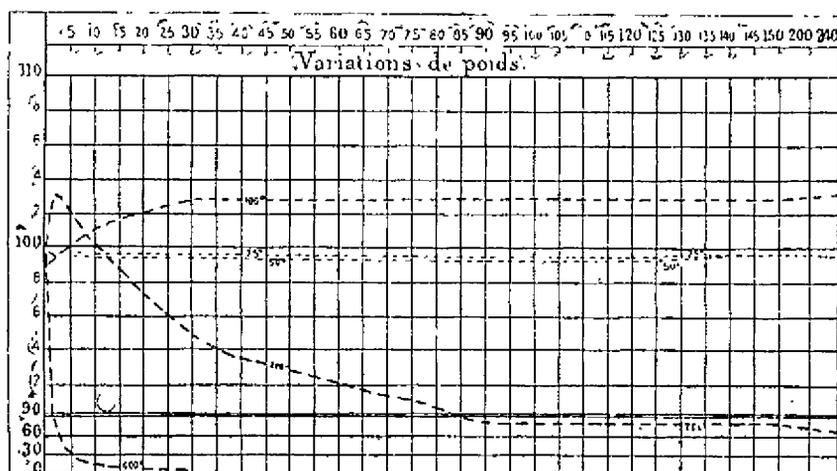
Mean of the whole of the results obtained with all the coals examined (in powder).



Ordinates: Weights on any arbitrary scale.
Abscisse: Time in hours.

Mean

Mean of the whole of the results obtained with all the coals examined (in powder).



Ordinates. Weights.
Abscissa: Time in days.

The following summary taken directly from M. Fayol's paper will give an idea of the phenomena observed:—

	Temperature of the air.				
	25° C.	50 C.	100° C.	200° C	400° C.
<i>First Period</i> —First decrease of weight.					
Maximum loss per cent.	0.53	0.81	1.50	1.60	?
Time at the end of which it took place.....	15 days.	24 hours.	12 hours.	1 hour.	?
<i>Second Period</i> .—Increase of weight per cent. (reckoned from the minimum to the maximum).					
Total increase	0.20	0.20	4.70	5	?
„ time of exposure to air	150 days.	150 days.	240 days.	8 days.	?
<i>Third Period</i> .—Second decrease of weight per cent (after leaving the maximum weight).					
Loss	0	0	0	30	100
Total time of exposure to air	240 days.	240 days.	240 days.	240 days.	15 to 20 days.

The relative inflammability of different kinds of coal was examined in a manner which however is not more particularly explained. It appears that by inflammability is meant the ease with which a fragment of coal can be set on fire by being placed in the flame of a candle, and the freedom with which the coal will continue to burn when withdrawn from the candle. The samples are classified in ten classes between "Bog-head," whose inflammability is denoted by 10 and anthracite, whose inflammability is denoted by 0. This property, in M. Fayol's opinion, is of great importance in determining the liability of coal to spontaneous combustion. It appears that at 400° C. every kind of coal loses in a few minutes its inflammable properties; at 200° C. this property will remain almost unimpaired during five to seven days, after which it diminishes rapidly; at a temperature of 100° C. the inflammability is not sensibly impaired, in a time less than one and a half to two months, and it entirely disappears only at the end of about four months. "Bog-head" shows an extraordinary resistance in this respect.

There is a remarkable parallelism between the luminosity of the gas obtained from various samples of coal, and the inflammability of pieces of these samples. In order to set coal on fire it is not always necessary to put it in contact with flame or with a body in ignition. On many occasions coal which was exposed to air at 200° to 400° C. took fire spontaneously.

Summary of the effects produced by air upon the physical state of coal.

The colour and appearance of the coal were not changed by keeping it at any temperature up to 75° for a period of eight months. At 100° C., on the other hand, the fragments appear to be gradually converted into cinder at their edges; and at 200° and at 400° C. the change takes place with increased rapidity.

The hardness of coal did not appear to be affected up to a temperature of 75° C. after a year's exposure to air. At 100° C., after twenty to thirty days the friability of the coal increases. After a year at this temperature the coal becomes so friable that the grains may be crushed under the pressure of the fingers; at the same time the structure changes, becoming granular. At 200° C. the same changes occur as at 100° C., but very much more rapidly. At the end of fifteen days the coal becomes converted into dust. At 400° C. the coal is disintegrated and reduced to powder at the end of several hours, if in the meantime it has not melted.

Several observations appear to show that as the weight of the coal increases the density diminishes. The density was measured by preparing a solution of sulphuric acid of the same density as the samples to be examined and then measuring the density of this solution. For a given kind of coal there appears to be a relation between the density and the ash content. We may even utilise this relation to evaluate the relative proportion of ash in similar coals.

Besides coal certain other combustibles were examined, and they all appeared more or less to resemble coal in their behaviour under the influence of air and high temperature.

Chapter 3 refers to various experiments made upon coal, amongst the most important of which are those as to the action of various gases. It appears from these experiments that hydrogen and carbon dioxide have no action upon coal.

Samples of coal were kept for more than two years in water at ordinary temperatures without any sensible change either in the appearance of the coal or in its properties. Oxygen, on the other hand, is rapidly absorbed in a manner which does not appear to differ sensibly from that in which the same phenomenon was observed to occur by Richters. The action of water on coal at high temperatures was also studied. After 100 days immersion in water at from 50° to 90° C., no sensible change was produced. At 100° C. the agglomerating power and the illuminating power were not sensibly impaired; the appearance of the fragments was not appreciably modified. In a sealed tube at 400° C., that is to say at a pressure of 300 atmospheres, the grains of coal became fused into a single piece, which was dense, compact, and had a metallic appearance. The gas produced from this product had no illuminating power.

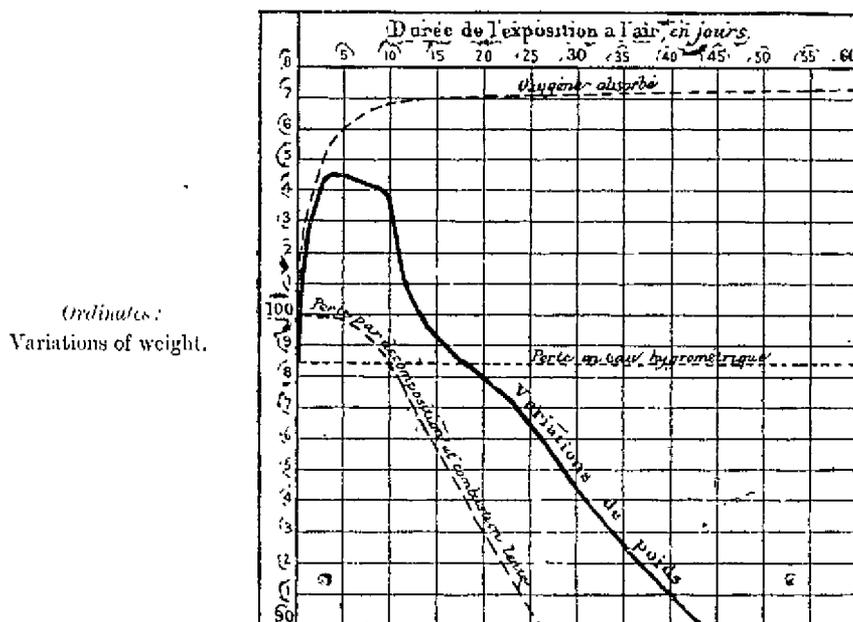
The action of acids may be passed over.

A long series of experiments was made by calcining coal at different temperatures, but as these have no appreciable bearing on the present inquiry, they may be omitted.

We may note, however, that M. Payol considers that the power which a coal possesses of evolving gas is a function of the temperature, and such as to persist even at ordinary temperatures. "Placing some of the Commentry coal in the upper portion of a graduated tube inverted over mercury during a month, I only obtained half a litre of gas per 100 grammes of coal at a temperature of 100° C. At 400° C. the rate of gas liberation was 5 litres in twenty-four hours. At a red heat it was 32 litres in fifteen minutes. The gases liberated, however, have a composition which depends upon the temperature, and may even change completely between the beginning and end of the same distillation."

Chapter 5 contains a summary of the results obtained up to that point. It is noted that when coal is exposed to air it is capable of absorbing a considerable quantity of oxygen, and that this absorption is favoured by high temperature within certain limits; but, on the other hand, a rise of temperature favours the loss of hygrometric water, and also the decomposition and slow combustion of the coal. The increments and diminutions of weight which have been referred to as occurring in coal under various circumstances are the differential result of these different phenomena. An estimation was made of the extent to which the different factors determining the change of weight of a sample of coal influence the final result. This is clearly shown by the diagram.

Coal of Commentry (in powder) exposed to air at 200° C.
Components of the curve of the variations of weight.



The question as to whether oxygen is chemically combined with the coal as opposed to being merely physically absorbed by it is left somewhat undecided. It is, of course, shown that a considerable quantity of oxygen enters into chemical combination, but whether the whole of the oxygen does so is not made very apparent.

The action of pyrites, on the behaviour of coal under the influence of oxygen, was made the subject of special examination, but the previous results were obtained with coal containing only up to 1 per cent. of that substance.

The second part of the paper is devoted to a study of the spontaneous combustion of coal. A great number of observations appearing in this division, being in complete accordance with what is known to everybody interested in colliery matters, may be omitted. With the Commentry coal no spontaneous combustion has occurred with heaps less than 2 metres high; on the other hand, when the height passes 4 metres, spontaneous combustion nearly always occurs. These remarks, of course, apply to slack—that is to say, fragments passing a sieve having holes 20 mm. wide.

In order to study the circumstances attending the spontaneous combustion of coal, experiments were made on large heaps of coal placed under special circumstances; for instance, in order to study the effect of the height; a heap was made 40 metres long and 6 metres high at one end, tapering away to nothing at the other. The breadth at the top was in all cases 1 metre, while the breadth at the base was determined solely by the natural inclination at which the coal would stand.

The following conclusions, amongst others, may be mentioned:—

- (1.) In shallow layers the coal does not heat.
- (2.) Rise of temperature increases with the height of the heap.
- (3.) Towards a height of 3 to 4 metres the temperature rises continuously, and then falls away again without having passed 60° or 70° C.
- (4.) When the heap is 4 metres high, or over, the temperature continues to rise. During the third month steam is generally observed to be given off, after this a colourless but strongly smelling gas makes its appearance, and after several days smoke breaks out from a point which is generally situated about half-way up the slope of the heap. Sectional drawings are given showing the isothermals of the heap at different times. It appears from these observations that the point of highest temperature is situated immediately under the deepest or highest part of the heap and near the ground.

"From whatever part of the mine it comes, whatever may be its ash content, or the nature of the ash, coal piled up in the air heats in approximately the same manner and appears in its heating to follow laws which are approximately constant. Atmospheric influences—cold or heat, drought or damp—have not been sufficiently marked to be sensible."

The inflammability of coal at different temperatures was tested in a long series of experiments, using small volumes of coal and exposing them to the influence of air more or less heated. These experiments were confined to coal in the form of dust, though the receptacles containing the coal were considerably varied. It appears that at 100° C. the gas-making coals took fire in about five hours; at 150° they fired in about two hours; at 200° in about forty minutes; and at 400° C. in as little as one minute. The inflammability of anthracite coals was very much less than of the gas-making coals. For instance, the anthracite from Marias took four hours at 200° C. before it inflamed—that is to say, it is more than four times less inflammable than gas coal, as judged by this criterion. The order of inflammability in hot air of different kinds of coal may be stated as follows:—(1) lignite; (2) gas coal; (3) coking coal; (4) anthracite. This is the same order of inflammability as had already been obtained in experiments made by placing the coal in contact with a flame.

Spontaneous combustion takes place more easily and more rapidly the higher the temperature. At 400° C. all combustibles take fire—lignites instantaneously, anthracites after thirty to forty minutes. At 200° C. anthracites only catch fire in a state of powder; bituminous coal alone catches fire in large vessels. At 150° lignite in dust is the only combustible which fired in each of the three containing vessels employed. At 100° C. lignite alone will fire in large grained powder. The flaming coals only catch fire in impalpable powder. At 75° none of the samples caught fire.

The state of division of the coal has a great influence on the spontaneous combustion. Thus, in fragments of 1 centimetre and over none of the coals took fire except at 400° C. Dust composed of fragments measuring half-a-millimetre took fire at 200° C., except in the case of anthracite. When the coal is in a state of impalpable powder, whether it be lignite or gas coal, it will catch fire at 100° C. Pieces measuring 1 centimetre will not catch fire at 100° C. unless there be several of them. A single piece will not catch fire. On the other hand, a piece measuring 10 centimetres on the side

[did

did catch fire. This latter broke up under the action of the heat, and it was in the cracks, probably in the dust lying in them, that the fire started. At 400° C. the coal broke into flame at the surface of the fragments, or at the surface of the dust in the case of those vessels filled with dust. At 200° C. and below, in the case of dust, the fire did not break out at the surface, but at a depth of 1 or 2 centimetres. A crust is formed at the surface, from which smoke is given off after a certain time, and on breaking through the crust it is discovered that the coal below it is incandescent.

By placing a thermometer in the mass of coal undergoing observation the temperature at various points could be exactly ascertained, and it appears, from many experiments made in this connection, that the following table will represent, with tolerable approximation, the temperature at which the various kinds of coal catch fire:—

Lignite catches fire at about	150° C.
Gas coal	200°
Coking coal	250°
Anthracite	above 300.

Too much weight, however, must not be attached to these numbers, because small quantities of coal are liable to undergo considerable variations of temperature by the operation of trivial causes.

Some interesting experiments were made by heating coal in different states to various initial temperatures, and then placing the samples thus prepared in the air at ordinary temperatures. For instance, slack was heated in a stove to a temperature between 100° and 140° C. This was then exposed to air (under a roof) in a heap measuring from 1 to 1½ metres high, of pyramidal form, and having a volume of about 4 cubic metres. After two days of exposure to air smoke was observed to be given off on the southern side. It came from a depth of 5 to 10 centimetres, and a thermometer thrust into the heap at this point indicated from 265° to 275°. This fire was put out by removing the hot coal. Thirty days afterwards smoke was given off at another point without the heap actually catching fire. The temperature here was 195° C.

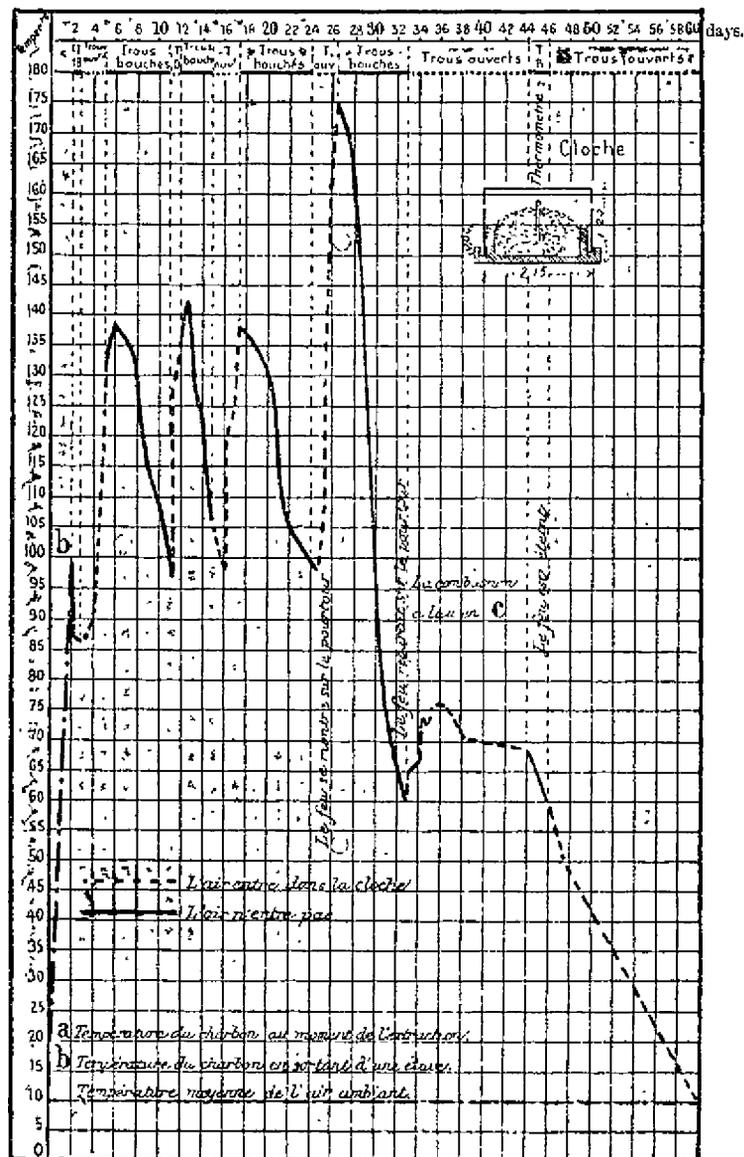
The following conclusions were drawn from the experiments made in this manner:—If a heap is made (in free air) of coal previously heated to a temperature a little above 100° C. fire will break out at the end of a few days. When the initial temperature is between 60° and 100° sometimes there is an increment, sometimes a diminution, of temperature. Below 60° C. the heap always cools to the temperature of the surrounding air.

It must be remembered, of course, that these numbers only refer to heaps containing a few cubic metres.

In all cases spontaneous ignition is preceded by the evolution of a characteristic odour: then yellow smoke appears at a certain point on the surface, generally about half way up the heap. At this moment, in the neighbourhood of the point at which the smoke appears, the temperature is generally from 100° to 150° C.

Perhaps the most conclusive experiment which has yet been made as to the influence of air on the spontaneous combustion of coal was made in the following manner:—A conical heap containing 2 to 3 cubic metres was placed on the ground and surrounded by a ditch which could be filled with water. A cover large enough to surround the heap and fit into the ditch was provided in such a way that the heap could be hermetically sealed from the external air after the manner of a gasometer.

In one experiment the coal was heated to a temperature of about 100° C to commence with. The cover was maintained constantly in position, but certain air holes with which it was provided were alternately opened and closed, and the temperature variations following the opening and closing of these holes were carefully studied. This heap was observed for sixty days, and it will suffice to say that when the holes were opened the temperature rose and when the holes were closed the temperature fell. By leaving the holes open for two days spontaneous combustion was superinduced. The fire was put out by closing the holes and allowing the temperature to fall to 60°.



It appears that this experiment may be performed on a very small quantity of material; even one hectolitre will suffice provided it is initially heated to between 100° and 120° C. The experiment succeeds perfectly with coal in grains from which the dust has been removed. It succeeds fairly well with large and square coal; not so easily with ordinary slack. In this latter case the dust which fills up the interstices between the pieces opposes the penetration of the air.

We have seen that air is necessary for the spontaneous heating of coal. It must not, however, be concluded that the more air the more rapid the spontaneous combustion. Air may influence the phenomena in two ways (1) by supplying oxygen it may favour oxidation and therefore heating (2) by carrying away the heat which is produced it may prevent the temperature rising. It is this last action which prevents the heating of slack exposed to air in thin layers and which also prevents the heating of heaps composed of large fragments. This action is illustrated by several experiments which need not be described.

Influence of Moisture.

The influence of wet weather on coal heaped at the mouth of the mine has not been sufficiently sensible to be remarked.

Several experiments made with the object of estimating the action of moisture have shown that this action either does not exist or is very slight. A large number of heaps measuring from 2 to 12 cubic metres have been made under sheds and in dry galleries. These heaps were composed (1) of slack recently extracted; (2) of coal previously dried in stoves without passing a temperature of 40° C; (3) of the same coal not dried, but watered in order to render it damp though not wet. Every day, during several months the temperature of these heaps of coal was observed, in no case did it pass 50° C. dry or wet. The heaps behaved in a practically identical manner.

It appears to result from these experiments that moisture does not favour the spontaneous ignition of coal.

We know, moreover, that slack which has been washed (for coke making), heaped up in a wet state becomes less altered and less heated than the unwashed slack. Although these results may be attributed to the presence of a smaller proportion of dust in the washed slack, it does not appear to be on that account less evident that humidity does not cause a rise of temperature.

Finally, the rapidity with which coal heated to above 100° C. catches fire, when it must be dry, shows that the presence of moisture is not a necessary condition of spontaneous combustion.

All the facts observed at Commentry appear to indicate that dampness prevents heating rather than favours it. It has, in fact, an action analogous to that of water or neutral gases in protecting the coal against contact with air.

Notwithstanding, there is a strong current opinion that dampness does act as a cause of combustion. It is possible that damp does, in fact, act indirectly by breaking up the coal and so facilitating its reduction to dust, and thereby favouring the action of the air.

An important remark is made as to the susceptibility to spontaneous combustion as affected by the presence or absence of dust. It appears that if the coal is in sufficiently small particles to ensure the requisite relation between the surface and the volume, the presence of dust hinders rather than assists spontaneous combustion. That this must necessarily be the case is obvious, and that it is the case has been observed at Commentry.

It appears that when coal is classified according to its susceptibility to spontaneous combustion the list is the same as that previously given as representing the inflammability of the coal. Thus, lignite is the most susceptible to spontaneous combustion, then gas coal, then bituminous coal, and lastly, anthracite.

Action of the impurities of Coal.

The author considers that pyrites has only a very slight influence on the spontaneous combustion of coal, in support of which opinion he mentions the following experiments:—

- (1.) Coal containing large quantities of pyrites and in small fragments, was exposed to very damp air at a temperature between 35° and 45° C for twelve months. At the end of that time the pyrites began to break up.
- (2.) Observations were made on heaps (containing 5 cubic metres) composed as follows:—One-third part of coal dust, one-half to one-fifth of pyrites, one-fifth to one-half of clay sand. In every case the temperature at the middle of the heap did not pass 50° C, which is the temperature which it would have attained if the heap had been formed of coal only.

The heating of heaps of slack at Commentry does not appear to have depended in any measure on the pyrites content.

Final deductions.

- (1.) That the first essential cause of spontaneous combustion of coal is the absorption of oxygen from air by the coal.
- (2.) That the best conditions for the spontaneous heating of coal are: a mixture of fragments and of dust, a high temperature, a large quantity of coal, and a certain proportion of air.
- (3.) The conditions opposing spontaneous combustion of coal are: storing the coal in large pieces, preserving a low temperature, stacking small quantities, and ensuring either complete absence of air or very effective ventilation.

Means employed to prevent Spontaneous Combustion.

The method formerly adopted to prevent the spontaneous combustion of slack was to ensure that no heap should remain in existence for more than a certain time. Later on attempts were made to prevent the spontaneous combustion of large quantities of slack by ventilation. Experience, however, has shown that although ventilation when excessive is effective, yet in practice whenever an obstruction or an interruption occurs in the ventilating appliances spontaneous combustion occurs much more quickly than if the heap had not been ventilated at all. For instance, in a conical heap of coal 2 metres high, the temperature at the centre of which varied from 120° to 150° C, a fagot was thrust in in such a manner that one end stuck out in the air. At first a slight cooling was produced, but after a short time the temperature again rose and the fagot caught fire in the course of several days. On pulling out the fagot the combustion was stopped, on replacing it by a fresh one the combustion recommenced.

A means more simple and more sure of avoiding spontaneous combustion of coal consists in not allowing the heaps to be very high. During the six years that it has been customary at Commentry to pile the coal in masses not exceeding 2.5 metres, there has not been a single case of spontaneous combustion. The coal, it is true still heats and becomes altered in a certain measure, but it does not catch fire. The temperature at the centre of a heap 2 metres high does not ordinarily pass 40° or 50° C.

A better method of preserving the coal would be to immerse it in water, but any impermeable covering—clay, or very fine powder, or wetted coal-dust—would certainly give excellent results.

Spontaneous combustion on board ship.

M. Fayol generally endorses the conclusions arrived at by the English and Belgian Commissions of 1876, with the following notes and exceptions.

The English Commission considered that certain coals take fire more easily than others. Fayol considers that his experience shows that the most dangerous coals are those which are at once friable and rich in illuminating gas. Experiment has shown that these coals are the most inflammable, and the inflammability may be tested either by the laboratory method indicated in the account of his experiments in hot air, or by holding grains of coal in a flame, or by simply kindling the coal in an ordinary fire-place.

- (1.) The most inflammable coals are the most dangerous, and they are the coals which generally contain the most oxygen.
- (2.) The Commissions have attributed to pyrites and to moisture a great importance (*sic.*) I have proved, on the contrary, that pyrites has only a very secondary action, and that moisture tends to hinder spontaneous heating rather than to help it.
- (3.) The Commissions came to the conclusion that ventilation was disadvantageous. Fayol points out (what is, of course, perfectly well known) that a ventilation can be got sufficiently good to prevent spontaneous combustion. As to whether such a ventilation is practicable on board a ship, he gives no information. He appears to lean rather to the view that a proper treatment is a complete deprivation of air. (4.)

- (4.) It is pointed out that it is quite possible for a small portion of a cargo of coal to become so hot as to distil off inflammable gas without the coal at the surface or the sides being appreciably high in temperature. It is clearly necessary, therefore, that some means should be adopted for removing explosive gases thus formed.
- (5.) Fayol considers that water in the liquid or vapourous state is preferable to carbon dioxide as a means of putting out fire.

"I have had many opportunities of observing how difficult it is to extinguish large masses in flames. A small quantity of water increases the combustion instead of extinguishing it, in consequence of the property which incandescent coal has of decomposing water. The free hydrogen and the oxide of carbon, resulting from the decomposition of the water, catch fire, burn and develop much heat."

The rest of this long memoir is taken up in the consideration of the application of the principles above laid down to colliery practice.

- (23.) "Note sur les Incendies dans les Houillères," by M. Durand, Engineer of Mines, at Doyet, Allier. (Bulletin de la Société de l'Industrie Minérale) Vol. XII (2nd Series, 1888.)

The object of this paper, coming four years after M. Fayol's publication, abstracted above, is not exactly clear. M. Durand, however, considers that Fayol did not take into account sufficiently the action of pyrites, but after a lengthy discussion on this matter, he finally admits that the chief cause of fire is the absorption of oxygen. It appears, therefore, hardly profitable to follow him in his reasoning in favour of the action of pyrites, especially as his conclusions, which are practically unsupported by fresh experiments, are matters of opinion rather than anything else.

M. Durand undoubtedly shows that pyrites, alum schist, &c., can be caused to heat spontaneously. This, however, is not the question at issue. The idea that pyrites may play an important role in the spontaneous combustion of coal by the inflaming of sulphur liberated during the decomposition of that substance, appears to have originated with M. Durand. That this is the case is likely enough, but M. Durand offers no experimental evidence of the catching fire of coal from this cause.

- (24.) "Incendies dans les Houillères," précédés employés pour les prévenir et les éteindre." Notes by M. Nesterowsky, Engineer in the Russian "Corps des Mines." (Bulletin de la Société de l'Industrie Minérale) Vol. VII (2nd Series, 1878.)

M. Nesterowsky visited a large number of French mines in order to inquire into the method of working them, in the interests of the Russian Government. His conclusions are those to which any intelligent engineer would have been led, and he does not appear to add anything to what had been previously established.

[Translation.]*

- (25.) "On some alterations which coal undergoes by heating"; by Dr. E. Richters, Chemist in the Mining School of Waldenburg. (Dingler's Polytechnisches Journal, Vol. 190, page 398, December, 1868.)

Through the comprehensive and interesting researches of Fleck, Stein, Grundmann, Varrentrapp, Sauerwein, and others, the attention of chemists has been directed in modern times in an increased degree to the study of coal, and more particularly to the circumstances which determine its greater or less suitability for different technical purposes; I hope, therefore, the following account of observations on this subject may not be without interest.

If we heat at a temperature of from 180° to 200° C. coal powder which has been previously dried in a desiccator until its weight becomes constant, an increase in weight soon becomes apparent. For instance, according to the experiments which I have hitherto made, after heating for twelve hours the weight may increase by several per cent.; in twenty hours the increase of weight has reached its maximum, and any further heating then produces a diminution in weight. Coal which has gained in weight resembles unheated coal in little more than in appearance. The differences between heated and unheated coal are:—(1) The heated coal has a greater specific gravity than the unheated; (2) the chemical constitution is different; (3) heated coal differs entirely in its behaviour when heated to a red heat from ordinary coal; (4) the coal which has been heated abstracts moisture from the atmosphere much more freely than the normal variety.

With regard to (1) and (2), reference may be made to the table of analyses which accompanies this communication.

The heated coal, as I shall call it for convenience, gives no coke when heated in a crucible, even in the case when the coal was originally of an excellent coking variety. The alterations which its appearance undergoes by heating to a red heat are so inconsiderable as to be almost unnoticeable. If coal is quickly heated it foams up in an extraordinary manner, very similar to the manner in which silicic acid which has been separated from silicates by acids will foam up when carelessly heated. The gases which are given out, carrying with them particles of carbon, burn with a non-luminous flame. If the coal is heated in a closed crucible until the evolution of gas has entirely ceased, then any farther heating, if not too long continued, only produces a very small diminution of weight.

Under dry distillation the products at first obtained cause litmus paper to turn permanently red. The coal behaves in this respect like wood, or like turf or brown coal. Alkaline vapours are only given off later on during the distillation. The formation and separation of tar does not take place.

When two grammes of heated coal were exposed in an open watch-glass, first for fourteen and then for thirty-six hours, to the not very damp air of the laboratory, the increase of weight amounted, in the first instance, to 3.3 per cent., and in the second to 4.8. Exposing these samples for fifteen minutes in a drying oven heated to 105° C. caused the original weight to be recovered in both cases. The same coal, previously dried in a desiccator, experienced an increase in weight amounting to 1.3 and 1.8 per cent. during fourteen and thirty-six hours respectively.

If we compare the chemical composition of coal which has been dried in a desiccator with that of the heated coal, it appears that the latter has lost considerable carbon and hydrogen, but has gained considerably in oxygen (and nitrogen?). It appears, therefore, to be certain that by the process of heating a portion of the carbon and hydrogen disappear, and oxygen is taken up. The further question then arises as to whether the two first-named elements go off together as hydrocarbons, or whether they are previously oxidised to carbon dioxide and water; and, further, whether oxygen is simply condensed upon the coal by surface action, or whether it becomes chemically united with it. In order to answer the first question, 2 grammes of coal were taken and placed in a V-shaped tube, and this was brought into a drying oven in such a manner that the two free ends of the tube stuck out through the lid of the oven. (The coal used in this experiment was obtained from the 21st level of the Carl-George-Victor mine in Waldenburg). One limb of the tube was connected through drying tubes containing sulphuric acid, soda lime, and chloride of calcium, with the gasometer; the other end of the tube was connected with tubes containing chloride of calcium and soda lime. I heated this coal for 10 hours to 190° C., and during this time kept up a slow stream of air through the tubes. The result was that the weight increased by 4.21 per cent. The following table will show the result of this experiment:—

Coal dried in the desiccator.	Heated coal.	104.21 parts by weight of the heated coal, containing, consequently.
86.82 per cent. C.	82.19 per cent. C.	85.65 parts C.
4.26 " H.	3.38 " H.	3.52 " H.
6.40 " O. (& N)	11.96 " O. (& N) .	12.47 " O. (& N.)
2.52 " Ash.	2.47 " Ash.	2.57 " Ash.

The coal accordingly lost by heating .74 per cent. of hydrogen and 1.17 per cent. of carbon. On the other hand, it gained 0.07 per cent. of oxygen. The water which made its appearance in the chloride of calcium tube weighed .118 grms., corresponding to .66 per cent. of hydrogen. The increase in weight of the soda lime tube was 0.092 grms., corresponding to 1.25 per cent. of carbon. The result of this experiment is to show that by heating the coal in air there is complete oxidation of the hydrogen and carbon which it loses.

*We desire to thank Dr. Helms for assistance in preparing this translation. We believe that this is the first time that Dr. Richters' work has been translated as a whole, though it has been frequently referred to and quotations from it made (especially by Percy—"Fuel.")

The next question is as to whether the oxygen in the coal is mechanically condensed upon it or whether it is chemically united with it. Certain circumstances appear in favour of the former, and others of the latter, hypothesis. In favour of the former view, it may be mentioned that the heated coal when dipped into water gives off a great many more bubbles than unheated coal, and also in the first stages of heating in the crucible we have a vigorous evolution of gas. On the other hand, the abovementioned behaviour of coal by heating, the strong acid reaction of the product of dry distillation and the considerable increases of specific gravity, make it probable that oxygen becomes chemically fixed in the coal. I hope to make further experiments on this subject, and in settlement of the question as to whether the nitrogen of the atmosphere has anything to do with the matter.

With regard to the following table and data therein contained I must make the following remarks:—The samples of coal "a," "b," and "c," coming from the 4th, 23th, and 24th levels of the Carl-George-Victor Mine at Waldenburg, were heated for twelve hours at the same time. The increases of weight were 4.24 per cent., 4.45 per cent., and 4.07 per cent., respectively. The samples of coal "d," "e," and "f," coming from the 6th, 3rd, and "B," level of the Gustave Mine at Waldenburg, were heated for twenty hours. The increases of weight of these samples were 4.62, 3.92, and 3.24 per cent., respectively. During a further heating of five hours duration, after which analysis was made, the samples of coal had fallen in weight,—“d” by .67 per cent., “e” by .63 per cent., and “f” by .77 per cent.

The term "red hot residue," used in the table, applies to coal which had been heated until the gas evolution had completely ceased, and refers, of course, to the substances then left behind. This residue appears to be constant since its oxygen content increases with that of the heated coal.

The specific gravities were determined by a pyknometer at a temperature of 19° C.

Coal.	Chemical composition of the dried coal.				Chemical composition of the heated coal.				Weight of residue obtained on raising the heated coal to a red heat	Composition of red hot residue.				Specific gravity of dried coal.	Specific gravity of heated coal.
	C.	H.	O. & N.	Ash.	C.	H.	O. & N.	Ash.		C.	H.	O. & N.	Ash.		
a	84.69	3.97	5.38	6.01	78.44	2.62	13.50	5.44	77.4	88.23	1.25	3.52	7.00	1.327	1.495
b	84.03	3.57	7.10	5.30	78.14	2.72	13.62	5.52	77.5	88.04	1.23	3.60	7.13	1.319	1.496
c	86.99	4.26	4.97	3.78	77.98	2.55	14.28	5.19	78.1	90.67	1.15	3.64	4.54	1.280	1.479
d	81.52	4.34	10.44	3.70	72.66	2.39	21.93	3.02	61.54	89.10	0.65	5.72	4.53	1.288	1.469
e	82.12	4.64	10.88	2.36	74.32	2.82	20.75	2.11	68.52	91.77	0.83	4.40	3.00	1.275	1.453
f	79.59	4.74	10.75	4.92	70.84	6.63	21.50	5.03	67.59	87.03	0.90	5.46	6.61	1.299	1.471

(26.) "Contributions to our knowledge of the relations of coal and oxygen"; by Dr. E. Richters. (Dingler's Polytechnisches Journal, Vol. 193, page 51, July, 1869.)

In vol. 190, page 398, of this journal, Part I, December, 1868, I have drawn attention to certain peculiar alterations which coal undergoes when kept for some time at from 180° to 200° C. It was shown in that article that powdered coal heated to the abovementioned temperature begins by taking up oxygen, and losing carbon dioxide and water, but the weight of the oxygen so taken up is greatly in excess of the carbon dioxide and hydrogen which evaporate, so that the net result is a very considerable increase in weight. I noted further that the increase in weight reaches its maximum after about twenty hours heating. This is, however, only true for coal of that composition, which, in the communication quoted is denoted by the letters "d," "e," and "f." The increase in weight appears from my farther researches to depend in general in an inverse proportion upon the oxygen content of the coal. A coal which contains 4.81 per cent. of oxygen, which is a very small quantity, after seventy-two hours continuous heating, gained in weight by 8.45 per cent.

The contents of my former communication is besides importantly supported by a later communication by Hindrichs, which, at the same time, and as I think, entirely completes it.

I allowed powdered coal which had increased in weight by heating to remain for forty-eight hours under the bell-glass of an air-pump exhausted down to 22mm mercury pressure. This powdered coal maintained its weight, including the increase of weight, a proof that I had to do with true oxidation, and not with mere absorption. The former observations made me think that oxidation processes, similar to those occurring on the heating of coal, would take place at ordinary temperatures, but, of course, more slowly. Varrentrapp has shown (D. V. J., vol. 178, p. 375), that coal absorbs oxygen at ordinary temperatures, and that it gives off carbon dioxide at higher temperatures. Since one of the processes taking place when coal is heated will go on by itself at ordinary temperatures, and under normal circumstances, it appeared probable that the other, namely, the absorption of oxygen without the formation of carbon dioxide, would also take place at ordinary temperatures, most probably, however, more slowly and gradually. This then would lead to the conclusion that coal by lying a long time in the air would become altered in a manner similar to the manner in which it is rapidly altered by heating.

I have carried out sixteen experiments on samples of coal of different quality which aimed at the determination of the absorption of oxygen at ordinary temperatures. In these experiments I made use of two forms of apparatus, the one consisting of a glass tube open at one end, and capable of being closed at the other by means of a tap; and the other of an apparatus which has already been constructed and described by Dietrich for the conduct of volumetric gas analysis, and more particularly for the determination of carbon dioxide. In the glass tube, containing 50 to 75 c.c., a weighed quantity of coal of known specific gravity was introduced and packed tight by means of a small asbestos stopper. The open end of the tube was then dipped below mercury, and the tap at the upper end allowed equilibrium to become established between the external and internal pressure. After standing for one hour, during which the temperature of the room had remained constant, the tap was closed, and the volume, temperature, and height of barometer were noted. When using Dietrich's apparatus (the capacity of which was previously ascertained, and of which the lead condensing worm was replaced by a glass tube) the flask intended for an evolution of gas was employed as a receptacle for the coal. I will give a detailed account of three of the abovementioned experiments, partially because they were continued for the longest time, and partially because the earlier experiments had made me aware of several sources of error which afterwards I was able to avoid.

- (1) Experiment made with the Dietrich apparatus—Using 50 grms. of powdered coal from the Jacob level of the Theresien shaft, which had been lying in a loosely-stoppered bottle exposed to the air of the laboratory for two months, the following results were obtained:—

4 May, Morning, 10 o'clock, beginning of experiment. Vol. 218.2 c.c. at 15.75° C. and 717.3 mm. barometric pressure (= 194.8 c.c. under normal conditions).

4 May, Evening	218.5 c.c. at 15.75° C. and 715.1 mm. (= 194.4 normal c.c.)
5 " Morning	209.6 " 12.50° " 724.1 " = 190.0 "
5 " Evening	212.0 " 15.75° " 724.1 " = 191.0 "
6 " Morning	208.6 " 13.00° " 720.7 " = 188.8 "
6 " Evening	212.2 " 15.25° " 715.0 " = 189.0 "
7 " Morning	210.4 " 14.75° " 715.0 " = 187.8 "
8 " Morning	210.8 " 18.00° " 715.0 " = 186.0 "
8 " Evening	212.6 " 21.00° " 717.3 " = 186.2 "
10 " Morning	201.4 " 16.00° " 721.8 " = 180.8 "
10 " Evening	207.0 " 21.50° " 720.7 " = 181.9 "
11 " Morning	202.0 " 18.00° " 717.3 " = 178.8 "

It appears, therefore, that in 168 hours—that is, seven days—16 c.c. of gas, measured under standard conditions, were absorbed. In order to show that the gas which had been absorbed was only oxygen, 6 c.c. of a solution of pyrogallic acid in concentrated alkali was brought into the calibrated tube after the rubber tube which closed the upper portion had been opened. The rubber tube was then immediately closed, and the solution was distributed as well as possible by moving one tube in and out of the other. The volume, after it had remained standing for twelve hours, was read. The residue and the air confined in the tube, reckoned as atmospheric air, should have contained 24.9 c.c. of oxygen, but 23.1 c.c. was all that was absorbed. The experiment can make no great pretensions to accuracy, but sufficiently serves its purpose.

(2) Experiment in the calibrated glass tube and with 20 grms. of coal powder from the Robert level of the Theresien shaft. This sample had been dried in a desiccator and until its weight remained constant, and then been immediately removed into the slightly-warm tube through which, until it was cold, a gentle stream of dried air was passed:—

Commencement of experiment, 23 May, 12 o'clock midday. Volume of air 37 c.c. at 19° C. and 726.8 mm. pressure = 33.1 normal c.c.

24 May, Morning	35.0 c.c. at 17.00° C. and 726.8 mm.	= 31.5 normal c.c.
24 " Evening	34.8 " 17.00° " 726.8 "	= 31.3 " "
25 " Morning	34.2 " 17.00° " 725.2 "	= 30.7 " "
25 " Evening	34.2 " 17.50° " 722.9 "	= 30.6 " "
26 " Morning	33.8 " 17.00° " 718.4 "	= 30.1 " "
26 " Evening	34.2 " 19.00° " 716.2 "	= 30.0 " "
27 " Morning	33.3 " 18.00° " 718.4 "	= 29.5 " "
27 " Evening	33.3 " 21.00° " 721.8 "	= 29.4 " "
28 " Morning	32.5 " 18.75° " 724.1 "	= 28.9 " "
28 " Evening	32.6 " 20.00° " 724.1 "	= 28.9 " "
29 " Morning	32.2 " 19.05° " 724.1 "	= 28.6 " "
29 " Evening	32.2 " 20.50° " 721.8 "	= 28.4 " "
30 " Morning	31.6 " 19.50° " 724.1 "	= 28.1 " "
31 " Morning	30.2 " 19.00° " 724.1 "	= 26.9 " "
31 " Evening	30.1 " 18.50° " 722.9 "	= 26.8 " "
1 June, Morning	29.8 " 17.25° " 725.2 "	= 26.4 " "
2 " "	29.3 " 16.00° " 729.7 "	= 26.5 " "

From this date the volume remained constant. The original 33.1 c.c. of air contained 6.95 c.c. of oxygen, from which 6.6 c.c., or 95 per cent., had been absorbed.

(3.) Experiment with the calibrated glass tube and 20 grms. of coal powder from the Carl level of the Theresien shaft. The air was saturated with moisture during the whole period of the experiment.

Commencement of the experiment, 22 May, 9 o'clock morning. Volume of air = 60.6 c.c. at 19.75° C. and 722.3 mm. pressure = 52.4 normal c.c.

22 May, Evening	60.0 c.c. at 19.00° C. and 722.3 mm.	= 52.1 normal c.c.
23 " Morning	58.4 " 17.50° " 726.8 "	= 51.4 " "
23 " Evening	58.2 " 17.50° " 726.8 "	= 51.2 " "
24 " Morning	57.2 " 17.00° " 726.8 "	= 50.5 " "
24 " Evening	57.2 " 17.00° " 726.8 "	= 50.5 " "
25 " Morning	56.4 " 17.00° " 725.2 "	= 49.7 " "
25 " Evening	56.5 " 17.50° " 722.9 "	= 49.4 " "
26 " Morning	56.0 " 17.00° " 718.4 "	= 48.8 " "
26 " Evening	56.6 " 19.00° " 716.2 "	= 48.8 " "
27 " Morning	55.4 " 18.00° " 718.4 "	= 48.1 " "
27 " Evening	55.4 " 21.00° " 721.8 "	= 47.6 " "
28 " Morning	54.1 " 18.75° " 724.1 "	= 47.1 " "
28 " Evening	54.3 " 20.00° " 724.1 "	= 47.2 " "
29 " Morning	53.8 " 19.50° " 724.1 "	= 46.7 " "
29 " Evening	53.8 " 20.50° " 721.8 "	= 46.4 " "
30 " Morning	52.8 " 19.50° " 724.1 "	= 45.9 " "
31 " Morning	51.9 " 19.00° " 724.1 "	= 45.2 " "
31 " Evening	51.7 " 18.50° " 722.9 "	= 45.3 " "
1 June, Morning	51.4 " 17.25° " 725.2 "	= 45.2 " "

Of the 11 c.c. of oxygen which were contained in the original volume of air, 7.2 c.c. were absorbed. A further absorption followed, as the three last columns show. There was then no further absorption. (Compare Experiment 2.)

Similar results were obtained when air saturated with moisture was employed instead of dry air. However, under the influence of moisture there was a considerable evolution of carbon dioxide, which was not to be expected when dry air was employed.†

Observations were in general made at a quarter-past 8 o'clock morning and evening—that is to say, they were separated from one another by twelve-hour intervals, and after the temperature of the room had remained during at least one hour fairly constant, or had, at most, only varied $\frac{1}{2}$ ° C.

However inclined one may be, from the small differences between the readings of the morning and of the evening of any given day, to conclude that no absorption goes on during the day time, it appears to me still to be doubtful whether my observations allow this position to be taken up with security.

This conclusion will be evident if it be remembered that, although considerable quantities of gas were employed, the settlement of this question depends upon the correct determination of fractions of a cubic centimetre, in addition to which there were a number of other sources of error, which appear sufficient to account for the difference between the results obtained in the evening and morning in another manner.

I may mention (1) that during the day the temperature was continually changing; (2) the high coefficient of absorption of coal for radiant heat obviously affects the temperature of the air in the apparatus, and so may cause a difference of temperature between the latter and the air in the room, amounting perhaps to about 1° C. The influence of this upon the result may be considerable, as may be verified by anyone who will make the calculation.

It is remarkable that at the beginning of an experiment, even when this occurs during the daytime, a very appreciable alteration of volume takes place. It continues for about the first thirty-six hours, and then, during the day at all events, it is no longer to be observed with certainty. It must also be mentioned that, on the other hand, some absorption was clearly observed to take place if the apparatus was shielded from the influence of daylight by covering it with black paper or in any similar manner; also, in so far as the influence of light upon the phenomena of absorption is concerned, and in spite of experiments extending over months, I have not succeeded in arriving at positive and, in every respect, certain results. I feel still impelled to a conscientious communication of such results as were obtained, as they possibly may induce others who have an opportunity of working under more favourable conditions and with instruments better adapted to the ends, to take up these experiments so as to settle this interesting question definitely. So much, however, follows from my observations with full certainty, namely, that perfectly dry coal, as well as air-dried coal, is able to absorb oxygen without exhaling carbon dioxide, both from dry air and from air saturated with water vapour.

I shall show in another communication that in this behaviour of coal we have the key to the explanation of a whole series of phenomena, which without this key can hardly be explained. I must not omit to draw attention, however, to an objection which may be raised against the above conclusion, namely, that the oxygen is absorbed not by the coal itself, but by

* Here, as in the following experiment, the glass tube was surrounded by black paper on the day named, in order to eliminate the action of light.
† I note in connection with this matter, that if the oxygen combines with CaCl_2 , a given volume of oxygen gives rise to the same volume of carbon dioxide; so that a formation of carbon dioxide at the expense of the oxygen of the air can give rise to no change in the volume of the latter.

by the pyrites which is present with it. If we calculate the total ash content of the coal as if it were ferrous sulphide, we find that the coal from the Carl seam contains '81 per cent., from the Robert seam '42 per cent., and from the Jacob seam '36 per cent. of pyrites. These coals, therefore, are extraordinarily poor in pyrites. Moreover, pyrites is quite unaltered in dry air. In moist air, however, it does absorb a certain quantity of oxygen, but in very small proportions, so that if we mix an indifferent substance—for instance, quartz sand—with the pyrites, so as to make a mixture having the same pyrites content as the above-mentioned coals, it appeared that, in the first case, no oxygen was absorbed, and in the second only a very small quantity, even when the mixture was left for a very long time with a measured volume of air.

CHAPTER II.

It is well known that both ordinary coal and charcoal act in a reducing manner upon compounds rich in oxygen. During this process a portion of the oxygen goes into combination with the coal, so that after treatment with oxidising substances the coal is richer in oxygen than it formerly was.

My attention was almost solely directed to the action of ferric salts upon coal, for reasons which will appear from the content of the next memoir. I will, however, give the following account of the experiments:—

The oxidising action of ferric salts is, quantitatively considered, exceedingly variable. Very strongly acid solutions of ferric sulphate were scarcely reduced at all. Ferrous sulphate, however, in contact with air acted more powerfully as an oxidiser, especially if to the solution of the salt there was added a small quantity of an alkali. Ferric chloride was, especially when warm, a fairly active and energetic oxidiser, and was itself decomposed so as to precipitate ferric hydrate upon the surface of the coal. Ferric hydrate can, of course, be removed by treatment with a little dilute acid. Ferric acetate behaves in a similar manner. Dilute nitric acid has some action in the cold, the velocity of reaction increases as the temperature rises, and then the acid behaves as a powerful oxidiser. The weight of the coal considerably increases, and its properties are proportionately altered.

After the action of the ferric salts upon the coal was completed, the latter was treated with a small excess of dilute sulphuric acid in order to separate any ferric hydrate which might have been formed, and the results were only accepted as proving anything and included in this paper if the coal on analysis gave a pure white ash.

In order to show that the alterations which the composition of the coal undergoes by successive treatment with ferric salts and dilute sulphuric acid are not to be ascribed to the action of the latter, I digested samples of the same coal for long periods of time in the sulphuric acid alone, and then determined its elementary constitution. (See analysis 3 in the following table).

In the following collection of results, I have set down the composition of ash-free-coal in order that a better view may be obtained of the phenomena. The ash content of coal dried at 100° C. is added. At the bottom of the columns are placed with positive or negative signs the numbers giving the increase or diminution of weight which the coal undergoes by the action of the different reagents:—

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
C	84.76	84.85	85.02	84.76	84.31	84.45	83.06	84.20	81.23	81.15	82.78	83.82	84.17	83.56	82.08	83.11	83.10	82.00	79.96	
H	5.37	5.29	5.38	5.28	5.26	5.25	5.33	5.23	4.89	4.85	4.60	4.95	5.02	4.89	4.72	5.29	5.02	5.09	4.66	
O	9.85	9.81	9.00	10.58	10.49	10.30	10.71	10.38	13.83	11.00	12.58	11.23	10.81	11.55	13.25	11.63	11.55	12.01	15.38	
Ash	7.33	7.62	6.13	6.99	6.26	6.49	6.49	6.72	6.78	3.08	3.90	3.71	4.06	3.04	3.14	3.37	2.40	2.38	2.60	
			-1.3%	-0.2%	+0.2%	-0.4%	+0.5%	-1.6%	+3.19		+0.9%			-0.10%	+1.24%			+0.45%	+3.41%	

The coals examined came from the mines of the Waldenburg district. Coals (1) and (2) came from the 6th seam of the Erb-stollens; (3) the same, digested for two days with dilute sulphuric acid; (4) the same, digested eight days with a solution of ferrous sulphate and half an equivalent of potash; (5) the same, treated for three days with a solution of ferric acetate; (6) the same, treated for fourteen days with a solution of ferrous sulphate; (7) the same, digested with a solution of ferrous sulphate to which a few drops of caustic potash had been added; (8) the same, treated with a solution of ferric sulphate; (9) the same, treated for two days with gentle warming, with a solution of nitric acid containing 14% of N.O₃. After treatment with acid the coal was boiled six times with a solution of carbonate of soda, until the filtrate, at first brown became of a clear yellow colour. The unaltered coal gave 69% of very hard baked coke, but the coal after treatment with nitric acid gave 71% of a coke which was scarcely sintered. (10) coal from the "Bestelloetz des Wrangelschachtes Niederbank"; (11) the same coal treated like No. 7; (12) the same coal treated with exclusion of air, by a solution of ferrous sulphate; (13) coal from the "Bestelloetz des Wrangelschachtes Oberbank"; (14) the same coal treated at ordinary temperatures with a dilute solution of ferric chloride; (15) the same coal treated on the water bath for two days with a solution of ferric chloride; (16 and 17) coal from the Carl seam of the Theresien mine; (18) the same, treated with ferric chloride, like No. 13; (19) the same, treated with nitric acid, like No. 9. The unaltered coal gave 68% of very much sintered coke, whilst the coal which had been digested with nitric acid gave the same quantity of loose and pulverulent coke.

The numbers show, without exception, an increase of the oxygen content of the coal consequent upon treatment with oxidising reagents.

The amounts of reduced ferrous hydrate, which were determined by the use of ferric salts and potassium permanganate, are not given, since the reaction took place in open dishes or beakers, and the results are affected by the presence of air.

CHAPTER III.

In continuation of my first communication on the behaviour of coal at a temperature of about 180° C., I will here add several important observations which refer to the behaviour of charcoal under similar circumstances.

I heated powdered charcoal from pine wood on a watch-glass in a drying-cupboard up to a temperature of 105° C. This was done after the charcoal had been previously dried until its weight became constant at 100° C. After a short time I noticed an appreciable increase in weight, which, however, neither in these nor in the researches which are about to be described, attains to such dimensions as in the case of coal. The temperature was gradually raised to 150° C., and the charcoal was weighed from time to time. After thirty-six hours heating the increase in weight was 2.46 per cent. The charcoal was then left for forty-eight hours under the receiver of an air-pump, which was exhausted down to a pressure of 22 mm. When I allowed the air to re-enter the receiver the charcoal absorbed moisture from it, which again increased its weight. After long heating at 100° C., however, the original weight, including the increment of weight through the former heating, namely 2.46 per cent., was exactly recovered.

The second sample of the same charcoal gave, under similar treatment, an increase of 1.83 per cent. This sample was then placed in a platinum bowl, was covered with boiling water and was heated for three hours in a water bath. It was then collected upon a weighed filter and again dried at 100° C. It was found to have recovered its former weight, including the increase of 1.83 per cent.

Charcoal from oak and beech, which I prepared myself in platinum crucibles, behaved in a quite similar manner; after heating for thirty-six hours between 105° and 150° C., the increase of weight was 1.51 for the oak charcoal, and 1.61 for the beech charcoal.

When charcoal is treated either at ordinary temperatures, or after warming, with a solution of a ferric salt, the same kind of phenomenon is observed as in the case of coal. In this case, however, and in consequence of the extraordinary power of absorption possessed by charcoal, it is exceedingly easy to fall into mistakes. This remark applies more particularly to the application of ferric chloride, which is reduced in the most rapid manner. The ferric chloride is decomposed partially into ferric oxide, which coats the surface of the charcoal, and into hydrochloric acid. The former may, however, be removed by treatment with an excess of hydrochloric acid, but the latter remains partially absorbed and can be completely driven out neither by prolonged boiling with water nor by boiling with a solution of sodium carbonate.

In order to determine the amount of hydrochloric acid remaining in the treated coal I boiled the latter with a solution of sodium carbonate in a platinum dish, evaporated to dryness, covered the contents with a layer of the same salt, and heated the whole to a high temperature until the charcoal was destroyed, a thing which very easily occurs. The residual mass was then exhausted with water saturated with nitric acid, filtered and subjected to a chlorine determination by silver solution.

From

From the results of these experiments the equivalent quantity of chloride of sodium was calculated, and this was then subtracted from the observed (by difference) oxygen content. This was necessary, since in the final analysis the residual ash only showed very small proportions of chlorine, showing that the chloride of sodium had been appreciably volatilised at the tolerably high temperatures employed. The following table gives the results of the experiments which have hitherto been made. —

	20	21	22	23	24	25	26			27
							a	b	c	
C	89.09	88.62	85.68	85.94	88.74	89.39	84.13	84.35	84.24	87.49
H	2.77	2.81	2.34	2.57	2.67	2.77	2.63	2.61	2.62	2.72
O	8.14	8.57	11.98	11.49	8.59	7.84	11.49	11.08	11.29	9.79
Ash	1.58	1.59	1.64	1.23	0.67	1.40	1.75	1.96	1.85	.....

These numbers give, with the exception of 26 (compare below) a percentage composition of the ash free substance of charcoal; (20) and (21) refer to pine charcoal dried at 100° C.; (22) refers to the same charcoal which increased 2.46 per cent. in weight by heating, and was then kept under the air pump for forty-eight hours; (23) the same, which increased by heating 1.83 per cent., and was then treated with boiling water; (24) the same, which had been digested for two days with a solution of ferric sulphate; an increase in the oxygen content is not clearly visible; (25) the same charcoal treated with nitric acid only for two days, and then boiled out with sodium carbonate. After subtracting from the difference, .62 per cent. chloride of sodium, the remainder represents the oxygen content; (26a and b) the same charcoal which had been digested for two days with ferric chloride, and then further treated with nitric acid, and sodium carbonate; (c) represents the mean of the measurements made upon (a and b); (27) is the ash free substance of (26). The oxygen content was obtained by subtracting 1.87 per cent. of sodium chloride from the difference.

If we admit that the circumstances attending the increase of weight which charcoal undergoes by heating are to be attributed to an oxidisability similar to that which coal exhibits owing to the presence of hydrocarbons, or hydrocarbon oxygen compounds, a new light will be thrown upon many peculiarities of charcoal.

So far as the time at my disposal permits I intend to return to the study of this subject, and hope to make further communications about it; meanwhile I give here without any comment the results of my observations.

(27.) "On the Alterations which Coal undergoes when exposed to Air." By Dr. E. Richters (Dingler's Polytechnisches Journal, vol. 195, p. 315, 1870).—Slightly abbreviated translation.

The alterations which coal undergoes by lying in air have formed the subject of many technical chemical researches. These researches are characterised by the fact that they have all been directed rather to the elucidation of the alterations which coal undergoes with regard to its heating power and so forth than to the chemical changes taking place in it. It is known that the longer coal has been exposed to air the richer it becomes in oxygen and the poorer in hydrogen and carbon, but it remains to be determined whether the increase and diminution of the elements mentioned are relative or absolute. The researches of Fleck, Grandmann, Reder, and Thompson are referred to in connection with the weathering of coal at considerable length.

"We know that coal always absorbs oxygen quickly at upper temperatures, slowly at ordinary temperatures. The chemical and other changes which the combustible substance of coal undergoes under the first condition has already been established by me. On the other hand, at ordinary temperatures the absorption of oxygen is, in so far, a matter which in no way assists us in understanding the chemical changes which are consequent upon it. Whether and how far the carbon or hydrogen is the cause of the oxidising action of the oxygen; whether the action of the latter is not essentially confined to the formation of carbon dioxide, which is then absorbed by the coal; and whether, further, the absorption is a chemical or more or less physical process, are all questions which are of the greatest interest for a critical examination of the phenomena of the weathering of coal."

"I shall offer several observations which appear to me to be of importance for throwing light upon the first of the questions propounded above. If we heat coal-dust to a temperature from 180° to 200° C., the weight at first increases rapidly in a very marked manner; carbon dioxide and water are then separated, and oxygen is taken up in greater proportion than is required for the oxidation of the carbon and hydrogen. After a certain time the oxygen absorption, and with it the alteration in weight, comes to an end. If we continue to heat the coal, at first there is a small diminution in weight, but after a while the weight, as well as the chemical composition of the coal, becomes constant, or, rather, the variations which the coal still undergoes are so small that in an experiment which was continued for six days a good chemical balance was unable to show any further variation. If we examine the constitution of coal which has been heated up to the point of maximum absorption of oxygen, we find that the oxygen and hydrogen are present approximately in the same proportions as in water. This interesting behaviour of coal brings to light two important phenomena. It shows firstly that the carbon of the coal is endowed with a very variable degree of oxidisability, and makes it, in the second place, probable that there is a perfectly definite relation between the absorption of oxygen and the content of disposable hydrogen in the coal, since with the vanishing of the latter the oxygen absorption comes to an end. The first circumstance agrees with the view which is generally taken by chemists that the carbon in coal exists in two different chemical forms. We may say that the coal is a mixture of pure carbon with obscure organic compounds containing carbon, hydrogen, oxygen, and nitrogen. These carbon compounds are sometimes grouped together under the name of "bitumen." The rapid evolution of carbon dioxide which takes place when the coal is first heated may be attributed to the oxidation of the carbon of the bituminous constituents, while the relatively much smaller evolution of carbon dioxide which succeeds may be attributed to the oxidation of the more difficultly oxidisable carbon."

This view may be supported by a consideration of the similar phenomena occurring during the absorption of oxygen by wood and the products to which it gives rise.

Saussure, the distinguished chemist, noticed that dry oak wood absorbs oxygen and gives out carbon dioxide without causing any alteration in the volume of gas in which it is contained. Similar researches made by Liebig are also mentioned.

"If we bring damp brown coal, either freshly obtained or which has been exposed for a considerable period to the air, we find that carbon dioxide is formed, and at the same time, oxygen is taken up. The brown coal which was used by me in these researches was of two kinds—(1) a fibrous lignite exhibiting the original wooden structure very clearly, and (2) a completely formed brown coal; both of them free from pyrites:—

1. Lignite.	2. Completely formed brown coal.
55.97 % C.	53.64 % C.
5.65 % H.	5.32 % H.
36.02 % O. + N.	32.81 % O. + N.
2.36 % ash.	8.20 % ash.

"Sample (1) contains 1.12 % and sample (2) contains 1.22 % of disposable hydrogen.

"These samples, when moistened and exposed to atmospheric air over quicksilver, absorbed oxygen. For instance, 10 grammes of lignite, in six days, absorbed 4.3 c.c. of oxygen and formed, at the same time, 3.6 c.c. of carbon dioxide. The completely formed brown coal absorbed in the same time 4 c.c. of oxygen and gave up 3.1 c.c. of carbon dioxide. These observations confirm my anticipations.

"Wood in which hydrogen and oxygen are present in about the proportions of water, and which, therefore, does not contain disposable hydrogen, form, in contact with air, carbon dioxide without taking up oxygen. Brown coal, which contains free hydrogen, absorbs oxygen without giving up the equivalent quantity of carbon dioxide, behaving in this respect like ordinary coal, though the phenomenon is less strongly marked.

"On

"On the ground of these observations we come to the following conclusions, which are of importance for our knowledge of the behaviour of coal in the presence of oxygen:—

"(1) The peculiarity of coal, when heated to 190° C., in taking up oxygen, depends almost entirely on the fact that the coal contains disposable hydrogen. This is oxidised in presence of a certain quantity of carbon. On the one hand water is formed, while on the other oxygen takes its place directly in the composition of the coal; (2) the carbon of coal when exposed to oxygen at a temperature of 190° C. behaves in a totally different manner, in that the smaller part—5 to 6 per cent. only—of the whole weight combines, forming carbon dioxide. The remainder is only slightly or not at all altered by oxygen at that temperature.

"It is to be noted that both these conclusions refer exclusively to the oxidation of coal at upper temperatures, since, however, we observed precisely the same relations existing during the oxidation of coal at ordinary temperatures, there is very strong evidence that the processes of oxidation at both high and low temperatures are essentially similar.

"During the heating of coal, as well as at ordinary temperatures, oxygen is absorbed. That, in the latter case, the absorption of oxygen is related to the disposable hydrogen in the same manner as in the first case, is made clear by the behaviour of wood and its decomposition products.

"It is also clear that the content of disposable hydrogen is diminished when coal is exposed to air in a manner similar to that in which it is diminished when the coal is heated."

It may be shown with certainty that carbon dioxide is formed at ordinary temperatures just in the same way as it is formed at higher temperatures, and, in both cases, when the more easily oxidised portions of the carbon come to an end, the oxygen absorption reaches its maximum.

The assumption that the more difficultly oxidisable carbon behaves with regard to oxygen at low temperatures, differently to the way in which it behaves at high temperatures, would contradict all experience.

It cannot be maintained that the absorption of oxygen at ordinary temperatures is merely a physical process, still the surface action of the coal is perhaps not to be neglected.

We must distinguish between the tendency which the coal has to absorb oxygen and the intensity with which oxygen is at first actually absorbed. It appears to be not improbable that in the earlier stages the absorption of oxygen is a purely mechanical process, and that this precedes the chemical combination.

The quantity of hygroscopic water which coal actually takes up when exposed to air saturated with water vapour at 15°C. was determined for more than 100 samples by heating them to 100°C. until the weights became constant. The percentage of hygroscopic water thus liberated varied from 2 to 7.5, but the power of the coal for condensing hygroscopic moisture did not appear to be related to its structure in any determinate manner. The condensing of hygroscopic water on the surface of the coal, however, shows very clearly the condensing power possessed by coal. If we examine the quantity of oxygen which different coals absorb from the air, under similar circumstances, we find that there is a very close connection between this quantity and the power of the coal for condensing moisture. In order, however, to obtain complete and decisive experimental results in this connection it is necessary that care should be exercised in selecting coal which has been freshly obtained, and has not been lying in contact with atmospheric air.

Fresh coal, after it has been pounded, ground, and sieved, gives an apparently dry powder, although this is saturated with moisture. About 20 grammes of this powder are taken and brought into contact with air in an 80 c.c. absorption tube, and a quantity of water is introduced above the quicksilver in order to saturate the air with moisture. In carrying out comparative experiments the following points are to be observed:—(1) All the absorption tubes must have the same capacity and the same diameter. (2) The subdivision of the samples of the coal must be about equal. I employed coal which, by powdering and sieving, was reduced to the size of poppy-seeds, and freed from dust. (3) The experiments must, so far as is possible, begin at the same temperature and at the same time, and are best all made in the same room.

"The absorption of oxygen by the freshly-prepared coal begins at once and goes on rapidly. The volume of the absorbed gases, though not proportional to the surface action of the coal as indicated by its hygroscopicity, are, nevertheless, very dependent upon it. I intend to make a further communication in greater detail as to the results of this experiment, and will, therefore, confine myself in this place to the statement of the quantity of oxygen absorbed during the first twenty-four hours by 20 grammes of different samples of coal, a quantity which varies between 2 and 9 c.c. I may, however, mention certain circumstances which appear to me to strengthen my position in considering that at first the absorption of oxygen is chiefly mechanical."

(The observation on which reliance is placed appears to be that the oxygen absorption is at first very much more rapid than is the case later on.)

It is noted that Varrentrapp has shown that when coal is exposed, at ordinary temperatures, to a stream of air, carbon dioxide is formed. It is suggested that carbon dioxide may have been originally condensed upon the surface of the coal, and that it is gradually removed by the stream of air, its place being taken to some extent by oxygen. In order to clear up this point certain special experiments were made which rendered it probable that the continued absorption of oxygen is not to be explained by assuming that it merely takes the place of carbon dioxide condensed upon the surface of the coal.

"Coal absorbs carbon dioxide with the greatest readiness. The volume of this gas which is taken up in a given time is often greater than three times the volume of oxygen which could be taken up. Samples of coal whose absorptive power for oxygen has almost vanished, so much so that 20 grammes will only take up about 1 cubic centimetre of oxygen, will absorb in a few hours at least their own volume of carbon dioxide. If a sample of coal saturated with carbon dioxide is brought into contact with atmospheric air, we find at first an increment of volume as if the carbon dioxide is given off. Soon, however, the volume again begins to diminish. If, at the same time, a small bulb containing caustic potash is introduced in the absorption tube, or if the sides of the latter are moistened with a solution of caustic potash, the absorption of the oxygen goes on very quickly, as does the separation of the carbon dioxide which, of course, forms a compound with the caustic potash. If we leave samples of coal saturated with carbon dioxide for thirty-six hours under the receiver of an air pump exhausted to 2 inches of quicksilver, the greater portion, but not all, of the absorbed carbon dioxide is given off. If a sample of coal which has been so treated is then saturated with moisture and again put into an absorption tube it begins to take up oxygen with the same avidity as when it was freshly prepared, and this whether any potash is present or not. If potash is present, however, we soon discover that a certain quantity of carbon dioxide has been liberated, which shows that the absorption of oxygen is at first accompanied by a separation of carbon dioxide, and that this carbon dioxide will again be taken up by the coal in the absence of any other substance capable of absorbing it.

"If coal which has been saturated with carbon dioxide is boiled for half-an-hour in water and is then air-dried, so that it remains saturated with hygroscopic moisture, it is found to have recovered its original absorptive properties.

"Coal which has been exposed for a long time to the air until it has lost its power of absorbing oxygen behaves in a completely different manner when the foregoing experiments are performed upon it. For instance, when exposed under the receiver of an air-pump it does not by any means recover its original power of absorption, though this power is still partly restored by boiling out with water. Carbon dioxide is either not absorbed at all by such coal or in only very small proportions.

These observations show that the small absorptive power of coal which has been lying for a long time in the air does not depend upon a condensation of carbon dioxide upon its surface, and other conclusions may also be drawn. Amongst these may be mentioned the following:—

"We may now explain the experiments of Varrentrapp. The coal which has lost its power of absorbing oxygen may, nevertheless, absorb large quantities of carbon dioxide, and, on the other hand, when this coal which contains carbon dioxide begins to take up oxygen the process is accompanied by a separation of carbon dioxide. Now, this process is not very noticeable when the experiment is carried out in closed tubes, but it becomes noticeable when the experiment is performed by Varrentrapp's methods.

Influence of heat on the process of oxidation.

I have formerly shown that a rise of temperature is the most important determining circumstance of the process of oxidation. It is not, however, necessary to use a temperature which lies far above 100° C., though the higher the temperature the greater the acceleration of the process. In pursuance of these experiments I heated coal for fourteen days on the water bath at from 70° to 80° C. The first sample of coal increased in weight during this process by 1.01 per cent., the second sample by 0.2 per cent., and the third by 0.35 per cent. The constitution of these three samples of coal is given by the three tables of analyses accompanying this paper. The composition of the same samples after fourteen days heating is indicated by the analyses 1', 2', and 3'. In all cases there was a diminution in the carbon and hydrogen content and an increase

increase in the oxygen content, exactly as in ordinary weathering. The caking power of sample (1) was diminished from 1.4 to 1.1, of sample (2) from 2 to 1.6; sample (3) was a so-called "sandkohle" which does not give coke. The quantity of the coke did not appreciably change, and the specific gravity certainly did not. The heating power of sample (1) fell by 2.62 per cent.; of sample (2) by 3.61 per cent.; and of sample (3) by 3 per cent.

1.		2.	
Including ash.	Excluding ash.	Including ash.	Excluding ash.
78.17 per cent.	82.90 per cent. C.	81.99 per cent.	84.44 per cent. C.
4.95 "	5.25 " H.	4.92 "	5.07 " H.
11.18 "	11.85 " O. + N.	10.19 "	10.49 " O. + N.
5.70 " ash.		2.90 " ash.	

In 1,000 parts by weight there were 45.48 of disposable carbon and 17.85 of combined carbon, corresponding to 63.33 parts of hydrogen.

The heating effect of the ash free substance was 7,922 calories per pound. (German.)

In 1,000 parts by weight there were 44.52 of disposable carbon and 15.49 of combined carbon, corresponding to 60.01 parts of hydrogen.

The heating effect of the ash free substance was 8,084 calories per pound. (German.)

1 ¹ .		2 ¹ .	
Including ash	Excluding a. h.	Including ash	Excluding ash.
77.54 per cent.	81.94 per cent. C.	81.07 per cent.	83.49 per cent. C.
4.79 "	5.06 " H.	4.71 "	4.85 " H.
12.30 "	13.00 " O. + N.	11.32 "	11.66 " O. + N.
5.37 " ash.		2.90 " ash.	

In 1,000 parts by weight there were 41.92 of disposable carbon and 19.83 of combined carbon, corresponding to 61.73 parts of hydrogen.

The heating effect of the ash free substance was 7,741 calories per pound. (German.)

In 1,000 parts by weight there were 40.37 of disposable carbon and 17.73 of combined carbon, corresponding to 58.10 parts of hydrogen.

The heating effect of the ash free substance was 7,842 calories per pound. (German.)

Increase in weight	1.01 per cent.
" oxygen	1.28 "
Loss of carbon	0.13 "
" hydrogen	0.14 "

Increase in weight	0.25 per cent.
" oxygen	1.20 "
Loss of carbon	0.74 "
" hydrogen	0.21 "

3.		3 ¹ .	
Including ash.	Excluding ash.	Including ash.	Excluding ash.
81.77 per cent.	90.73 per cent. C.	80.54 per cent.	88.80 per cent. C.
3.83 "	4.25 " H.	3.69 "	4.07 " H.
4.53 "	5.02 " O.	6.46 "	7.13 " O. + N.
9.87 " ash.		9.31 " ash.	

In 1,000 parts by weight there were 39.92 of disposable carbon and 6.92 of combined carbon, corresponding to 46.84 parts of hydrogen.

The heating effect of the ash free substance was 8,508 calories per pound. (German.)

In 1,000 parts by weight there were 35.82 of disposable carbon and 10.02 of combined carbon, corresponding to 45.84 parts of hydrogen.

The heating effect of the ash free substance was 8,201 calories per pound. (German.)

Increase in weight	0.2 per cent.
" oxygen	2.12 "
Loss of carbon	1.76 "
" hydrogen	0.16 "

"Samples of coal employed in these researches had remained for a long time in loosely stoppered bottles, so that the absorption of oxygen at ordinary temperatures only took place very slowly. As a control, check analyses of the unheated coals were made after they had suffered fourteen days longer exposure. The fact that during this time the composition of the samples did not undergo any variation, shows clearly that the increase in oxygen and loss in carbon and hydrogen is really to be attributed to the higher temperatures to which the coals were exposed.

"There appears to be a certain contradiction between the observation that oxidation goes on more rapidly at upper temperatures, and our thesis that oxidation follows a preliminary surface condensation of oxygen. This apparent contradiction is, in my opinion, easily cleared up if we distinguish clearly between oxidation and mere absorption. The first goes on more rapidly at upper temperatures, the latter at lower temperatures. If the coal has been saturated with oxygen at lower temperatures, the condensed gas combines only gradually with the substance of the coal, and only in proportion as the latter process advances can new quantities of gas be taken up. When, however, coal which is saturated with oxygen is heated, a portion of the gas is evaporated; but the greater part enters into chemical combination, and does so more rapidly as the temperature is higher. The surface action, however, neither undergoes any appreciable change, nor produces any result at all comparable with the chemical action. (?)

Influence of moisture on the absorption and on the oxidation of coal.

"The greater number of technologists are of opinion that moisture has an important aiding action in the weathering of coal." (Thompson's researches are mentioned in connection with this point.) "That moisture may, under certain circumstances, aid the oxidation of coal is not to be denied; but the action of moisture is very complicated, and is influenced by various circumstances, and is not so generally prejudicial as Thompson's observations would lead us to imagine. I will communicate the result of a few experiments made upon this subject.

"If we take two tubes, and into one of them introduce air dried and into the other moist coal, both being freshly won, the first absorbs oxygen much more rapidly than the second. If, in addition, small bulbs containing fused chloride of calcium are introduced alongside of the dry sample of coal so that the coal gets gradually drier, the intensity of the absorption of oxygen becomes greater. The same is the case if the coal has been dried for a day over sulphuric acid, although during this process a very considerable quantity of oxygen must certainly have been taken up.

"If instead of fresh coal we take two samples of coal with different surface properties, both of which have been exposed to the air for a long time and which have lost their power of absorption to a great extent, and expose them to the drying action of sulphuric acid, both of them recover to some extent their absorptive power. That coal with the greater surface action recovers most completely.

"If we dry coal at 100° C., and cool it in a desiccator, and place it in an absorption tube, it is found to absorb gas with extraordinary rapidity. This gas consists in part of nitrogen (from 12 to 21 per cent., from the mean of many experiments). Coal which has been dried at ordinary temperatures also takes up nitrogen, but in smaller percentages, at the same time as it absorbs oxygen.

"All these experiments indicate only a relative increment of the power of absorption by the removal of moisture, and establish in so far the view which has been taken in the former work as to the nature of surface action. They also show that a dry coal will take up a larger volume of gases than one which is merely air dried, before the absorptive power of the two samples sinks to the same level.

These researches, however, still leave unanswered the question as to how far the moisture is disadvantageous for the chemical action of the oxygen upon the coal. I had hoped to be able to give a definite answer to this question, but I have not succeeded in coming to a positive decision.

"We have just seen that both freshly-won coal and coal which has been lying for a long time in the air can be caused to absorb oxygen with increased avidity by a preliminary drying over sulphuric acid. If we leave the coal in contact with air until 20 grammes of it can only absorb one-half a cubic centimeter in twenty-four hours, then moisten it with water and expose it again in the absorption tube, we find no increment of the volume of air in the tube, as might be the case if the water took the place of a portion of the gas which was mechanically associated with the coal. In making these experiments, however, there is generally observed a small absorption of oxygen, and if in addition chloride of calcium is introduced as a drying agent the absorption goes on with renewed intensity.

"These observations would seem to support the assumption that water assists the process of oxidation; but on repeating the experiment several times—that is, first wetting and then drying the coal by means of chloride of calcium—we finally reach a state at which no further increment of absorptive power is to be observed.

"We may, however, approach the question by inquiring whether the action of water on the decomposition of coal is not to be attributed to the consequences of secondary action. Many coals contain pyrites which is only oxidisable in the presence of moisture. This process is undoubtedly of importance, even if it is regarded only as indirectly introducing active material for the oxidation of the coal."

(The well-known action of pyrites in breaking up the coal and exposing fresh surfaces is then described. The question as to whether ferrous oxide can act as a carrier of oxygen to the coal is discussed, and it is considered that the small quantity of this substance which is present can only account for a very small part of the action.)

"If we take two samples of coal (one of which is rich and the other poor in pyrites), after they have been lying in the air for a long time, and introduce them into the absorption tube in a wet state over mercury, the first begins to exhibit a tolerably rapid and enduring absorptivity, which I must attribute to the action of the pyrites alone, since the power of absorption of the other sample is not in the least increased, but, on the contrary, diminished. Samples of coal containing 3.04 per cent. of sulphur, which had been exposed to the air in a state of powder for eight months, behaved as follows:—When air-dried they absorbed in nine days 3.0 c.c. of oxygen. A second sample, containing 1.08 per cent. of sulphur, absorbed in the same time 4.9 c.c. When these samples were moistened, the first in nine days absorbed 6.5 c.c., and the second only 3.8 c.c. of oxygen. The coal, therefore, which was poorer in sulphur, absorbed less oxygen when it was wet than when it was air-dried, but on the other hand the coal which was richer in sulphur absorbed oxygen more readily when it was wet.

"An agreement with the assumption that the moisture of coal exercises only a small and slightly favourable action on the oxidation of coal appears from the result of the following investigation.

"Referring to the samples of coal mentioned above, which had been heated for fourteen days, three other samples of the same coal were taken and were treated in the same manner, except that during the day they were kept damp in a water oven. The altered composition, variation of weight, &c., are shown in the following table:—

1.		2.	
Including ash.	Excluding ash.	Including ash.	Excluding ash.
77.44 per cent.	82.02 per cent. C.	81.46 per cent.	83.81 per cent. C.
4.81 "	5.09 " H.	4.76 "	4.90 " H.
12.16 "	12.89 " O + N.	10.87 "	11.29 " O + N.
5.59 " ash.		2.91 " ash.	

In 1,000 parts by weight there were 42.42 of disposable carbon and 19.63 of combined carbon, corresponding to 62.05 parts of hydrogen.

The heating effect of the ash-free substance was 7,762 calories. Loss = 2.01 per cent.

Increase in weight	0.98 per cent.
" oxygen	1.17 "
Loss of carbon	0.08 "
" hydrogen	0.11 "

In 1,000 parts by weight there were 41.63 of disposable carbon and 16.75 of combined carbon, corresponding to 53.38 parts of hydrogen.

The heating effect of the ash-free substance was 7,893 calories. Loss = 2.35 per cent.

Increase in weight	0.14 per cent.
" oxygen	0.82 "
Loss of carbon	0.52 "
" hydrogen	0.16 "

3.	
Including Ash.	Excluding Ash.
80.75 per cent.	89.01 per cent. C.
3.59 "	3.96 " H.
6.38 "	7.03 " O + N.
0.28 " ash.	

In 1,000 parts by weight there were 34.60 of disposable carbon and 9.89 of combined carbon, corresponding to 44.49 parts of hydrogen.

The heating effect of the ash free substance was 8,183 calories. Loss = 3.81 per cent.

Increase in weight.....	0.45 per cent.
" oxygen	2.04 "
Loss of carbon	1.32 "
" hydrogen	0.27 "

Coal (3') alone has been altered more under the influence of moisture than in the corresponding experiments which were made without addition of moisture, and, indeed, this coal is distinguished by a larger percentage of pyrites from (1') and (2'), which were less altered. As, however, the conditions under which we assume the pyrites to be effective, are for the greater part here excluded, owing to the special mode of the experiment, I do not feel inclined to ascribe the further advanced oxidation of the coal to that substance; but I believe that in the majority of cases the often stated favourable influence of moisture upon the decomposition of coal must be ascribed to the oxidation of the pyrites and the secondary symptoms connected therewith, so that coal containing little pyrites will be decomposed, viz., oxidised, at least as quickly, or even more so, when air-dry than when in a moist state. Of this, as also of the purely mechanical effect of water, which may be specially apparent if coal is lying in very large heaps, I shall speak in my next paper on the spontaneous ignition of coal.

In the former communication I referred to the fact that daylight appears to hinder the absorption of oxygen, without, however, venturing to consider the matter as concluded, on account of the numerous sources of error which were incidental to my inquiry.

In these experiments I worked almost entirely with old coal, which, as the further researches show, absorbs gas very slowly. In my later researches (which were made under more favourable circumstances, in so far that the temperature was subject to a variation of only from 8° to 10° C. and that the absorption tube was completely guarded against the direct action of the sun) I have completely confirmed my former observations upon coal of the same character. Coal which has been freshly mined absorbs oxygen with such intensity that the small influence of light escapes attention.

I will confine myself here to a repetition of my former statement, namely, that since old coal absorbs oxygen only slowly, as was formerly mentioned, the diminution in volume of the atmosphere surrounding the sample of that coal during daylight goes on very slowly, in fact vanishingly so under certain circumstances. This phenomenon, therefore, would square better with the hypothesis of mechanical absorption than with the theory that the absorption is a process of oxidation.

(28.) "On the alterations which coal undergoes by exposure to air"; by Dr. Richters (continuation of former paper). (Dingler's Polytechnisches Journal, Vol. 195, page 449, 1870.)

This communication consists, for the most part, of a theoretical discussion of the causes which lead to the spontaneous heating of coal, and though it is believed that the modern view as to the cause of heating was developed for the first time in this paper, still the views herein set forth may now be regarded as almost the commonplaces of the subject. It will therefore, be sufficient to abstract the paper instead of translating it.

The paper begins with a consideration of the then existing theories of spontaneous heating, and it is shown that they are wholly vague and unsatisfactory. This remark applies alike to those theories which assume that the heating is due to some kind of decay of the coal similar to that which is undergone by hay during the process of fermentation, and also to the theories based upon the supposed action of pyrites.

Richters' argument against the supposed important action of pyrites in connection with the spontaneous combustion of coal is based upon a calculation of the possible amount of heat which can be liberated by the oxidation of a normal percentage of pyrites. For this purpose a sample of coal is considered containing 1.01 per cent. of pyrites, and it is shown by a reference to Dulong's experiments on heats of combustion, that in this case, under the most favourable circumstances, the temperature of the coal could not possibly be raised above 72° C. In order that this may be the case, it is supposed that the heat of oxidation of the iron pyrites is the same as that which would be produced by the combustion of the iron and of the sulphur separately. This, of course, is a vastly excessive estimate. It is also assumed, for the purpose of arriving at an upper limit, that the combustion takes place instantaneously and nothing is allowed for any loss of heat. It is pointed out that in practice the oxidation of pyrites requires at least a year for its completion, and, secondly, it is argued that the heat developed by this oxidation can never be sufficient to account for the spontaneous combustion of coal. On the other hand, arguments are given in favour of the view that the immediate cause of heating is to be sought in the absorption of oxygen by the coal, and for this purpose several very definite statements are made as to the quantity of heat rendered available by the oxidation of various kinds of coal.

It is a preliminary necessity to show the quantity of oxygen which is absorbed by coal under various circumstances, and the result of a number of experiments made upon 20 grammes of coal roughly powdered, dried in the air, but still saturated with hygroscopic moisture, are appended.

The following table shows the amount of oxygen which is absorbed during consecutive periods of twenty-four hours:—

No.	1 Coal with 5.15 per cent. water.	2 Coal with 5.20 per cent. water.	3 Coal with 5.25 per cent. water.	4 Coal with 2.54 per cent. water.	5 Coal with 3.10 per cent. water.
	cub. cent.	cub. cent.	cub. cent.	cub. cent.	cub. cent.
1	9	9.1	7.2	3.0	5.0
2	8.2	9.0	7.0	2.8	4.7
3	5.0	5.6	6.3	1.5	4.0
4	3.4	4.0	5.0	1.5	3.8
5	3.0	3.6	4.6	1.5	3.8
6	3.4	3.0	3.9	1.4	3.5
7	2.4	3.0	3.9	1.2	3.1
8	2.7	2.8	2.8	1.2	2.9
9	2.7	2.6	2.9	1.0	2.6
10	2.0	2.6	2.4	1.2	2.5
11	2.0	2.5	2.0	1.0	2.0
12	2.0	2.3	2.0	0.9	2.0
	45.8	50.1	50.0	18.2	39.9

The argument proceeds as follows:—"Since 20 grammes of air-free coal occupy a volume of about 15 c.c., it follows that samples 1, 2, and 3 absorbed in twelve days more than three times their own volume of oxygen. Sample 5 absorbed two and a half times its volume, and sample 4 only one and a quarter times its volume."

Since the temperature of ignition of the coal examined does not appear to have been exactly determined, Richters relies upon an argument drawn from the analogy between the behaviour of coal and the behaviour of charcoal, about which more appears to be known. (The date of the paper is 1870.)

Let us compare the power of absorption of charcoal with that of coal. In powder factories it is customary to grind charcoal in large drums (by means of bronze spheres) to an impalpable powder. This charcoal absorbs atmospheric air, and more particularly the oxygen, not indeed in larger quantities than the Jungground charcoal, but with exalted eagerness—so much so, that the charcoal always heats and not infrequently takes fire. Now, according to Saussure, one volume of box-wood charcoal absorbs 9.25 volumes of oxygen. Since the weight of a cubic centimetre of the charcoal examined by Saussure was 6 grammes, we see that 20 grammes would absorb 308 c.c. of oxygen, or about six times more than was absorbed by coal (samples 2 and 3) in twelve days.

Now it is known that this absorption of oxygen is sufficient to raise the temperature of the charcoal to its firing point, which, according to Violette, lies between 400° and 600° C. for a charcoal which has been carbonised at a temperature between 432° and 1,000° C.

Let us assume that if the quantity of oxygen absorbed is diminished in the ratio of one to one-sixth, the heat which is liberated will also be diminished in the same ratio. Assuming that the same amount of heat is liberated by coal as by charcoal when the quantity of oxygen absorbed is the same in both cases, and also that the mean firing temperature of charcoal is 500° C., it appears that coal (samples 2 and 3) would, during twelve days, rise in temperature to an extent represented by $\frac{500}{6}$, that is, through 83°. This, of course, is on the assumption that the specific heat of coal is the same as that of the charcoal, and that no heat is lost in any way.

These assumptions made by Richters appear to be rather large, and perhaps account for the fact that some people have failed to regard his researches as conclusive.

In practice, of course, a certain quantity of heat which is developed passes away, but in Richters' opinion this is more than compensated by the increased activity of absorption which goes on as the temperature rises.

"In a former communication I have shown that three different kinds of coal which were exposed to a temperature of about 70–80° C. lost 3.6 per cent. of their heating power. The same effect takes place if the coal is heated for two or three days to about 105°, and in several hours if it is heated to 150° C.

Let us calculate theoretically the quantity of heat liberated by the coal during fourteen days' heating while it was losing the 3.6 per cent. of its heating power:—

Oxidised to carbon dioxide	1.76 per cent. C. = 140 calories.
" water	0.16 " H. = 55 " "
Oxygen absorbed, forming water remaining in the coal.....	2.12 " = 91 " "
	286 " "

This table shows that for 1 lb. of coal 286 units of heat are liberated. If this heat were solely employed in raising the temperature of the coal, that temperature would amount to 1,100° C.; or, more correctly, the coal would quickly be raised above its firing temperature, and would then burst into flame. It appears, therefore, that the heat which is liberated is quite sufficient to raise coal to its firing temperature. Whether this temperature will in any specific case be reached or not will depend (1) upon whether the coal can obtain a sufficiency of oxygen; and (2) whether the heat developed at each temperature can or cannot pass off as quickly as it is generated."

The influence of the size of the coal, the intensity of its surface attraction for oxygen, the influence of the shape of the heaps of the coal, and similar matters, are fully discussed.

It is perhaps a little difficult to estimate the merit of this discussion, since it has now become almost instinctive with students of the behaviour of the heating of coal, but it does not appear that the discussion here referred to differs from that which would have been expected from any reasonable and competent observer.

- (29.) "Is it possible that the Combustion of Coal can be assisted by the addition of Water"; by F. Fischer. (Dingler's Polytechnisches Journal, Vol. 210, page 233, 1873).

Fischer discusses the problem as to whether more heat can be got by the combustion of wet coal than by the combustion of dry coal, and comes to the conclusion that under all circumstances the addition of water will reduce the temperature of burning coal.

He recommends that dust-free coal should also be burnt dry, but admits that, for obvious reasons, it may be desirable to damp very dusty coal.

The proposition as to the relative temperatures produced by coal burnt dry and wet is substantiated by calculations based upon the data of thermo-chemistry.

- (30.) "On the Prevention of Spontaneous Combustion of Coal at Sea"; by T. W. Bunning. (Transactions of the North of England Institute of Mining and Mechanical Engineers, Vol. xxv, part 2, page 107. April, 1876.)

Quotes Captain Scott, a man of great experience, to the effect that spontaneous combustion invariably occurs under the hatchway.

There is a description of Captain Scott's method of dealing with fires under the hatchway, which consists in gradually lowering a wooden trunk, after the manner of a caisson. This is well illustrated by means of a diagram. The idea is to allow of the driving of a shaft through the heated portion of the coal, and the wooden trunk acts in such a manner as to prevent the coal falling into the hole dug out. Captain Scott appears to have used this method with success, but from the illustration the workmen seem to be engaged in shovelling red-hot coal, amongst which they are standing. To protect them from getting burnt buckets of water are lowered for them to stand in while at work.

Captain Scott considers that it is useless to pour water over a heated cargo of coal, because the effect of water is to cause the coal to coke at the surface and thus prevent the water from penetrating. This is illustrated by the experience of the master of the "River Boyne."

Mr. Bunning notes the necessity for testing the temperature of the coal under the hatchway by means of iron rods, pointing out correctly that tubes placed in position for thermometric testing will frequently be quite cool, whilst coal right in the centre of the square of the hatchway has become heated.

The most important part of this communication is the discussion, from which the following is taken:—

Captain Steinson pointed out that his experience went to prove that all the ships which had been burnt had been ventilated, and mentioned some instances.

Mr. John Glover, who also communicated his opinions to the English Royal Commission of 1875-6, mentioned that his researches showed there was no special time for loading which ensured freedom from danger. Let the ships be loaded how and when they might, in wet or dry weather, still they fired; and ships had been known to fire when loaded by baskets as well as when loaded by tip. He mentioned thirty-seven days after loading as the shortest time for ships to fire, and the longest period was 190 days; the average was sixty days. He thought that if coal could be shipped perfectly dry, or dried by passing hot air through it when shipped, spontaneous ignition would be considerably retarded. Mr. Glover also proposed a plan for extinguishing fire by means of carbonic acid.

Mr. Steavenson's experience went to show that the most impure coal was the most liable to ignite. When very clean coal was heaped there was not the slightest fear of its taking fire.

Mr. Thorpe said, in confirmation of Mr. Steavenson's remarks, that he had had a good deal to do with accumulations of pure iron pyrites, containing 50 per cent. and under of sulphur, and neither in large pieces nor in the form of dust was it liable to spontaneous combustion. Neither in Spain, where it was usually very dry, nor in Norway, where there was a good deal of moisture, had the pyrites ever fired; and, moreover, these remarks applied to many thousands of tons then lying in Spain and Norway unsaleable.

Mr. Glover, who had stored pyrites for thirty years, said that he never knew of a case of spontaneous combustion either of Norwegian or any other kind. He had known sulphur pyrites from the Cleveland Ironstone Mines, with no coaly matter in connection with it, and obtained apart from the coal measures, to ignite spontaneously in a few days, almost as soon as coal brasses.

Mr. Mitcalfe said he had particulars of about 150 ships which had been burnt at sea, and he believed there were only two amongst the number which were not ventilated.

Mr. Wallace said that Mr. Steavenson's suggestion of putting coal in air-tight bunkers might be effectual.

Captain Scott insisted on the importance of using iron probing-rods as well as thermometers for testing the temperature of coal.

A pamphlet by Mr. E. Cooper Rundell is quoted, from which the following may be noted:—Out of 587 sailings from South Wales ports during a certain period in 1873 there were 7 casualties, or about 1.19 per cent.; whilst during the corresponding period of 1874, out of 589 sailings there were 10 casualties, or 1.7 per cent.

During the period in 1873, out of 1,133 vessels which sailed from the United Kingdom there were 23 casualties from heating, or about 2 per cent.; whilst in the period of 1874, out of 1,240 sailings there were 50 casualties, or about 4 per cent.

Mr. Rundell attributed the increase in the number of casualties between 1873 and 1874 partially to the operation of the Coal Mines Regulation Act, 1872.

(Discussion continued in Part III, Vol. xxv.)

Captain Scott mentioned a curious case of combustion which occurred on board a ship laden with small gas coal. She went out apparently safe, but when the cargo was being discharged there was found under the hatchway a quantity of coke from 2 feet to 18 inches in thickness, and on going through this they came to an immense cavern with a heap of ashes at the bottom.

The President (Mr. Lindsay Wood) considered that wherever wood was in contact with coal it added very considerably to the danger of spontaneous combustion.

Note:—The discussion, though extremely interesting, is practically superseded by the report of the English Royal Commission, the evidence before that Commission containing much of the information elicited during the discussion.

- (31.) "British Columbia Mining Record," October, 1896, Vol. II., No. 13.

A brief reference is made to a coal loading appliance erected by Messrs. Dunsmuir and Sons, at their Wellington Wharves, Canada. The coal is carried from the hopper by means of an endless apron to a heavy telescopic tube, of four pieces, which it is said can be contracted or extended by the man in charge. As the tube gets filled up, the bottom section is slightly raised, allowing the coal to fall gently out. An engine of 25 h.p. is employed to manipulate the machine, but the amount of power actually used rarely exceeds 10 h.p. Only one man is required to work the machine, which is controlled entirely by the movement of three levers, located on a bridge commanding a clear view of the operations. Further tests of the machine were to be made.

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ROYAL COMMISSION TO INQUIRE INTO THE CAUSE OF THE DANGERS TO WHICH VESSELS CARRYING COAL ARE SAID TO BE PECULIARLY LIABLE, AND AS TO THE BEST MEANS THAT CAN BE ADOPTED FOR REMOVING OR LESSENING THE SAME.

MINUTES OF EVIDENCE.

THURSDAY, 27 AUGUST, 1896.

[The Commission met at 2.30 p.m., at the University.]

Present:—

PROFESSOR RICHARD THRELFALL, M.A., PRESIDENT;

And EDWARD FISHER PLITTMAN, Esq., A.R.S.M.

Captain Francis Hixson examined:—

1. *President.*] You are the President of the Marine Board? Yes.
2. How long have you held that position? Since the inception of the Board in 1871.
3. Were you connected with the marine service before that? Yes; as far back as 1863.
4. During that time, you have known of ships laden with coal which have left the Port of Newcastle and which have never afterwards been heard of? Yes; between the years 1888 and 1896, about 31 coal-laden vessels, out of 3,221 which sailed from Newcastle, were never afterwards heard of. In the year 1889, a vessel named the "Pacific Slope" left Sydney for Shanghai, with 1,119 tons of coal, and was never afterwards heard of. These are the only ships I know of as missing.
5. Was any inquiry held in respect to either of those ships? In most cases inquiries were held, but no information could be elicited to account for the loss—whether from the coal cargoes or from the ordinary perils of the sea. All that can be reported in such cases is, as to the seaworthiness of the vessels at the port of departure. A vessel named the "Girvan" left Newcastle within the years mentioned, and was lost in consequence of the shifting of her cargo. The crew were saved, and landed at Norfolk Island.
6. It was clearly proved that the coal had shifted? Yes; the crew were saved when the vessel was on her broadside and gradually sinking. It was during heavy weather.
7. Was that loss the subject of inquiry? Yes.
8. Can the evidence be obtained from your office? Yes.
9. Do you know of any other cases of ships which have been known to sink through the shifting of the coal cargo? That is the only case on record.
10. Is there any means of inspecting the trimming of the vessels as regards their coal cargoes? Yes; the ships are usually inspected by officers of insurance companies, and by an officer of the Marine Board, but the whole process of loading and trimming is not supervised.
11. It is possible, then, for a fault in trimming to escape attention? Yes, by the means that have hitherto been in existence.
12. There is no complete system of inspection? No; not during the whole process of trimming. The custom of the service is for the captain or one of his mates to be in attendance to see that the trimming is properly done. It is, perhaps, more important than anything else to the ship master and all concerned to see to this, not only for the safety of the vessel, but for her sailing qualities and fitness to encounter bad weather.
13. Those who inspect the ships are then, first, one of the ship's officers; secondly, an officer belonging to an insurance company; and thirdly, an inspector of the Marine Board? Yes; the inspectors of shipping are constantly about watching to see how the work is going on, but they do not stand by one ship and see the whole of the loading.
14. Is it necessary to use any special precaution in trimming the coal? I think great care should be exercised, and where possible shifting-boards should be used. Shifting-boards are often used both here and in England, but there is no law necessitating their use. We have lately been in correspondence with the Board of Trade in England on the subject, and they tell us there are no regulations as to the compulsory use of shifting-boards for coal cargoes.
15. I understand a shifting-board is one that runs fore and aft of the vessel? Yes; for preventing the coal on one side getting to the other.
16. In your opinion, would it be desirable that legislation should enforce the use of such boards? We have lately had complaints from English shipowners about the supervision exercised in this Colony to which ships are not subjected in England. They state they comply with all requirements at the port of departure, and think it hard they should be interfered with at a place to which the ship does not properly belong.

Captain
F. Hixson.

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Captain
F. Hixson.
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17. They think that if the officers, whose lives depend upon the safety of the ship, see that the work is properly done, it is causing unnecessary trouble to have Government supervision? That is practically it. They complain of being put to inconvenience and expense at mere visiting ports. Most of the ships we have referred to are English owned—very few are foreign-owned, and very few actually belong to the Colony.

18. It might not be possible to enforce regulations on foreign-owned ships? No; we do not possess the power to do so, except in the case of overloading. If a foreign vessel is considered dangerous, we do not refer to the shipping company, but to the Consul for the country to which the ship belongs;—but there is power under the Navigation Acts to insist that a vessel shall be in a seaworthy condition before leaving, so far as overloading is concerned.

19. You would not be prepared to recommend that any legislative interference be brought to bear upon the question of trimming? I should prefer, in place of our taking the lead here, to follow what is done in the old country, where, although our experience is great, theirs is of course much larger.

20. *Mr. Pittman.*] You were saying that there is an officer of the Marine Board who watches the loading of ships at Newcastle; does he take any responsibility in the matter;—if he saw the trimming being carried out in what he conceived was not a safe way, would he interfere? Certainly, but his duties are principally concerned in seeing that the vessel is not overloaded so far as her marks are concerned. Each vessel has what is called the "Plimsoll mark," and the main supervision is to see that she is not overloaded. We infer that all the interior work of the ship—the details of loading—are better performed by the master and officers, than by any Government interference.

21. Can you say that it has frequently happened that officers have had to draw attention to what was considered improper trimming of coal cargoes? I could not say very much on that subject. I know, as a rule, that any suggestion or objections made by Marine Board officers to the masters of vessels are invariably attended to.

22. Have you any knowledge or experience in connection with the work at the hydraulic cranes? I have none.

23. Can you tell me who is responsible for that work? The cranes belong to the Railway Department, but there is a contractor to whom the letting and working of the cranes is actually given over by the authorities.

24. You cannot say for certain whether the Department exercises any supervision over them? I do not think there is any supervision. I think the contractor is bound to keep the plant in order. His object is to effect quick dispatch.

25. The thirty-one vessels which you mentioned as never having been reported to arrive at their destinations between the years 1888 and 1896, do not include any cases where the fate of the vessels has been actually known? No.

26. *President.*] Will you tell us what you know of fires that have occurred on coal laden ships? The latest experience, perhaps, is that of the "Ellen A. Read."

27. That ship, I understand, was bound for Manila? I think it likely. She was discovered to be on fire a day or two out from Newcastle, and made towards Sydney. We had a message from Broken Bay to say there was a ship on fire making her way to Sydney. We sent the pilot ship, "Captain Cook," which is fitted with fire appliances, and as soon as possible she got to work and put the fire out, by cutting up the deck in two or three places, and throwing down large quantities of water.

28. Was any inquiry held in that case? No; she was a foreign vessel. We do not hold inquiries in cases of foreign vessels. The captain told me he obtained his coal from different collieries at Newcastle. It was just prior to the strike that lately occurred. He managed to scramble together a cargo, but could not tell me from what mines.

29. Did you learn where the fire broke out first on board the "Ellen A. Read"? Yes; on the surface, near the main hatchway. The coal was nearly up to the deck, and the only means of getting at it was by breaking up the deck. The decks were a good deal injured, but otherwise the vessel was not seriously affected.

30. Did it come within your knowledge how the fire broke out, or was suspected to have broken out? The captain could not tell any more than that the fire had broken out.

31. It has been suggested to me that in some cases the coal trimmers leave their candles in such a position amongst the coal that it is very difficult for them to get at the candles afterwards to extinguish them, and they do occasionally leave them actually alight to burn out themselves;—have you ever heard of that? I have not had any actual experience of it, but I can quite understand such a thing happening. There are certain portions of the vessel where it is necessary to have light, and it is very possible that lights may be left, negligently, burning. Officers of the ship should certainly be on the look out for that.

32. Have you had experience of any other fires in coal cargoes? There was a vessel called the "Knight of St. Michael" that put into Sydney lately from Newcastle, with her cargo heated. It did not actually catch fire, but the captain found the cargo so hot that he bore up for Sydney, and the coal was taken out of the ship without any great damage being done.

33. Did you hold any inquiry in the matter? No; the ship was placed in the hands of certain surveyors here, who advised in the case, and by their directions the cargo was taken out.

34. You can give us no further information about the "Knight of St. Michael"? No; I cannot give you any positive information.

35. And there was no inquiry? No; the Marine Board does not hold inquiries unless there is serious damage to a ship or loss of life has been occasioned.

36. Are there any other instances you know of? There was a German barque, called the "Argo," on board of which, in the year 1893, there was a very serious explosion. There was loss of life in that case, and a Coroner's inquest was held. This being a German vessel, and although seriously damaged, we had no jurisdiction to hold an inquiry.

37. Can the evidence of the Coroner's inquest be obtained? I presume the Coroner can supply it.

38. The accident, I believe, occurred in Sydney Harbour? Yes.

39. There was no evidence collected except that taken at the inquest? No.

40. Do you know of any other cases? There was the case of the schooner "Prosperity," on which a serious explosion occurred, and some people were injured a good deal.

41. How long is that ago? In 1895. The vessel was lying in Woolloomooloo Bay, and she had only had

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had her cargo on board a short time. The explosion occurred, as they mostly do, unexpectedly, whilst the captain was being rowed towards the vessel, which he was about to take to sea. We held a partial inquiry into this case, and we found that the vessel's hatches were on, with the exception of what is known as the booby hatch, a small hatch in the fore part of the vessel. The explosion occurred just about daylight. There had been an anchor light hoisted, and there was a tendency to believe that when this light was brought down on deck and taken to the galley and blown out the explosion occurred. We could not positively prove this, in consequence of the injured men not being able to give evidence for some weeks, and eventually they disappeared, and we could not find them. They were taken to the hospital, and when discharged we could not trace them. They were invited to come and give evidence. I believe in this case the gas must have come out of the booby hatch, and there must have been a train of gas to the galley; and when the lantern containing the light was opened I am inclined to think the train was fired. The vessel was head to wind, and the booby hatch was under the top-gallant fore-castle.

42. Can you give us any idea as to the distance from the galley to the booby hatch? About 10 to 15 feet.

43. That would be a great distance for a train to form? Yes; but I speak without having any scientific knowledge on the matter. That was my common-sense view of the occurrence.

44. Do you think the men did not wish to give evidence? I am rather inclined to think so.

45. I may take it, in regard to the case of the "Prosperity," there is no information to be obtained? Yes.

46. You can assure us that your inquiry was so unsatisfactory that it is not worth while for us to go into the evidence obtained? I think not.

47. Are there any other cases within your recollection? As far as my personal experience is concerned I do not remember any more. There was a case I would like to bring to the notice of the Commission. That was of a British barque, called the "Republic," which loaded from Newcastle some time ago. She carried a large quantity of coal—nearly 4,000 tons—and was a long time on the voyage. I imagine the greater the cargo and the longer the voyage the more the danger.

48. From spontaneous combustion? Yes, or heating. The cases of the "Argo" and "Prosperity" were, however, peculiar, inasmuch as the explosions took place soon after the coal had been put into the vessels. In the case of the "Republic" all went well for a considerable time, and then the captain found the cargo was heated.

49. Was there an inquiry held? Yes, at San Francisco. There appear to be two opinions as to the treatment to prevent these explosions. The one approves smothering the cargo as much as possible; the other advocates very strongly extreme ventilation. In the case of the British barque "Republic" it almost looks, from reading the evidence, that if the smothering process had been adopted, the fire would have been kept under much longer than it was. They actually dug into the cargo and stirred it up, and provided all sorts of means whereby the air could be supplied. It seems as if the steps taken to put the fire out made matters worse.

50. Did they not begin to stir the cargo about until the fire had broken out? They began to stir the cargo when heat was discovered. They jettisoned about 30 tons of coal because of the heat. When they pumped water down, the smoke became so intense the men had to abandon their work.

51. The fire actually broke out then when they began to stir up the coal? Quite so.

52. Is the evidence very complete upon this point? I do not know whether it is very complete. The report of the inquiry was sent out to us by the Board of Trade.

53. Of England? Yes; it was held by the British Consul in San Francisco, and the Board of Trade, in accordance with custom, and in response to our application to be furnished with all information, sent the report.

54. Is it printed? It is typewritten, and I can supply you with a copy.

55. Have you recollection of any other such cases? I do not remember any more information that I can give you just now.

56. *Mr. Pittman.*] The two vessels—the "Argo" and "Prosperity"—were, I think, loaded with different coal altogether to the other vessels referred to—the coal was from the south? Yes.

57. Coal known to contain a great deal of occluded gas? They were coals received in Sydney from one of the southern mines.

58. I think it is a well-known fact that the particular mine from which those two coal cargoes came is known to be a fiery mine, in which safety lamps are used? I understand that is the case. The coal is very excellent, but very troublesome.

59. In the case of the vessels which you mentioned as having disappeared, and which were never heard of after their departure, I understand the coal cargoes were from Newcastle? Yes.

60. Where, so far as you know, there are no mines in which explosive gases are so common as to necessitate extra precaution? It was thought so. It is only during the last two or three years that we have had a suspicion of Newcastle coal. The two cases—the "Knight of St. Michael" and the "Ellen A. Read"—are quite recent ones from Newcastle.

61. You would distinguish, would you not, between the two cases—one where heat is produced, and explosion in the other? Yes, I think there is a difference.

62. *President.*] Have you formed any idea as to why it is only within recent years that this trouble has arisen? I have no scientific knowledge of collieries, but I have a vague opinion that the further you penetrate into the earth, the more the gases are found in the coal.

63. Do you consider that the trouble has arisen from a change in the quality of the coal, or a change in the manner of loading it into the ship, or in the treating of it while on the ship? I could not say, but, of course, latterly the trade has increased; there is more coal handled and more liability of explosions.

64. Perhaps it is not loaded so carefully? I have heard it remarked that in the loading by the hydraulic cranes all that is thought of is speed, and the coal is dropped from a great height.

65. You have seen yourself that the coal is roughly handled? Yes, they put it in as fast as they can. It is a matter of expedition, as far as I can see. The coal does, in some instances, fall from a great height.

66. Have you seen this yourself, or is it what you have heard? I have seen the coal dropped from a good height. It is lifted up high enough to get over all the impediments of the ship, and then swung round.

67. How far do you think it drops? The larger the ship the deeper the fall. In some cases 25 to 30 feet, or even more than that. Sometimes it would drop from the top of the crane to the bottom of the hold, but, of course, the drop becomes less as the vessel is filled.

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68. Would it be possible, in your opinion, to adopt some measure which would reduce the smashing of the coal by falling from a great height, and which would not, at the same time, be commercially impossible on account of expense? I am afraid the only way to do it would be to lower the coal until it is level with the hatch, but that would take up some time.
69. Would it take twice as long? Yes; I should think it would double the time. There would be the time taken up in lowering, and also in raising afterwards.
70. We may understand from you that the prevention of the evils which may occur from the dropping of the coal—supposing evils do so occur—would be a source of expense? I think so.
71. It would, perhaps, double the expense of loading the coal? It would, certainly, increase it very materially.
72. Is it ever the custom to load coal by pouring it through shoots into the hold of the ship? That practice is pretty well abolished. It used to prevail at Newcastle. There were several shoots there, but I do not think it prevails to so great an extent at the present time. The Australasian Steam Navigation Company at one time had shoots. From my knowledge of Newcastle, which I only visit occasionally, I think the custom of shooting the coal into the vessels is now almost obsolete.
73. Have you any idea as to the reason why it has become obsolete? The coal had to be taken to a high level for the purpose. Now it is run along a rail and hoisted at the ship's side.
74. It is, in your opinion, to save expense that the method of shooting has been abolished? Yes; and to secure expedition. The present hydraulic cranes take up 7 or 8 tons, or even more than that, in a single truck.
75. How long ago is it since the practice of loading through shoots was abandoned? It has been gradually brought about since the extension of the Bullock Island works at Newcastle.
76. From about what date? About twenty years ago, or more. The works at Bullock Island have increased gradually, and the other places have become superseded. What now is the general cargo wharf at Newcastle was the place where all the coal used to be shipped.
77. I wish to obtain an idea as to whether it would be possible to connect the recent calamities to coal-laden ships with some specific change in the method of loading or otherwise of handling the coal;—am I to understand that the shoots have been abolished so long that that would not explain the difficulty? I do not think the different mode of shipping the coal has had much to do with the explosions.
78. You do not know of any specific change in the method of handling the coal during the last two or three years? Between the years 1888 and 1896 it has all been handled the same way, or, if not all, the greater part.
79. Since when have the accidents chiefly begun to occur? During the last eight years. The wharf at Bullock Island was commenced about twenty years ago, and that did away with much shooting of the coal. The change is not complete—there is still a little loading done by shoots.
80. *Mr. Pittman.*] There has been a gradual change? Yes.
81. *President.*] If we could connect the cause of the trouble with some change in the procedure of handling the coal it would be of the greatest importance? I think the change has been so gradual that I could not attribute the explosions to it.
82. The greater part of the coal is now loaded by means of cranes and dropped into the hold? Yes.
83. That was not the case twenty years ago? No; but now we ship a very much larger quantity than we did then.
84. *Mr. Pittman.*] Do you think it possible that the very large increase of late years in the number of ships which have suffered from spontaneous combustion in their coal cargoes may be directly connected with the increase in the tonnage of coal carried by the vessels? To a great extent.
85. Is it not supposed to be a fact that large cargoes undergo spontaneous combustion or heating more frequently than small cargoes? Certainly. I think the larger the cargo of the ship and the longer the voyage the greater is the risk.
86. There is a distinct increase in the average of coal cargoes as regards size during the last ten years? Certainly.
87. *President.*] It is within your knowledge that the size of ships has increased within the last ten years? I may say enormously.
88. Is it also within your knowledge that the larger the ship the more frequent the accidents, or is that merely your impression? I may state positively that the larger the cargo and the longer the voyage the greater the liability to accident.
89. Have you read the report of the English Coal Cargoes Commission? I have not.
90. You have not that report in your office? No.
91. Is there any further way in which you can assist the Commission? I do not know now, but if the Commission require me again I shall be glad to give any information I may be in possession of.

[Witness withdrew.]

WEDNESDAY, 2 SEPTEMBER, 1896.

[The Commission met at 2.30 p.m., at the Custom House, Newcastle.]

Present:—

PROFESSOR RICHARD THRELFALL, M.A., PRESIDENT;

And EDWARD FISHER PITTMAN, Esq., A.R.S.M.

Mr. Thomas Brooks sworn and examined:—

Mr.
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92. *President.*] You are the surveyor for London Lloyds? Yes; for the Port of Newcastle.
93. How long have you been Lloyds' surveyor? About ten years. I have been a resident of Newcastle for thirty years.
94. With experience of maritime matters all that time? Yes.
95. You are aware of the object of this inquiry, I presume? Yes.
96. Have you had any particular experience of any combustion or explosion occurring in any of the ships which you have had under your notice at Newcastle? Not of combustion, but of heating before combustion took place.

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97. Will you please give us any information you can as to the cases which have come before you? During this year two cases came under my notice—the ship “Morna” and the barque “Invermay,”—both British vessels.
98. Let us take the “Morna” first? She received her stiffening coal in Sydney.
99. She did not come under your notice during that part of the transaction? No; she had already received her stiffening coal some three weeks previous to my examination.
100. Can you give us the date of this event? It was on the 27th March, 1896, when my attention was called to her as Lloyds’ surveyor to examine the condition of the cargo while lying in the harbour at Newcastle.
101. What did you find? I found that she had a quantity of stiffening coal—between 700 and 800 tons—on board. I was informed that was the amount. The captain called upon me and told me he had received instructions from his owners to put tubes down the hatches, so that he could test the temperature daily on his passage, and while doing so he found the stiffening coal heated.
102. Was that with regard to the stiffening coal or the cargo generally? The stiffening coal only. He found the heat so excessive that it caused alarm, and he consequently waited upon me to examine it and advise. I did so, and found the coal in the way of the main hatch, in the lower hold, in a conical heap, just as tumbled down from the baskets.
103. The coal was loaded from baskets? Yes; taken in from the coastal steamers. After taking the top off the coal I sunk down into the coal right in the centre of the hatch, about 8 feet, and buried a thermometer, and after about fifteen minutes I found the temperature 110 degrees.
104. What did you do then? I tried the after hatch in the same manner, and found a temperature of 86 degrees.
105. In which hatch was the larger heap? In the main hatch. The temperature on deck at the time was 76 degrees Fahrenheit. I then advised the master to discharge the heap out of the main hatch.
106. Did he take your advice? Yes.
107. Your advice was practically a command? Not necessarily so; the advice was carried out at all events. The coal was taken out right down to the ceiling of the ship.
108. Was it taken out of the ship? Yes, right in the square of the hatch. There were 120 tons taken out of the main hatch. The coal was dug into at each end and the thermometer buried, and I found the temperature there normal.
109. After 120 tons had been taken out, the remainder had a normal temperature? Yes; I tested the coal at both ends and on each side, and found the temperature was normal.
110. What do you call normal? The same as on deck—76 degrees. This clearly indicated the heat was all in the square of the hatch, where it was all very small coal and dust—absolutely dust.
111. You noticed that? Yes; not only dust, but excessively moist.
112. Did you notice whether the coal in the wings and fore and aft was smaller or larger coal? Much larger coal. The small and dust seemed to accumulate in the cone in the square of the hatch.
113. Is the coal dropped from a considerable height in loading from baskets? Yes; I should think it was coal dropped from a coastal steamer about 25 to 30 feet out of the baskets.
114. Do you know what coal it was? It was Wallsend coal.
115. You know, as a matter of fact, that it was Wallsend coal? Yes; I invited the shipping manager of the Wallsend Coal Co. to visit the ship with me, and I pointed out to him the small coal and dust that existed.
116. He went with you? Yes.
117. What is his name? Captain Cross.
118. The Chairman of the Marine Board? Yes.
119. Was the small coal caked at all where the heap was hot? There was a slight tendency to cake. There was a smoke or vapour escaping from the fissures of the coal when we sunk down, in several places, like the smoke coming from a cigar.
120. What about the after hatch? That was somewhat similar, but the temperature was not so great.
121. Was the high temperature confined to the square of the hatch? Solely, and in the midst of the small coal.
122. It is essential to take the temperature right in the middle of the cone? Yes.
- 122½. The spot at which the temperature was highest was the spot where the coal was finest? Yes; the conclusion I came to was that it was the continual dumping of one basket-full on top of the other, and the accumulation of small coal and dust that created the heat.
123. Did you move the cargo out of the after hatch? When I tested the temperature on deck it was 78 degrees, and 83 degrees in the coal.
124. That was not a very serious rise? Not very, in view of the heating in the main hatch, but we thought it best to be on the safe side, and 120 tons were moved out of the square of the after hatch.
125. *Mr. Pittman.*] The same as out of the main hatch? Yes, about that; and the temperature was reduced to the same as on deck.
126. *President.*] That concludes the story of the “Morna”? Yes; so far as the coal is concerned.
127. Did she reload with coal? Yes; with Wallsend coal.
128. And did she arrive safely at her destination? Yes.
129. Will you kindly give us the information with regard to the “Invermay”? She also received her stiffening in Sydney.
130. Of what coal? Wallsend Company’s coal—in two hatches, the main and fore hatch.
131. What was the date she arrived here? The day I first visited her was the 10th April. She received her stiffening coal of between 500 and 600 tons in Sydney, but I am not quite certain as to the quantity. The captain was alarmed at the heat of the coal when sinking the tubes for taking the temperature. He thought it was too hot, and I was called upon to advise. The temperature I took that day was 85 degrees, after sinking into the coal as quickly as possible before the heat could escape.
132. How did you sink? By men with shovels, in about a quarter of an hour, and buried the thermometer in the face of the coal each side of the hold, and covered it up. I found the temperature 98 degrees.
133. *Mr. Pittman.*] In the main hatch? Yes; and in the fore hatch the temperature was only 86 degrees. That was pretty well normal. We did nothing with the coal in the fore hatch, considering it was all right. In the main hatch about 100 tons were taken out—just this cone was removed.
134. *President.*] Was this also finely crumbled and powdered? Yes.

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135. And damp? Yes; in both ships I drove iron rods down, in addition to the sinking, and allowed them to remain for about twelve or fourteen hours. Three feet from the ceiling or skin of the ship the temperature was normal. About 6 feet up the temperature was quite up to that indicated by the thermometer, as far as we could tell.
136. Three feet from the skin means 3 feet up from the bottom of the ship? Yes.
137. When you drew out the rods, did you lower the thermometer? No; we knew the temperature only by feeling the rods.
138. Three feet from the bottom the temperature was normal? Yes; and about 6 feet up the rods were much heated and damp. Three feet above that it was normal again. The heat was in the centre of the heap.
139. *Mr. Pittman.*] How much coal was taken out of the "Invermay"? There were only 72 tons discharged.
140. *President.*] Did anything further happen subsequent to her reloading and going away? The master was quite satisfied when this was taken out. The coal was tested each side of the square of the hatch, and the ship went on with her loading and arrived safely at her destination.
141. With what coal did she load? The Wallsend Company's.
142. Are there any other cases you can inform us about? No.
143. Have you formed any idea as to the cause of the heating? I have.
144. Will you favour the Commission with your opinion? I have a theory which to my mind should be carried into practice. In the first place, I think the coal should not be loaded into the ship within ten or twelve hours after coming out of the mine. I think it should remain in the waggons for a time to allow the gases to escape. In the second place, I think some means can be devised, and very simply, to prevent the great breakage.
145. That would also have the advantage of increasing the value of the coal? Of course. It can easily be done by an appliance to prevent the accumulation of smalls and dust in the square of the hatches.
146. Can you suggest any appliance? You can use coal-distributors to prevent coal-dumping in one particular spot, and let it run away.
147. That would lead to some extra expense in loading? I do not think so.
148. Would you be prepared to propose a plan that steredores or trimmers could carry out? There are conveniences in existence now, if they will only use them.
149. Which of these appliances would be the most suitable? I have only seen one. They are all so simple, with a view to prevent the coal being dumped down continuously from 7-ton waggons in one spot.
150. It would cost more to trim if loaded in that way? I do not think so. I do not think it would cost the trimmer more. The Commissioners for Railways let a contract for the shipment of coal, and the contractor's object is to get rid of it as soon as he can. The trimmers have a contract, and their object also is to get rid of it as soon as they can.
151. The trimmers are not connected with the shipping contractors in any way? No. A waggon with 7 or 8 tons of coal is hoisted, and the coal dumped down in the middle of the hatch, one waggonful after another. The trimmer comes along and takes the big lumps of coal away, and leaves the small coal in the square of the hatch. When the coal is dropped into the bottom of the ship, if it cannot run away here, there, and everywhere, you will always have this accumulation of dust, and while that exists there will be fire. If they want to save the reputation of the coal trade they must adopt some means of distributing the coal properly.
152. *Mr. Pittman.*] If it took longer to ship the coal when a distributor was used the contractor would want a higher price? If there was a proper distributor fixed the coal contractors could ship as quickly as they do now.
153. *President.*] You consider it is the business of the colliery-owners to see that the cargo is stowed properly? It is their place to see their commodity is landed in good order and condition.
154. *Mr. Pittman.*] You have no doubt coal could be shipped as quickly? It might cost a half-penny a ton more, but what is that compared to the loss of a ship and of lives.
155. *President.*] Would it take much longer to load? No; it could be done just as quickly.
156. As the Railway Commissioners own the cranes, might they not insist on the ships being loaded with proper appliances? They would have to include trimming also, because trimming is the important point, after all.
157. You consider the trimming is even more important than proper loading, to avoid the dumping? The whole thing is in the trimming. The steredore or trimmer should be compelled to have proper appliances to distribute the coal to prevent it being dumped in one place. The Railway Commissioners finish their part when they deliver the coal over the ship's hatch.
158. Have you known of any system of ventilation being adopted in the hulls of the ships? Most modern ships have surface ventilation, which is the only useful method.
159. It is not customary to provide any other than surface ventilation? No; none of the ships leaving this port have other than surface ventilation. I think it would be a source of danger. From my experience, the tubes for taking the temperature do not indicate the true temperature within 5 to 10 degrees.
160. On what do you base that opinion. Experience. In the "Morna" the tubes gave 10 degrees less than in the middle of the coal.
161. *Mr. Pittman.*] Do not the tubes go down the sides of the hatchway? In the after part. The master puts the tubes at the end of the hatch for convenience sake. They cannot be put in the centre.
162. *President.*] Are accidents more frequent in large ships than in small ones? Decidedly so; the larger the ship the greater the risk. Twenty years ago, when we had small ships, we never heard of these things.
163. The increase in the size of the ships is, then, in your opinion, the cause of the increase in the trouble? Yes; the larger capacity of the ships.
164. Do you think that is sufficient to account for it? Yes.
165. Do you know, as a matter of fact, that the larger the ship the more likely the cargo is to heat? That is my confirmed opinion.
166. Is it your experience? Yes, also.
167. Have you noticed any greater tendency to fire on the part of one coal than another? I do not think there

there is any difference. If the coal is shipped large it will keep well. Some coal when dropped will easily crumble to pieces, and I think that coal is most dangerous which is easily reduced to powder. I have a strong opinion, also, that coal should not be loaded in excessively wet weather.

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168. Is that based on experience? Yes.

169. Have you known that cargoes loaded in wet weather have been particularly liable to spontaneous combustion? I cannot single out one particular cargo, but, where moisture exists, fire is more easily created.

170. All coal contains a certain percentage of moisture? I admit that. Modern ships now have very large hatches, about 12 feet wide by 15 to 20 feet long. We may have a downpour of rain, but the coal continues to be loaded and the hatches are kept open. It tends, to my mind, to create heat, always having in view the large accumulation of small coal that exists in the square of the hatch.

171. That is your impression—you have no direct knowledge that such is the case? No; except in the case of the "Morna." She loaded the stiffening coal in Sydney in wet weather.

172. Did the "Invermay" load in dry weather? I think so.

173. *Mr. Pittman.*] You said that you thought it advisable that coal should stand for some time before being loaded, so that the gases might escape;—have you any knowledge that gases do escape from Newcastle coal when standing? There are gases, more or less, in all coals, and you find the gas oozing out in a mine before the coal is won.

174. In the Newcastle mines? Yes, in several of the mines in the district.

175. Do they use safety lamps? No; it is not sufficient to require that.

176. *President.*] It has been suggested to us that the hatches of ships might be made large enough to lower the waggons right down into the hold—in your opinion, would that be of advantage? It would be to a certain extent, but the expense of converting ships' hatches would be prohibitory, and ships' hatches would require to be specially constructed for loading by the method of lowering the waggons into the hold. The main hatches of modern vessels are large enough to allow of this being done.

177. It would not prove a complete cure of the evil? No.

178. It has been pointed out that there is sometimes a large quantity of fine coal in the waggon before it is emptied into the ship, so that the fine coal is not always formed from the dumping into the hold? No; it comes from passing over the shoots, and the friction of traction.

179. Is it a custom, do you know, to intentionally load small coal in the bottom of the trucks? No; I believe it is the desire of the proprietors to load good coal.

180. *Mr. Pittman.*] You are not familiar with Spencer's distributor? I have seen it once or twice. It works very well. It avoids the accumulation of dust in the hatch. If you get over that point you will solve the problem.

[Witness withdrew.]

Mr. A. Bertram sworn and examined:—

181. *President.*] What is your name? Augustus Bertram.

182. And your profession or business? Shipping Inspector to the Local Marine Board.

183. How long have you been in that position? Nineteen years the 1st of next month.

184. Does your duty include the watching of the loading of ships with coal? No; it has nothing to do with that. It is simply to inspect the ships' equipments, and see that they are not overloaded.

185. Are there officers of your Department that do watch such loadings? No.

186. You have merely to see that the ship is seaworthy? Yes; that her equipments are in good order, that she is not overloaded; and of late years I have been in the habit of inquiring as to her ventilation.

187. For all you know, a ship may go to sea with a coal cargo absolutely untrimmed? So far as I could swear to.

188. It does not come within your duty to examine into the trimming? No.

189. Are there any officers whose duty it is to examine into the trimming of coal? It is all done by private stevedores.

190. It is absolutely left to the stevedores, the captain, and the officers of the ship? Yes.

191. Have you had experience of any ships whose coal cargoes have heated? No; I have never specially inspected them. I have been aware of one or two lately. I have looked at them casually, but not as part of my business.

192. Is there any information which you could give to the Commissioners in regard to this inquiry? I am afraid not in any way. I look, as a rule, when I get aboard a ship, to see if she has any shifting boards, but as far as the trimming is concerned, we have nothing to do with it.

193. Can you insist on the use of shifting-boards? No. As a rule they are put up. I just note in a diary whether they have them or not.

194. You have no power to insist on any special appliances being used? None at all.

[Witness withdrew.]

Mr. J. Russell sworn and examined:—

195. *President.*] What is your name? James Russell.

196. And your business? General contractor.

197. You have a contract occasionally for loading at the cranes? Yes.

198. How long have you been in that business? Thirty-seven years.

199. You have had contracts for loading ships with coal for thirty-seven years? Yes; since the cranes started.

200. Where does your contract begin? The Government places the coal, and I hoist it on board the ship.

201. The Government delivers you the coal at the ship's side, and you lift it on board? Just so.

202. You are at liberty to lift it in any way which seems good to you within the means of the cranes? Yes; in the usual way of shipment.

203. Is there any stipulation in the contract as to any particular method of loading? No.

204. You can do as you like? Yes.

205. The usual method, I believe, is to provide trucks with movable bottoms. The trucks are lifted above the hatch, and the coal dropped into the hold? Yes.

206. Do you ever lower the trucks down through the hatch? Yes; where it is practicable.

207.

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207. You have nothing to do with the trimming of the coal; your work is done when the coal is put on board? No; trimming is a different thing altogether. However, I contract for that too.
208. It is a matter for separate agreement? Yes.
209. Do you usually trim the ships which you load? Very often.
210. Your contract for trimming is with the owners or masters of the ships? Yes.
211. Would it be possible for you to supply us with a list of those ships which you have loaded with coal? Yes.
212. Would it be very much trouble to prepare such a list? No.
213. Could it also be stated with what coal the ships were loaded? Yes.
214. It is all filed in your office? Yes; in the books.
215. You would describe yourself as a stevedore, I presume, would you not? Yes.
216. I suppose you are unable, personally, to superintend each individual loading? I am always there or about.
217. So that you practically rely on yourself to see that the loading is carried out satisfactorily? Yes.
218. A certain amount of evidence has come before us, and an overwhelming amount collected some years ago in England, which tends to show that the source of spontaneous combustion, and nearly always of heat in coal cargoes, is the small coal under the hatchways—is that your experience? Sometimes; but how do you account for it when, supposing the running of the coal is from the main hatch down to the fore hatch, and the coals are then taken into the fore hatch, and the two ends at the bottom meet and are nothing but lumps, and those ends take fire, and not under the hatch.
219. Have you any evidence of a case in which a fire has originated among the large coals and not among the small? Yes.
220. You have definite evidence of fires which originated among the large coal as distinct from the small coal? Yes.
221. In those cases was the coal wet or dry? I could not say.
222. *Mr. Pittman.*] Is it not a fact that there are master trimmers or stevedores in charge of each separate ship? Yes.
223. In giving us the list of vessels asked for, could you give us a list of the stevedores in charge of each? Perhaps I could not do that. I could give you a list of most of them. I think I can satisfy you as far as ships are concerned that have come to grief.
224. *President.*] Supposing, however, we considered it was desirable to reduce the breakage of the coal in loading? I am anxious to do that whenever I can get a chance.
225. Supposing some appliance were adopted to reduce the breakage by dumping, would that increase the expense? Yes; you would need to make the cranes to apply to that work. The ships that I have lowered the waggons into the hold of have had large hatches, both long and wide. The trucks carried 9 or 10 tons of coal.
226. Is it possible to adopt some means of allowing the coal to slide quickly down into the hold of a ship? Yes; I have done it hundreds of times myself. I have had a platform like that formed in the centre, with arms for the purpose of shifting the coal away.
227. With what result? It saves trimming. It spreads the coal.
228. Does it save breakage? There is nothing will save the breakage more than lowering down the ship's hold.
229. It would not be practicable, I presume, to make the waggons very much smaller? That could be done.
230. Would that lead to an increase of expense in the carriage? Tremendous, not in the carriage, but in alterations.
231. When the rolling-stock is increased, could not smaller trucks be obtained? There is a big difficulty in the way. There is only one hatch where they could go down. They could not go down the fore and aft hatches.
232. It would be practicable to lower the waggons into the main hatch but not into the fore and after hatches? Yes.
233. Would it be practicable to adopt any loading appliance at the fore hatch which would have the effect of reducing the breakage of the coal? You could get nothing into the hatch, because the stays go right across the hatch.
234. So that you could do nothing but use baskets or drop the coal from the deck? Yes.
235. It would not be practicable to give up loading from the fore hatch? That would put the ship to expense by trimming up from the main hatch.
236. The coal does not drop quite so far in falling down the fore hatch? In some cases further, because we can lower the waggons down the main hatch.
237. There is, in your opinion, no way of loading coal through the fore hatch so as to avoid breakage? Not with the present appliances that the Government have.
238. Are there any known appliances that would enable this to be done? I do not know of any.
239. *Mr. Pittman.*] It would be impossible to use the distributor in the fore hatch? There is no room for it.
240. *President.*] Would it cost more to load the coal if such appliances were used? I believe it would, from what I have seen.
241. Can you give us any idea how much more? I believe it would cost from 1d. to 1½d. a ton more.
242. Will you tell us how much it costs now to load the coal—the average price? You are speaking of the trimming.
243. No; of the contract under which you undertake to load the coal? One penny and a sixteenth a ton. You cannot lose much time at that price.
244. *Mr. Pittman.*] So that it would add very considerably to the price to use the distributor? Yes; more for the trimming and more for the shipment.
245. Would not the distributor assist in the trimming? I do not think so.
246. The effect of the distributor would be to disperse the coal from the centre towards the sides of the ship, would it not? To a certain extent.
247. The effect of the distributor is to tend to reduce the heap in the centre of the hatch, and to cause the coal which would otherwise be in the heap to fall towards the wings? You would need to put the distributor in the wings.
248. The distributor would tend to cause the coal to move towards the wings? It must be in the wings.
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249. *President.*] How do you then explain the statement that it would cost more to trim the coal if the distributor were used? You could only ship a few waggons when you would need to pull this thing up. The coals would not run after half-a-dozen waggons. You would then have to shift the distributor, and take a piece out.
250. That would lead to extra expense? Yes.
251. You have already tried some of these appliances? Yes.
252. Could you describe any? I have tried the planks and plates.
253. You have made use of such appliances as you could get together? Yes.
254. There are patent appliances, are there not;—are they of any service? There are some. There has been one used, but never with any success.
255. Not with any success? No.
256. From what point of view—that of the loader who desires to get the coaling over quickly, or of the owners, who wish to have the coal as little broken as possible? The captains won't have them on board.
257. Do you know why? They take too much time to load.
258. Captains are anxious to get the loading done as quickly as possible? Yes.
259. Why is that—in order to get to sea? Yes.
260. And you are anxious to get it done as quickly as possible, because at a penny and a sixteenth per ton you cannot afford to waste time? Yes.
261. It is in everybody's interest that the coal should be loaded as quickly as possible? Yes.
262. It is nobody's interest to see that the coal is not broken? It has been loaded the last thirty-five years the same as to-day.
263. Those who are on the spot have an interest in getting the coal on board as quickly as possible in spite of any other consideration? That is so.
264. These accidents have occurred chiefly during the last eight or nine years? Yes.
265. Have you formed any idea as to why it is that these accidents have been more prevalent recently? Only that the ships are so much larger and contain a bigger body of coal. If the ships were properly ventilated there would be no fear of gases accumulating amongst the coal.
266. In your opinion has the gas that accumulates anything to do with spontaneous combustion? If the coals are well ventilated I do not think there is any fear.
267. Is that a matter of impression or experience? If there were a current of air through the ship I do not think there would be any fear of fire.
268. That is your opinion? Yes.
269. Perhaps you have never thought about this matter very carefully? I have times out of number. I have said they ought to put *spires* in the main hatch to ventilate it.
270. Some of the ships loaded by you have afterwards come to grief? Yes.
271. Can you give us an instance? The ship that came into Sydney with her coals on fire—the "Knight of St. Michael."
272. You loaded her? Yes.
273. Did you see her loaded? Yes; I was on board.
274. Was the coal loaded from the cranes in the usual way? Yes.
275. Was there anything abnormal in the weather—was it wet or dry? I think it was dry.
276. Was it very hot? It was warm.
277. How long did you take to load the "Knight of St. Michael"? I could not tell you from memory. It would be about 1,000 tons a day.
278. How many tons were there on board? I think she had about 4,000.
279. She would have taken about four days to load? Yes, perhaps not so much, as they worked night and day.
280. Did you trim the coal on board? Yes.
281. Can you let us have the names of the men employed in the trimming? Yes.
282. Were they under any supervision other than your own? I have a foreman for that purpose—to look after nothing but the trimming.
283. Was he in attendance during the whole time she was being trimmed? Yes.
284. Was there any inspection of the state of the cargo by the captain before she left? No; when the ship was in Sydney I asked the question if there was any fault with the trimming, and they said no.
285. You asked specifically if there was any fault in the trimming? Yes.
286. There was no inspection here at any time;—I suppose your foreman reported to you all was correct? Yes.
287. You did not yourself see that all was correct? Only in a casual way.
288. *Mr. Pittman.*] You said that the use of a distributor would save to some extent the breakage of the coal—would it not save it to a very large extent? I do not think it would. It might save in one way, but would not save when you consider the time it would take.
289. It is not a question of time—it is a question of efficiency. I want to know, not from your point of view as a contractor, but from the point of view of public safety, whether it would not very largely save the coal from smashing? It might not to such an extent as you imagine. There are many difficulties, because of the waggons. The big waggons you must keep up a certain distance before you can let go the door. If you had a distributor the coal would fall heavily at the first.
290. Supposing you could get a distributor to act well, would it not, in your opinion, effect a very large saving in the production of smalls? It would have to be something different to what we have here.
291. You do not think there is a distributor here that would? No; the only thing we have here is Spencer's from Glasgow. It is similar to Harper's, but not so large.
292. What does Harper's weigh? Three or 4 tons.
293. And Spencer's? Twenty-five cwt. I do not think more.
294. It is united in the centre, and can be unhooked? Yes.
295. *President.*] I suppose if you were paid a suitable price it would be a matter of indifference to you how you loaded the coal? It would not matter.
296. It would be a matter of indifference whether you dumped the coal at a penny and a sixteenth or loaded it properly at (say) double that price? I do not think we can make any difference. The only thing you can do is to lower the coal down the ship's hold.

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297. That seems to be a question of either altering the waggons or the ship. I take it that it would be easier to alter the waggons than the ship? You could not do that very well. The distance that these waggons have to travel would make it an expensive affair.
298. No doubt it would increase the cost of carriage, but apparently there is no remedy to be suggested that would not involve increase in cost? It would involve great cost either way.
299. What is Newcastle coal worth on an average per ton landed at the ship's side? Seven shillings and sixpence.
300. The extra expense of about 1d. per ton would possibly make a considerable difference in the handling of the coal? I do not think it could be handled much cheaper than it is, unless you alter the whole thing and get the cranes built for the particular purpose, and have very large hatches right out to the wings. The A.A. Company have got shoots, and the coals suffer more breakage thro' than at the cranes. I have never had any accident with them.
301. There has been a good deal of evidence to the effect that the accidents on board ships are caused through having fine coal and dust together in the main hatch? The A.A. Company's coals are fine, and very easily broken. Their shoots are much higher than the cranes.
302. As a matter of fact, do they break the coals as much as the cranes? Yes, and more.
303. And accidents do not occur with them? No.
304. Have none of their ships been on fire? None.
305. Have you loaded the coal from the shoots for the A.A. Company? Yes; I take the coals there as well as at the cranes.
306. Mr. Pittman.] Distributors are used here occasionally, are they not? I think Spencer's affair has been used about three times, and Harper's once. It was taken out of the ship as being a failure. I was not there at the time.
307. Suppose the captain of a ship were to propose to use a distributor, would you raise any objection to it? No; I would be always ready to assist the ship.
308. But you would be losing money by loading the ship with a distributor? Yes.
309. And you would have no objection to losing it? I do not object to lowering the coal down with a distributor, but there is so much work attached to it—lifting it and putting it on board the ship. We could not go on for ever using it without coming to some arrangement with the Railway Commissioners. If the Commissioners wanted it done it would be a matter for them and me to settle.
310. President.] It could be done by entering into a different form of contract? Yes; the Commissioners are always glad enough to further the port. I had a talk with Mr. Eddy about the same thing, and he was agreeable to do anything to save the coals.
311. Mr. William Hudson, an employee of Messrs. Russell & Co., was then called in, and informed by the President that the Commission required specific evidence in support of the statement made by Mr. Russell that he knew of certain cases in which fire had originated on board ships amongst the large as distinct from the small coal and dust, and in a position away from the hatch.
312. Mr. Hudson stated he thought Mr. Russell must have been referring to the "Ellen A. Read," which, he said, was not trimmed by the firm.
313. The President also required him to furnish a list of the ships which had been loaded by Russell & Co., giving particulars as to the tonnage of the vessels, the date of loading, the amount of coal carried, the kind of coal, the name of the master, stevedore, or trimmer who trimmed the cargo, etc., as would be asked for by letter from the Secretary, since the year 1888.
314. Mr. Hudson said the information would not take long to prepare, but he would have to find out the names of those ships to which accidents had occurred.

[Witness withdrew.]

THURSDAY, 3 SEPTEMBER, 1896.

[The Commission met at 2.30 p.m. at the Custom House, Newcastle.]

Present:—

PROFESSOR RICHARD THRELFALL, M.A., PRESIDENT;
And EDWARD FISHER PITTMAN, Esq., A.R.S.M.

Captain Parkhill sworn and examined:—

- Captain Parkhill.
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315. President.] You are Captain Parkhill? Yes.
316. You are the master of a ship now in port? Yes; the "Scottish Lochs."
317. Is she an English ship? Yes.
318. What kind of ship? An iron ship.
319. What is her size? Her tonnage is 3,930.
320. You have been in the coal trade for some time? Since I went to sea.
321. How long ago? Twenty years.
322. Have you ever had any trouble with heating? The only trouble I ever had was when I was a second mate. We had a cargo of North Country coal which heated.
323. Did you form any opinion as to the cause of heating? I formed an opinion it was because of the ventilation of the hold.
324. So that you do not believe in ventilation? I think ventilation only helps the coal to heat.
325. You have never had any trouble with Newcastle coal? No; I have carried four cargoes.
326. Where did you carry them to? San Francisco—three cargoes of Wallsend and Greta coal.
327. You have had them both wet and dry? On the last occasion I loaded Wallsend coal it was in very wet weather, and the water was almost dripping out of the trucks.
328. Had you any difficulties with it? It did not, I believe, heat with us. The temperature was normal all the way.
329. You did not ventilate it in any way? Only the hatch ventilation. Our ship is very well ventilated. We have about fourteen or fifteen surface ventilators.

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Parkhill.

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330. In your opinion, it is desirable to have surface ventilation? I think so.
331. To get rid of the gas? Yes.
332. Will you tell us what procedure you adopt in loading the coal on your ship? Every time I have loaded here it was in the ordinary way.
333. At the cranes? Yes.
334. You have employed one of the stevedores of the port? Yes.
335. Who have you employed? Russell & Company this time, Dalgety's people last time, Sullivan the time before that, and I think it was Russell loaded us the first time.
336. On no occasion have you had any trouble? No; I always have the cargo very well secured with shifting-boards.
337. Do you give personal supervision to the loading? I see that the work is done to my own satisfaction.
338. That is the business of the inaster of a ship? Yes, of course. And during the progress of the loading I always keep one officer looking after that the whole time, and go occasionally myself to see how things are going on.
339. Do you see that the coal is well packed in the wings? Yes, to see that no empty spaces are left in the coal.
340. Have you or your officers ever had to complain of the loading? Not much, only just occasionally. The special thing is to see that the trimming is done properly. They seem to trim fairly well. You have less trouble with the trimming here than in England.
341. Are they very careless? No; they will do what you tell them very readily.
342. Have the stevedores been willing to meet you? I have never had any difficulty.
343. You have no complaint to make? No; I have always had the coal as I wanted it.
344. Have you had the coal dumped down the main hatch? Yes.
345. You have never taken any precaution to spread it? No; we have had no appliances for that at all.
346. Do you take the temperature of the coal? We do that every day.
347. Have you ever observed any tendency to heat? Nothing out of the ordinary. When you have a high temperature on deck, you will find the temperature rise slightly, but not abnormally.
348. There appears to be good reason to suppose it is the pounding of the coal into fine dust under the main hatch that gives rise to spontaneous combustion? I think so.
349. In spite of that you have never taken any precaution to prevent it? I always thought the Newcastle coal was safe. It is only this time I have heard of it taking fire spontaneously. Several kinds of coal at home are very liable to go that way.
350. Have you on this occasion taken any extra precaution in consequence of these reports? No; the only extra precaution I was going to take was to lower the waggons down the main hatch.
351. You are going to take that amount of extra precaution? Yes.
352. In regard to the fore and after hatches, that, however, cannot be done? No; the hatches are too small. Where we have not a large body of coal we carry all the cargo in two hatches nearly. The ends are practically empty.
353. In the end hatches, you have to dump the coal? Yes; we cannot lower the waggons down.
354. Is it possible for the distributors to be run down the fore and after hatches in such a way as to shoot the coal through the 'tween decks? Yes.
355. Do you think it a feasible and reasonable thing to have some sort of slide passing through the 'tween decks? They have much the same sort of thing only in a different way. They run the coal along iron shoots. They have to make a pile and shoot it over the pile.
356. That would increase the expense of loading? I daresay it would. I could not say positively.
357. It has been pointed out that owing to ballast being carried fore and aft, it is difficult to get the spreader to work without the first lot of coal put down the main hatch being thrown upon the ballast? The ballast is invariably carried amidships, unless they have some cargo already there. They must get the main hatch clear first. You cannot take a big ship to sea that is only ballasted in the ends.
358. There is no reason whatever why the ballast should not be amidships? The ballast should be amidships.
359. Supposing for any reason, it is not amidships? There is no reason why the ballast should not be amidships.
360. There is no reason why the ballast should be fore and aft? I should say not. I invariably carry the ballast amidships. In fact, I have never seen it carried any other way.
361. I understand it is the practice to sweep out the lighters, where coal is loaded from lighters, and to throw the sweeping down the main hatch? I have never loaded in that way. I have always loaded from the cranes, or, at home, from tubs.
362. Do you think that tubs load coal with less breakage than cranes? I do not think they do.
363. It has been suggested that in certain cases arrangements are made by the stevedores that captains of ships should pass over the supervision of the stowage for some pecuniary consideration? I do not know; I have never heard of it. Such a thing has never come to my knowledge. It is a thing I look upon as of the most importance that the ship should be properly stowed.
364. Such a thing has never come to your knowledge? I have never known of such a case. I do not think I ever came across a man quite so foolish.
365. *Mr. Pittman.*] You mentioned that you had carried four cargoes of coal from this port? No, three; this is the fourth time now.
366. Can you recollect whether any of those were loaded in very hot weather? No; I have loaded in November, April, and July. They were all in medium cool weather.
367. Do I understand that when you were having your ship loaded with coal, you personally supervised the trimming? Decidedly so.
368. You think that is the duty of the captain? Yes; I think it is the duty of every master to see that his ship is properly loaded.
369. So that you have the stevedore in charge under personal inspection? Yes; and I invariably keep one officer—generally the second—looking after the stowage.
370. You do not find the trimmers make any objection? I have never had any difficulty with them at all. The ship is being trimmed by Russell now. At other times I have taken the stevedores I thought best. I have always found they have met my wishes.

- Captain Parkhill.
3 Sept., 1896.
371. *President.*] Do you think it possible for a stevedore who wished to load badly to slum his work? I do not think so.
372. You think the cargo could not be badly loaded? Not with proper supervision.
373. It is possible to have sufficient supervision? Yes; in large ships like mine, you must look after the stowage to make the ship easy. The stevedores will sometimes run too much coal into the lower hold. I have to keep my 'tween decks well filled up. If I did not, her centre of gravity would be too low.
374. Do you think the use of shifting-boards is essential? I think it is. It is absolutely necessary.
375. Do you think the shifting-boards should be the whole depth of the 'tween decks? I have them about 6 feet in the 'tween decks. We have 3-foot shifting-boards, and I put two boards in the lower hold close up to the beams.
376. Have you formed any opinion as to the cause of the increase in casualties here during the last few years? I have formed an idea that most of the ships are lost through getting hove down in bad weather and the coal shifting.
377. In some cases, at all events, the coal is not as well and carefully loaded as on your own ship? I know of cases where masters of ships have left here without shifting-boards.
378. Can you mention such a case? I cannot from memory. I have read of several cases here lately.
379. That would be the fault of the master of the ship? It may be his fault or not. It may be that he cannot provide shifting-boards. He may not be allowed to go to the expense.
380. Not be allowed to buy them? I cannot say: I am only presuming that.
381. It would, however, be either his or the owner's fault? Quite so. I know in my case anything that I said was wanted the owners are quite willing to bear the expense of.
382. You have never had any difficulty in getting stevedores to do just as you wanted them to do? Exactly so.
383. If you did not see to the work yourself, it might be done faultily? Of course they will not shovel the coals more than they can help.
384. Have you formed any opinion as to the cause of heating of the coal? I do not know, unless it is on account of the small coal in the bottom of the main hatch, under the heap. I think that coal shipped wet, and getting much broken, is more liable to spontaneous combustion than when shipped dry.
385. It has been suggested that in some cases the cooks on board ship are not allowed to throw the ashes from the galley fire overboard, and so they put them down the main hatch? There must be mighty little discipline then.
386. What does your cook do with the ashes from your ship? Puts them into a pail and takes them ashore. I would not let him throw the ashes down on top of the ballast.
387. Have you anything about which you would like to inform the Commission? I do not think so. I have had practically no experience with cargoes heating, except in that one case, seventeen years ago.
388. Of English coal? Yes; Northumberland coal.

[Witness withdrew.]

Mr. J. D. Beeston sworn and examined:—

- Mr J. D. Beeston.
3 Sept 1896.
389. *President.*] What is your name? John Denison Beeston.
390. And your business? I am shipping manager to the Australian Agricultural Company.
391. How long have you been in that position? About six or seven years.
392. Has your experience been limited to that time in shipping matters? I had experience as a youth in a wharfinger's office, berthing ships, and since that time I have always taken an interest in shipping matters.
393. What is the nature of your duties in connection with your position? To arrange all matters in connection with the shipping of the company's coal. We ship at private shoots.
394. You have your own shoots? Yes.
395. You ship entirely from those shoots? With very few exceptions. With coal that we do not ship there we have nothing to do, except the business part.
396. With regard to the coal that you ship at your private shoots, is it part of your business to attend to the trimming;—are you responsible for the trimming? We are not responsible.
397. Does the company undertake the trimming of the coal? The ship employs the trimmers.
398. The ship's master? Yes; the same as at the dyke.
399. He employs the stevedores? Yes.
400. Have you ever been down in the hold of ships during the time they have been loading from the shoots? Frequently.
401. You have seen the trimmers at work? Yes.
402. Is it in your experience that they trim imperfectly;—can you give us any idea as to whether the trimming, as a rule, is well done? I would not like to say, as a rule, it is done imperfectly. I have seen some cases that I would call rather bad trimming.
403. Were there cases where the officers of the ship allowed the trimmers to do as they liked? My experience is that officers as a rule seem to take very little interest in it.
404. Is it their business to see that the trimming is properly done? It seems to me the contractor just gets the coal below the hatches and brings the ship down to her marks, and that is all the shipmaster and officers seem to care about in the majority of cases. I have known some officers to go down and see themselves to the trimming.
405. Is it possible for an officer who is anxious on the subject of the trimming to see that it is well done? Yes.
406. There is nothing to prevent him from going below to ensure the proper trimming of the cargo? Not that I can see.
407. There is no opposition on the part of the trimmers? No; I should not think so. There is nothing which would prevent me from going down if I were in a similar position. I have heard it said that trimmers would throw pieces of coal, but I think it is only talk.
408. You have never known such a thing to be done? No; I have not known it to be done. I have heard it talked about. I do not know whether I heard it said it had been done or it might be done.
409. You have heard it suggested that trimmers would regard such conduct on the part of the officers supervising the trimming as interference? Yes; I have heard that said at an inquiry at the Chamber of Commerce here some time ago into the shifting of coal cargoes.
410. Who said it? A man named Bertram, a master stevedore.

411. What do you consider constitutes bad trimming? Under the 'tween deck stringers, etc., should be filled up, not scamped.
412. They are not filled up? Not always; one particular case came under my notice. The ship was loaded. I got down the fore and after hatches, and there was room for me to stand up in the wings above the coal. That, to any practised hand, is a clear case of bad trimming, where the coal in the middle of the ship is high up, and nothing in the wings. The fore and after walls of the main hold were not backed up by the other coal much above the 'tween decks.
413. That would be a typical case? In my opinion it would.
414. Have you had any experience in regard to the heating of cargoes? No.
415. None of your coal cargoes have heated? Not that I have heard of. One vessel with our coal is missing; we cannot tell what has become of her.
416. A vessel loaded with your coal? Yes.
417. What was her name? The "Trinidad." Lloyds are seeking for information about her. She is now over 150 days out bound to Caldera.
418. How long ought she to have been out? Not more than sixty days.
419. Did you superintend the trimming of her cargo? No, I did not superintend it. I think I was down the vessel's hold once. When I have been down in any case it has been out of curiosity, and to form an idea of the number of empty waggons I could reckon on getting; it was not with a view to inspect the trimming.
420. Was the trimming, as far as you remember, satisfactory? Yes, I think it was.
421. Who was the stevedore who trimmed her? Ryan.
422. Was the coal shot down from the tips to the bottom of the lower hold? Yes.
423. Did she have a cone under the main hatch of broken, smashed-up coal? I do not know that it was smashed up more than is usual.
424. I suppose the coal fell 25 or 30 feet? This vessel was only a small one, carrying about 1,000 tons.
425. How far would the coal fall? It would be about 17 or 18 feet.
426. Were shifting-boards employed? Yes. When she came alongside she had shifting-boards right across the square of the main hatch, but I instructed the mate to take these boards out from the main hatch, as they would have broken the coal, and they would not stand by the time the hatch was run up. They would have been knocked down, and would have been no benefit to the ship. It would have thrown the coal on one side and given the ship a list. I told the mate we would stop tipping before the hatch was quite run up, and give him an opportunity to put up the top shifting-boards. One or two were put in, but they did not seem to take very much time about it. They may not have been put in well. I do not think they are necessary right in the main hatch.
427. They were left elsewhere? Yes.
428. You can think of no reason why the ship "Trinidad" should have come to grief more than any other ship? No; she was an old ship, but her hull was strong. She took the ground for a short time in loading, but not to any extent to account for the loss.
429. Was she owned here or in England? In England. One thing I remember, there was a strong smell of ammonia in the ship. She had had a cargo of guano on board previously, but I do not know whether that would interfere with her in any way.
430. With regard to the stevedores here, can you say whether, on the whole, they do the best they can under the circumstances, or is the rate paid so small that they must necessarily scamp the work where possible to do so? I think the rate paid makes it necessary for them to save some of the labour. I do not know that it would make the conscientious men scamp the work.
431. There is a temptation for them to scamp the work if not watched? I should think so. Some of the stevedores seem to take a good deal more pains than others.
432. It has been suggested that some system of licensing the stevedores would be of advantage in such a way that the licenses could be cancelled in the case of frequent mishaps occurring;—do you think such a system as that would have any advantage? I think it would.
433. Do you see any reason why they should not be licensed—would it interfere with the trade of the port? I do not think so, if there was a sufficient number of them licensed so as not to cause a monopoly.
434. Is the actual trimming a matter which requires a certain amount of skill, or could any man strong enough trim coal? It requires a little skill that might be picked up in a very short time. It is like most other work, you want to get used to it a little.
435. An ordinary strong, willing labourer could learn, I presume, in a week to be a competent trimmer? If he were among good men.
436. He might not learn to work as quickly, but he would learn to do the work properly? Yes.
437. We have heard of cases of candles being left among the coal by the trimmers when the candles have been in a position in which they could not easily be recovered;—have you ever heard of such a case? I have never heard of such a thing happening. It strikes me as a thing very likely to happen.
438. You have never heard of a case in which it actually occurred? No. It has struck me that the men might knock live ashes out of their pipes.
439. The men trimming a ship would not have much time to smoke? They make time to smoke. They have regular times for knocking off for their beer, at 11 and 4 o'clock.
440. We have also heard, incidentally, that in some cases trimmers work twenty-four hours straight on end;—is that the case? I suppose you would call it twenty, taking out meal-hours.
441. Do you think a human being could keep in full possession of his faculties for twenty hours? I would not like to keep a man employed that length of time and expect him to do his work properly.
442. What is the reason for this extraordinary length of employment—what is the cause at work which makes such a thing usual? I think it used to be a rule of the Union that a man who started a ship should go right on with her. I think that is one of their rules; or, if she worked at night, to go on for the first night.
443. So that it was really by the trimmers' own wish? Yes.
444. What is the motive that would lead a man to deliberately put himself in such a position? They get 6d. an hour more for night-work than for day-work, and a man who wants to make money would rather work night-work than day-work.
445. It occurs to me that if a man has done nineteen hours' work in the hold of a ship he would not care much whether the ship was properly trimmed or not;—do you agree with that? Yes.

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- Mr. J. D. Beeston.
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446. Has it been the custom to ventilate the cargoes which have been loaded from your shoots? Not anything more than the usual ventilation in a ship.
447. Do they ever put ventilating pipes down? No.
448. Do you put down pipes for testing the temperature by thermometers? No; that is a matter for the ship. I have noticed it frequently in the ships of late years—the last year or two.
449. It is a matter entirely for the master? Yes.
450. You have been singularly free from casualties yourselves? Yes.
451. You have never had a case of spontaneous combustion? Never one reported to us.
452. Nor of heating? Not reported to us. There is one case that I thought was favourable to heating, judging by the theories held as to the shipping of wet coal and coal freshly hewn. A ship in port at the present time loaded last February twelve months during boisterous and wet weather. We were short of coal at the time, and some of the coal was brought straight from the pit and tipped into the ship. On the other hand some of it was standing in heavy rain, and was saturated with water. On the captain's return here I asked him whether he had had any signs of heating, and he said none whatever.
453. Where did he take the cargo to? Valparaiso. Most of our foreign coal goes to South America.
454. Have you known of a case of your coal heating which has not been officially reported to you? No.
455. You have absolutely heard of no case of the kind? No; I have not. Of course, some of the ships have never come back, but I have asked a good many of the captains.
456. Do you think the loading from the tips enables the coal to be loaded with less breakage than from the cranes? No; it has its advantages in some ways and its disadvantages in others. I think it would be subject to the same amount of breakage. Some people hold that it would cause more breakage at the shoots than at the cranes, it is a matter of opinion.
457. What is the advantage of loading from the shoots? When you have a higher level it is much quicker. We can ship it quicker there than at the dyke. Our company have had shoots ever since they started.
458. It does not require the same expenditure of time? No.
459. What are the drawbacks connected with loading from the shoots? Sometimes we have not sufficient height with the big vessels; sometimes the shoot will be a few feet higher than the hatch, and the coal is dropped a little more.
460. What is your idea as to the cause of the increase in casualties during the last few years? I could not come properly to a conclusion as to the cause of it. It seems veiled in mystery.
461. Is there any other matter about which I have not asked you in regard to this subject which you could lay before the Commission? Nothing I can think of just now.
462. *Mr. Pittman.*] Is the shoot adjustable in any way? It is adjustable, but we like to have the shoot fixed so that the coal will run gently down it. Sometimes it is higher than the coamings of the hatch, and when the ship gets lower on being filled we use a lower shoot. We have two levels.
463. Would it not be possible to use some sort of telescopic arrangement on the shoot? I hardly see how it could be done with our shoots. I have heard of it in some of the tips at home.
464. On something after the same principle as the travelling cash system used in the shops in Sydney, where the ball holding the money falls down an inclined plane and drops into a stocking;—something like that might be adopted to prevent the coals falling any great distance? I do not know whether we could make anything that would stand the weight. There is a good deal of wear and tear.
465. What are your shoots made of? Iron.
466. Could not a telescopic arrangement be made of iron? That would only increase the breakage; the coals going down in a smaller compass would be liable to more breakage.

[Witness withdrew.]

Captain H. Porter sworn and examined:—

- Captain H. Porter.
3 Sept., 1896.
467. *President.*] What is your name? Harding Porter.
468. You are master of a ship? Yes, the "Avonia."
469. Now in port? Yes.
470. We understand you have had at some past time a case of heating of coal cargo? I had a ship burnt up with me in 1875, but not from Newcastle.
471. You never had any heating with Newcastle coal? I never loaded here before. This is my first visit to Newcastle.
472. What coal was it? It was loaded in America. Cumberland coal they call it there. It is a semi-bituminous coal.
473. What was the name of the ship? The barque "Senator."
474. Did the cargo heat? Yes, it caught fire.
475. Will you kindly favour the Commission with a short account of what occurred? In those days we used to ventilate. I had a platform in my ship, and down ventilators connected with it. We took in wet coal for stiffening. It was raining heavily at the time. The coal was fine. I think it was having wet, fine coal and underneath ventilation that caused it to burn.
476. How long was she in loading? About eight days.
477. As far as you know, it was the fine, wet coal being exposed to the draft of air from the through ventilation that did the mischief? Yes.
478. You have no reason to suppose anyone left a light in the hold? No, that was impossible. The fire was in the main of the ship close to the ventilators. The ship had been eighty days out before we knew of the danger.
479. How was the fire discovered? The first thing we discovered was smoke coming up through the poop, and we found fire down below. We dug down and found the whole of the middle of the cargo afire. We discharged over 200 tons overboard, and kept filling in with water. At last it burnt out just at the water's edge, and we had to leave her in boats.
480. Was she a wooden ship? Yes; and half an hour after we came away she was all ablaze.
481. Is it your practice, in carrying coal cargoes, to use shifting-boards? Not with the ship I am now in. I would if I had a tender ship.
482. You are in a safe ship? Yes. Her stanchions are 2½ to 3 feet wide.

483. They are practically shifting-boards? Yes.
484. Have you been satisfied with the way in which the stevedores do their work in this port? So far, I am very well satisfied. He has only been working two days.
485. Do you personally supervise the trimming of the coal? Yes, I look every day. I tell him what I want done.
486. He has shown a disposition to meet you? Yes.
487. Is there anything about which you would like to inform the Commission? I think the way they have here of putting the coal into the ships is very bad, in having to drop so far.
488. What would you propose as an improvement? I would have tubs that would hold a ton or two, that could be lowered down into the hold.
489. A skip? Yes. In my own case now, the coal drops about 30 feet.
490. That is too far? Yes; when the first coal drops to the bottom it must be in a fine state.
491. You think that would increase the danger from fire? Very much so.
492. And also would diminish the value of the coal? Yes.
493. Would you, as a man of business, be prepared to pay a little more for the loading of the coal provided you could get it into the ship without breaking it? If I were buying the coal I should certainly prefer to have it in a large state.
494. You would be prepared to pay a little more? Yes.
495. Have you had any experience with patent methods of distributing the coal? No.
496. You suggest that the coal should be lowered in small quantities and gently? Yes; lowered into the hold. I should suggest as a preventive of fires that coal should not be shipped wet.
497. From your former experience you are inclined to think the wetness of the coal had something to do with the fire? It tends to heat the coal.
498. That is your impression? Yes; I have only my own impression.
499. There is a large amount of evidence taken before the English Commission on that point, but the Commissioners, I think, were not very certain of the intrinsic effect of moisture? I cannot say.
500. *Mr. Pittman.*] What is the name of the stevedore who is loading your vessel now? Sanderson.
501. A master-trimmer? Yes; I made a contract with him.
502. Can you recollect what time of the year you loaded the cargo of Cumberland coal in the ship "Senator"? I left in the middle of June.
503. It was in hot weather? Yes; very hot crossing the equator.
504. Especially at the time you were loading? Not so very hot then. It was in Spring weather, probably such as we have here now, perhaps a little warmer.
505. What was the tonnage of the coal? I think I had 1,600 tons.
506. Was the fire under the main-hatch when it broke out? Yes, and under the poop-hatch. It was in both of these places.

[Witness withdrew.]

II. Ford sworn and examined:—

507. *President.*] What is your name? Henry Ford.
508. What are you? Master stevedore and coal-trimmer.
509. How long have you been in that business? In the stevedoring business between twenty and 30 years.
510. Have you ever been a working coal-trimmer yourself? Yes; in Victoria. I have worked right through, in Victoria, Sydney, and here.
511. You take contracts to load ships with coal? Yes.
512. It is the business of the master of the ship to put his ship in position at the wharf? Yes.
513. It is the business of the crane contractor to hoist the coal on to the ship? Yes.
514. It is your business to stow the coal? Yes.
515. It is, I understand, a matter for the master of the ship whether he will employ shifting boards or not—it is not a question which comes before you? It is not left to the trimmer.
516. You are paid so much a ton for stevedoring? Yes; according to tender.
517. What is about the average price per ton? At the present time there are many prices—2½d., 2½d., 2½d., 3d., and 3½d.
518. What is, in your opinion, a fair average price? Between 3d. and 3½d.
519. And for that you can afford to trim a ship perfectly? Yes, properly; as it should be trimmed.
520. What, in your opinion, is the chief cause of faulty trimming? Taking the ship too cheap. When a man sees he cannot make anything out of the trimming he puts the ship under the crane and runs up every hatch. In so doing, he only has to employ about two men. When he gets the coal run into every hatch the ship is pretty well down to her mark.
521. He runs the coal into each hatch as full as it will go? As full as he can run it.
522. Before he begins to trim at all? Yes.
523. He only employs two men during that part of the process? Yes; when he comes to the main hatch of the vessel, where he should trim the body of the ship full, she does not take enough coal to fill her body up properly. They slum the ship by doing this. They cannot turn to and fill the body of her, else she would be below her mark.
524. You mean to say they put too much coal in the fore and after hatches? Yes; they run the ship up too much in those hatches by taking this cheap work.
525. They do not put enough coal into the main hatch to fill the ship properly amidships? No.
526. Is it not usual to fill the ship fore and aft? No; it is usual to fill the body of the vessel, and if you have any space left the coal should come from fore and aft.
527. It makes the ship sail better? It makes her safe.
528. What do you consider to be the proper way of setting about trimming? I consider to load a vessel properly you should put her under the crane at the main hatch; run up that hatch, and get it high enough to put your plates in; put on all the men you want to trim the ship and fill her body first.
529. Keep on filling in the main hatch? Yes, until you get the body of the ship practically full; then shift into the after hatch and put the ship down to her draught there; then go into the fore hatch and finish the vessel off.

Captain
H. Porter.
3 Sept., 1896.

H. Ford.
3 Sept., 1896.

- H. Ford.
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530. Is the process of building the wall in trimming a comparatively expensive one? It is expensive, because while you are building the wall you could be filling up; but the ship would not be so safe.
531. Is the building of the wall a matter requiring skilled labour? Yes.
532. Nobody but a competent person is to be entrusted with that work? No. They should build walls in all ships. When you have built the wall you put the other coal up against it, and it is solid; whereas, if you have no wall, you throw the coal anywhere about the ship.
533. There are, I presume, plenty of competent trimmers available in the port? Yes.
534. There is no difficulty in getting them? No; not if you pay the wages.
535. What are the wages? One shilling and threepence day-work; 1s. 9d. night-work.
536. We have heard, and it has been corroborated, that sometimes the trimmers desire to work for twenty hours continuously? That lies with the employer.
537. Do you ever employ men trimming for twenty hours continuously? I have done it occasionally, such as at the time of the big strike before this, when there were so many ships under the cranes, and it was difficult to get men.
538. Is it a rule with the trimmers' Union that the men who begin the day-work trimming should have the privilege of getting the night-work? No.
539. Is there anything in the rules of the Union that would lead trimmers to desire to work for twenty hours on end? No. They are supposed to work ten hours, and then another shift comes on, which is relieved in the morning, if the ship takes thirty hours.
540. There is no doubt that some of the trimmers do work twenty hours? In the same boat.
541. What is the cause of that? Some of the bosses get a class of men and keep those men on day and night, instead of taking other men and relieving them.
542. Is it by the desire of the men or the masters that they are kept on? By the desire of the men as well as the masters.
543. The men employed like to have the advantage of the additional 6d. an hour? Plenty of them do.
544. You never employ the men like that yourself? I always give the men ten hours, and then put on another shift. If we cannot get trimmers we have to keep them on extra time.
545. It is not your practice to allow men to work more than ten hours if you can help it? No.
546. Are you of opinion that when a man has worked at trimming for fifteen hours he is in a condition to work any longer? If he does ten hours of trimming he is quite tired enough. He is not much good after that.
547. He is liable to be careless? Yes.
548. It is quite competent for a master to give that degree of attention he desires to the loading of vessels? Yes.
549. Would you be disposed to put any obstacle in the way of the master of a vessel who desired to superintend the trimming? It is right he should do so, and to send his officers down if he cannot be there.
550. Would your trimmers be disposed to resent the intrusion of any ship's officer? No.
551. We have heard stories of trimmers threatening to throw pieces of coal at ship's officers in the event of their interfering? I have never heard of it.
552. Did you ever hear a whisper of such a thing? No.
553. It has never happened in your experience? No.
554. You would give the captain or his officers every facility of inspection? Take his instructions, and trim accordingly.
555. You would consider the master was responsible for seeing his ship trimmed properly? Yes.
556. You know of no particular reason why he should not have the work done exactly as he likes? No.
557. There is nothing to prevent him getting the ship trimmed exactly as he wishes if he will only take the trouble to look after it? No.
558. Is it customary for the master or officers of a ship to take the trouble to see that the ship is properly trimmed? I have had several vessels where the mates have been sent down. I have had second mates sitting down below for several hours; go up and come down again and watch. At other times I have never seen an officer or captain down the hold.
559. I suppose a vigilant officer should certainly assure himself that the trimming was done properly? He should do.
560. There is nothing to prevent him doing so? No.
561. He would not be built out? No.
562. With regard to the method of loading from the cranes, evidence has been forthcoming to the effect that when cargoes heat they do so in consequence of the smashing of the coal into dust under the main hatch, owing to the practice of dumping the coal from a great height;—in your opinion, is it possible to make use of any of the contrivances in existence to avoid breakage? In Spencer's, I think it is, the coal falls on a very heavy iron plate and tumbles down below; and when they take the plate out you have to fill up the hatch just the same. I cannot see that this plan is any improvement.
563. Have you ever tried it? I have seen it tried.
564. Where working? At the Island.
565. Have any of these methods of distributing been tried by you? No.
566. You simply allow the coal to be dumped and then trimmed? Yes, but I do not believe in it.
567. What would you consider to be an improved method? I should propose that each colliery proprietor should have a certain kind of waggon made to carry 5 tons, and these small waggons should be lowered down to the ship's bottom.
568. Would waggons to carry 5 tons be small enough to be lowered? Say 4 tons. Some ships have very large hatches. I have a ship now where I lower the waggons.
569. How many tons are there in the waggons which you lower? The Wallsend, I think, run about fourteen to the 100 tons.
570. If the waggons were made to only carry 4 or 5 tons, you think that, in the majority of instances, they could be lowered into the fore and aft hatches? They could if they were not so long and broad, and were made a little deeper.
571. There would be the increase of cost for new waggons to be considered? Yes.
572. Would it cost more to load from such waggons? It would not make much difference, or but very little.

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573. Would it make much difference to the crane contractor? It would make a little difference to him. There are boxes used, two of which go to one waggon. They make a little difference in loading vessels.
574. More is charged for loading from boxes? I do not know; we charge just the same.
575. It would make no difference to you? No.
576. I understand the average price the crane contractor charges is one penny and a sixteenth per ton;—supposing the system you propose were adopted, would it increase the cost by a half-penny per ton? No; it would cost very little—it would cost about one-eighth.
577. The chief source of expenditure would be in the building of the waggons in the first instance? Yes. You can put what patent you like down the hold; the coals come on to it, and it causes smashing.
578. Supposing you loaded the wings with the distributor, what is to prevent your trimming the coal under the main hatch from the wings? If you trim the coal from the distributor into the wings, you would have to trim the wings into the main hatch again.
579. With regard to Harper's appliance, is that a feasible one? Not in all ships.
580. In what sort of ships could it be used? It would be feasible in ships with open 'tween decks.
581. In iron ships? Many iron ships have close 'tween decks.
582. So that that method might be adopted in some ships and not in others? Yes.
583. It seems to me that it would save breakage to a considerable extent? It would. It would cost more, because you would have to trim back from that under the hatch again.
584. You charge about 2½d. a ton for trimming? I never do a vessel under 3d. a ton.
585. Supposing you had to trim with an arrangement of that sort, what would you charge? It would cost, I suppose, another half-penny per ton to trim the coal back.
586. It would improve the quality of the coal somewhat? Yes.
587. Do you suppose it would improve the quality to the extent of a ¼d. a ton? I should think it would, and also make more work for the trimmers. If we had waggons that could be lowered until we came up to the hatch, and then put in our plates, that would save the coal.
588. Is there any reason why open hatches should not be made in the 'tween decks? They should all be open, not only for the trimming, but for the men in case of accidents.
589. As a means of exit? Yes. I have seen vessels run into while loading at the dyke. Speaking of fires, I can give you a little light on the subject. Vessels come here with general cargo and put it out on Queen's Wharf. She is then ordered down to the cranes, and has to leave perhaps in a hurry, so as not to lose her turn at the dyke. I have seen cases where the holds have not been properly swept up, and they have all sorts of rubbish and bits of matting swept under the keelson, and there it lies. This old matting, I think, is a great cause of many ships catching fire.
590. Does every ship have old matting in her? Most of them, and bits of wood from the cargo of the ship. I always get the captain to have the lower hold properly swept up. In taking coals out coming from home there may be a certain amount of English coal down the fore peak, and I have asked the captain to have it shifted. Leaving it there so long, and putting our Newcastle coal on top, is likely to cause fire.
591. Why? Because it has been lying there so long.
592. Does that make it more likely to catch fire? The longer the coal has been lying the more likely it is to catch fire.
593. That is your impression? Yes. English coal is very gassy, and our coal is not.
594. *Mr. Pittman.*] If it has been lying there so long, would it not have had time to get rid of its gas? Not if it had been covered up.
595. What is the depth of the present waggons? Somewhere between 6 feet and 6 feet 6 inches.
596. Does it not occur to you that a great deal of the smalls that find their way into the hold of a ship are produced from the coals having to fall into these deep waggons? Yes; it would certainly break the coals up.
597. If you increased the depth of the waggons there would be a greater quantity of "smalls" before the coal got to the ship's side? Of course, the lower you drop it the more it would break.
598. In some collieries they make the sides of the waggon as low as possible to prevent breakage;—to increase the depth of the waggon would be bad, would it not? Not for the fore hatch. Supposing you took the wings of the waggons off, and made the sides square with the bottom, they would then hold about 3 or 4 tons.
599. To make the sides perpendicular? Yes.
600. Coal falling down an inclined plane is not so liable to breakage as when it falls perpendicularly? No.
601. To make the waggons higher would increase the quantity of "smalls" before they got to the ship's side? I do not think it would increase it much.
602. *President.*] Have there been any accidents to the ships which you have loaded? No, sir.
603. None of the ships loaded with coal by you have suffered from heating of cargo or shifting of cargo? No.
604. How many have you loaded? A good many.
605. A suggestion has been made as to whether it would not be a good plan to license the master stevedores such as yourself? I believe it would.
606. Would you make it so that the license could be easily obtained by anyone having sufficient experience in the business? Quite right.
607. And do you think it would be a good plan to take the license away from anyone when the ships loaded by him met with more than a certain percentage of accidents? Yes.
608. That would give the stevedore a definite interest in loading the ships properly? In making him look after his work as it should be. There are men working on the wharfs as labourers who have never trimmed coals in their lives. Some of them have cards printed and introduce themselves to captains as stevedores. The agents at this port know who the stevedores are, and should recommend them to the captains. The first thing you are told when you go into an office is that the cheapest man gets her, and then when you have taken a contract, you contract 2 per cent. of the ship's cargo for nothing.
609. You contract 2 per cent. for nothing? The ship has to carry 2 per cent. on her cargo for wear and tear of discharging. They reckon they lose a certain amount taking in and putting out. It used to be 2½, but I believe it is 2 now, because I have had it stopped off in a contract.
610. Supposing you trim 100 tons of coal, do you mean to say that you only get paid for 97½ tons? Yes; it

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- it is 2 per cent. now. These stevedores, as they call themselves, are allowed to be employed by the agents, who let the captains take them, and they do the work cheaper. I consider it is the agents' duty to point out to the captains who are the proper stevedores. At the time of the last inquiry, about three years ago, when a ship was lost, Mr. Finch, of Wallace's office, said that the boss trimmers were not paid sufficiently to do the work. Mr. Finch was the self-same man to ask me to cancel my agreement with the "Inveruie." He offered me £5 to cancel my agreement with the captain of that vessel. I was getting 3d. per ton for the trimming of her, and he said he could get it done for 2½d., all baskets and gear being found.
611. What are the baskets for? To put out the captain's ballast at the ballast wharf or into lighters. A set of baskets would cost £2 16s. I said "No." I was doing the sister ship at the time, the "Inveramsey." I think it is nearly time the stevedores had some protection.
612. Do you consider the trimmers themselves are paid sufficiently? I always make it a practice to pay the trimmers what they ask. At one time Mr. Russell proposed to take the hatch away from the men.
613. What do you mean by that? The meaning of that is—an empty vessel comes under the crane and you run that hatch up. You only want one or two men to run it up before you put on your full gang of men.
614. What do you mean by taking the hatch away? Say you put the ship under now. The trimmers would allow you to run up that hatch. As soon as it is loaded up the full body of men go on. Mr. Russell wanted to take that hatch away from the men so that he could run up the three hatches before he put the men on.
615. So that he could do what you explain as bad trimming? Yes.
616. When did that custom introduced by Mr. Russell come into force? About three years ago.
617. To sum up what you say, you consider the trouble has arisen from under-cutting in contracts, the stevedores not being able or willing to do good work at the price? Yes; they cannot do the work for the money. It is a matter of impossibility.

[Witness withdrew.]

J. Gallagher sworn and examined:—

- J. Gallagher.
3 Sept., 1896.
618. *President.*] What is your name? James Gallagher.
619. What are you? I have been a coal-trimmer for about thirty years.
620. As a working trimmer? I was only a working trimmer for two years. I have been twenty-nine years as a stevedore.
621. Are you a stevedore now? Yes.
622. Are you actually in work now, or have a ship loading? I have not a job on hand to-day.
623. What price do you consider a fair thing to take a ship at? It all depends on the class of ships to begin with.
624. What do you consider a fair price? I am well acquainted with the prices that are paid. I consider the men that are trimming vessels are getting a remarkably good price.
625. What is a fair price? Threepence a ton for the English iron ships, 3½d. or 4d. for American vessels.
626. Wooden vessels? Yes.
627. Have you ever known any cases of bad trimming? For the last five or six years, I have been bothered all the time about bad trimming. It has been rung in my ears about vessels going out of this port with bad trimming.
628. Have you ever seen a vessel start away badly trimmed? Dozens of them.
629. What do you consider constitutes bad trimming? In the first place, a vessel, we will say, of 2,000 tons burden or measurement, according to her build, comes into this port. She is supposed to carry 4,000 to 4,300 tons of coal. She takes portion of her ballast out, and is brought to the cranes. The stiffening coal of that vessel will be from 1,500 to 2,000 tons, with only one man employed.
630. Two thousand tons of stiffening coal? Yes; one man is not sufficient for that quantity of coal. After she receives that 2,000 tons, she goes back to the ballast wharf, and takes out the balance of her ballast. She is brought again to the cranes, and that vessel will have 2,900 to 3,000 tons of coal in her without any labour.
631. Is that method customary in the port? Stevedores have made it customary.
632. Do they put the coal as far as they can into each hatch? Until it gets to the top of the hatch.
633. They do not start to trim until they get each hatch filled up? That is where they make the mistake.
634. The effect is to make a cheaper job for the stevedores? Yes; most decidedly.
635. Supposing the captain of the ship was up to his work, and said he would have it done properly, would the stevedores resist? Captains seem to take no interest in this matter, nor the officers. I consider the captain should instruct his officers to pay attention to the loading of the coal cargo.
636. What is the reason why they do not; is it on account of ignorance or carelessness? I do not know. That is where the bother lies. The captain should be responsible, personally, for his own vessel.
637. You say he pays no attention? No.
638. It has been suggested that occasionally captains agree to keep out of the way for some pecuniary consideration? That is quite correct.
639. Have you known of such a case? Many of them. I have never done it myself. Captains do shake their hands on three or four sovereigns for that purpose.
640. The less the stevedores are interfered with by the captain the more they can make on the contract? Yes.
641. Would it be of advantage to license stevedores? The work would be done no better.
642. Can you suggest any way in which it can be ensured that the work will be properly done? By having a competent man. Coal-trimming requires bone and sinew. There is no art or science in it. It requires a competent leader to carry that work along.
643. The master will naturally give a contract to the man who will do the work at the lowest price, provided it be done well? Decidedly.
644. Supposing a master gives a contract to an incompetent stevedore, what can be done? His work will be done far better than if he gives it to a good man as a rule.

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645. You mean to say the work is done better by incompetent than by competent stevedores? I am positive. An incompetent trimmer does his work to gain the favour of the captain on the return voyage. The good man, as soon as he receives the captain's cheque, does not care whether she returns or not.
646. You mean to imply there is a ring of good men? I do. I am not a man that belongs to the Stevedores' Association. I am one of the best men in New South Wales as far as coal cargoes are concerned.
647. There is a ring formed lately among stevedores? Yes; it is a ring of seven among fourteen. If you go to any of the agents connected with vessels in this port that have gone out coal laden, and look over their books, you will find that James Russell has lost four ships out of six; Taylor and McNeil, two out of six; Hans Bertrand, three out of six; Marsden, two out of six.
648. You are on oath? It can be proved by the books of the agents.
649. Your opinion is, I understand, that there is an association of stevedores who are chiefly responsible for the loss of ships? Yes; I mean that.
650. Can you suggest any way in which they can be persuaded to do their work better? The only suggestion I can make to better Newcastle as a coal port is that captains of vessels should instruct their officers to pay attention to the loading of their vessels, and not leave it in the hands of men that the skippers employ.
651. It would be competent for any officer, if he took the trouble, to assure himself that the ship was properly loaded? Yes.
652. When the ship is not properly loaded, it is primarily the fault of the officers? That is quite right.
653. *Mr. Pittman.*] You said just now that if stevedores were licensed it would not improve matters? Not at all.
654. Supposing the license were arranged so that when more than a certain number of vessels were lost loaded by a certain stevedore, he should lose his license;—would that do good? That would be a very good cure. But now this agitation has been going around Newcastle for the last six or seven weeks, you will find there will be no more vessels lost. They are very particular now.
655. *President.*] They are getting very particular? Yes. I have found out they have been doing the right thing, which they have neglected for years past—not filling the body of the ship.
656. I thought the body of the ship ought to be filled up? They never fill them. An iron ship can take her cargo and go down to her water-line, with lots of space, and stevedores know that. In the main body of the ship, where they ought to be trimmed, the master-trimmer says to his men "come out of that, you are only wasting time, there is plenty of room in her." They know the ship has plenty of room and they need not be particular about filling up.
657. The cargo of coal to be put on board, will not fill the ship? They know that, and they are not going to waste money.
658. Do you know of any specific accident that has occurred when such a thing has happened? For over twenty years I have watched it, and stevedores will say "come out of that, we cannot waste time, there is plenty of room in her."
659. And they have to come out? Yes.
660. Then that coal may not be trimmed at all? They leave room for 25 tons on each side of her body. They do not allow the trimmers time to trim her.
661. With regard to the question of heating of coal cargoes? Heating of coal cargoes! I will call it burning of coal cargoes, and I can prove it. Here is a coal trimmer's candle-stick [*witness produced a trimmer's candle-holder, and described the manner in which it is fixed in the vessel during the progress of trimming*]. When the candle burns down, it falls and rolls over. That candle will burn and the coal over it will catch. I have witnessed it, and put it out. That candle will burn for twenty-five to thirty minutes. That bit of candle is the cause of fire.
662. Have you seen it yourself? I have had three ships fire.
663. Mention them? A barque called the "Eversham," twenty-five years ago, Captain Williams; the next, an American barque, "Wealthy Penalton," Captain Penalton; the other's name I forget.
664. Did you see the candle fall on board the ship whose name you forget? I did not see it fall, but it fell.
665. How do you know? By the smoke that arose to the surface.
666. You knew the coal was on fire? When we noticed it we had a bucket of water and applied the water to it.
667. You noticed the coal was on fire, and you assumed it was due to the candle, but you did not see the candle in this case? It was there I am positive. Something between January and February recently, the "Dayspring," a missionary vessel, came in about the same time as the "Ellen A. Read," for 260 tons of South Wallsend coal for her own consumption. In taking in those coals, the candle fell.
668. Were you on board? No; I was not on board. The candle fell and no person noticed it for a while, but they saw the smoke rising, and when they looked they saw through the cracks of the coal that they were afire and well burning. They brought a bucket of water and put it out.
669. They got the fire under satisfactorily? Yes.
670. *Mr. Pittman.*] Did you ever hear of a case of coal cargo heating and not bursting into flames? Not Newcastle coal.
671. Did you ever hear of the case of the "Knight of St. Michael"? Yes, Wallsend coal; but I never believed a word of it.
672. If I tell you I saw and tested it, would you say you did not believe that? Practical knowledge and science are two different things.
673. If I tell you I tested that cargo and found it heated? It was not from the coals. It was from a lighted candle.
674. There was no candle there;—there was no fire at all? Something wonderful for Wallsend coal to be on fire. Sometimes you can smell or pick a piece up of what the miners use for blasting. You can smell the powder.
675. Such heating might occur, although you have never heard of it? I remember some seventeen or eighteen years ago there was a vessel that was supposed to be on fire. I maintain that Newcastle, New South Wales, coals are not those which catch fire by themselves.
676. *President.*] Can you mention some ships which have come to grief from bad trimming? I cannot exactly

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- exactly mention names. In the agents' offices—Mr. R. B. Wallace's and Mr. Stokes'—they would have all those vessels. I can give an instance. The "Indian Empire" left here some eight or nine months ago. The letter said she was thrown on her beam ends, and it took twenty-one days to right her. The letter was a private one from a friend to a friend in Newcastle. The agents of these vessels should be the best persons to give the information as to vessels lost, and as to who trimmed them.
677. Are the working trimmers likely to slum the work in spite of the stevedores? They never slum the work. They do the work fair, if the stevedores help them.
678. So that the fault lies with the stevedores? Yes.
679. You said something about a ring; for what purpose is that organisation? It is only four weeks old. Probably you have heard of a deputation that waited on Mr. Reid to ask him to license stevedores.
680. What is the object of the association—to get certain people registered? Their object is this; there are seven in and seven out, and the seven in say, "We will get it all and leave the others."
681. It is an association for business purposes? Yes; to carry on bad trimming.
682. You surely cannot mean that? It is an association to carry on bad trimming.

[Witness withdrew.]

FRIDAY, 4 SEPTEMBER, 1896.

[The Commission met at 2:30 p.m. at the Custom-house, Newcastle.]

Present:—

PROFESSOR RICHARD THRELFALL, M.A., PRESIDENT;

And EDWARD FISHER PITTMAN, Esq., A.R.S.M.

Captain R. C. Perry sworn and examined:—

- Capt. R. C. Perry.
4 Sept., 1896.
683. *President.*] What is your name? Robert Charles Perry.
684. You are master of the "Ellen A. Read"? Yes.
685. How long have you been so? About five years master of that one ship.
686. Have you ever had much trouble with the heating of coal? The cargo took fire.
687. How long ago? About the 1st May I put back. I arrived at Sydney on the 3rd.
688. When did you load? We finished loading about the 28th April. I have not the date with me; say the 30th April.
689. What was the first sign of the fire that you discovered? Smoke coming out of the forward ventilator, near the main hatch.
690. What steps did you take? We put water down the ventilators. The fire was getting worse, and I bored holes in my deck and flooded it, and the water ran down. That checked the fire a great deal.
691. You did not stir up the coal, or try to throw any overboard? We could not do that. We could not get at it.
692. You simply poured water down? Yes, the best way we could.
693. What coal was it? West Wallsend.
694. Was it a good quality of coal? That I have no way of telling.
695. Was it large coal? Large before they put it in, but it was fine when we got it up.
696. Was the coal dropped in when being loaded? Yes; they dropped the coal from the top of the hatch.
697. Who was the stevedore? Taylor and McNeil.
698. Did you pay any attention, personally, to the stowing? I was there all the time. I was not down the hold.
699. Had you any officer down in the hold? The mate was down occasionally.
700. It is part of your duty to see the ship properly stowed? We can hardly tell about that. We have to leave that to the stevedores. We do not know how to train coal. There are very few ship-masters who know how to stow coal.
701. I presume most ship-masters would know if the ship were filled? Very few ships can carry full cargoes.
702. You see whether the ship is full where she ought to be? Full amidships is the proper thing. My ship is steady if we fill amidships.
703. Your officer saw that was done? Yes; it was done to my satisfaction.
704. The stevedores have always been quite willing for you to see everything that was going on? Yes.
705. Always willing to put the coal where you wanted it? Yes; it is my duty to see that the ship is trimmed properly, whether the stevedore likes it or not.
706. Where do you think the fire broke out? Somewhere a little forward of the main hatch.
707. Not immediately under the main hatch? Anywhere within 8 or 10 feet forward of the main hatch.
708. You can say distinctly that the fire did not break out immediately under the main hatch? Yes; I am quite sure it did not exactly under the main hatch.
709. What was the distance from the main hatch? About 5 feet forward of the main hatch.
710. You were not burnt aft of the main hatch? No; nor under it.
711. You are quite sure it was not under the main hatch? Not exactly. At the same time, this fine coal runs several feet fore and aft of the main hatch.
712. You consider it broke out within 5 or 6 feet? It is impossible to tell exactly.
713. Still, it was in such a position that small coal could have run that distance? Oh, yes.
714. Have you ever had any previous experience of coal catching fire? No; not of that kind.
715. What was the weather like when the coal was taken in? Some wet; but mostly fine.
716. Still the coal was somewhat damp? Yes; one or two days we had damp weather.
717. The coal was neither very large nor very small, I suppose; it was ordinary coal? Yes, the usual size; but we do not take particular notice about that; we seldom do; but large coal is better.
718. Did you take the temperature at all before the coal heated? No; I did not.
719. Do you make provision, as a rule, for taking the temperature? No; I never had a ship heat before.

720. Did you form any idea as to the cause of the outbreak? My opinion is that the coal was loaded too quickly from the mines. It was at the time of the strike, and she was loaded very quickly. The drop of the coal is too far.

721. Did you ever before get a cargo direct from the mines? No; I cannot say I have. I have no way of knowing.

722. *Mr. Pittman.*] Did the fire break out in the whole coal in your ship? No; it did not.

723. What evidence have you of that? Our surveys fore and aft.

724. It was told to us that the fire broke out in the large coal—the whole coal? I could not say that. It was just forward of the main hatch, where there were lots of fine coal.

725. You think it possible the fine coal produced by dumping ran along? Yes.

726. There was no evidence at all to show the fire was in the whole coal? No; the drop would amount to 25 to 30 feet. When you drop coal 30 feet, and there were 1,000 tons down that hatch, you can judge for yourself what it is like. In Cardiff they have square boxes holding about 4 or 5 tons, which are lowered by a crane into the bottom of the ship.

727. Please describe what they do at Cardiff? They let the coal from the top of the jetty into a shoot. They have a box holding about 4 or 5 tons, which is lowered by a crane from the shoot down to the bottom of the ship, or nearly so, and the coal is let out at the bottom of the box. They do this until they get a certain quantity into the ship.

728. Is the crane by which they lower the box stationed on the wharf? Yes.

729. *President.*] It is a combination of crane and shoot? Yes.

730. The coal must first be taken from the trucks and put into the shoot? The trucks are hoisted on to the jetty, then run out into the shoot. At the end of the shoot is the box, which is filled and lowered down. They can stop the run of the coal in the shoot.

731. And when they get the coal a certain height in the ship? They leave the boxes and shoot it in.

732. What is the maximum drop that they give the coal in Cardiff? I do not know. I could not say exactly.

733. Do they drop it 10 feet? It does not drop more than 7 or 8 feet from the shoot to the box.

734. And when they give up the box? It drops 10 or 15 feet.

735. Does it take very much longer to load the coal in that way? We do not use it, perhaps, more than a day.

736. It probably does take a little longer? Yes; it does.

737. Can you inform us where we can obtain particulars of this method? Not unless from Cardiff.

738. Who are the shippers there? Cory Brothers are large shippers there. I loaded with Wilson, Son, and Company the last time.

739. In your opinion, is the method you have just described a satisfactory way of loading coal? Yes.

740. You think it entirely satisfactory? As regards saving the coal from being broken up. I like the way of loading here better than at Cardiff. There is only one objection—the breaking of the coal.

741. It is rather more expeditious? I do not know that. It is cleaner than in Cardiff. They screen the coal as it goes into the ship.

742. *Mr. Pittman.*] They screen it underneath the shoot? Yes. Your deck is covered with fine coal, and you have to stop and wash it down.

743. Do the same arrangements exist at other places? Mostly all are on the same principle. There may be a little difference. They all shoot it down, both at Berry and Cardiff.

[Witness withdrew.]

Mr. J. M. Hyde, sworn and examined:—

744. *President.*] What is your name? John Mullen Hyde.

745. And the nature of your business? Shipping and colliery agent.

746. How long have you been in that business? A little over twenty years.

747. In Newcastle? Yes.

748. Have you had any experience outside of Newcastle? No.

749. Has any case of spontaneous combustion or explosion ever occurred on any of your coal-laden ships? Not that I am aware of.

750. That is with ships loaded with coal from the Stockton, Wickham and Bullock Island, and Greta collieries? No.

751. No cases of spontaneous combustion or heating? No.

752. Nor of explosion? Not that we have heard of.

753. Have you had a case of cargo shifting, or, at any rate, vessels loaded with these coals reported missing? I think there is one missing, the "Suakim." She was posted as missing.

754. She has never turned up? No.

755. How long ago is that? Some eight years ago.

756. Do you remember what stevedore loaded her? I do not.

757. Where can I find that out? From the shipping agent's office.

758. Who was the agent? I think R. B. Wallace.

759. Is there a general office where such information can be obtained? No.

760. Is there no office in which information is recorded as to the names of the ships and the agents, &c.? Yes; you can find out from the Custom House.

761. We could then discover from the agents the names of the stevedores? Yes.

762. Though you have not had any experience of casualty with your own ships, I presume you have taken some interest in the matter of missing ships? I have noticed they have been missing one way and another.

763. Have you formed any idea as to the heating of coal cargoes? Yes. My opinion is that coal that contains a good amount of pyrites is more liable to combustion. That is where it is dumped down and broken up and gets wet.

764. In regard to pyrites, is your opinion derived from something you have read or been told, or is it from your own experience? We notice that ships which contain such coal are the ships which meet with accidents.

Capt.
R. C. Perry.
4 Sept., 1896.

Mr. J. M.
Hyde.
4 Sept., 1896.

- Mr. J. M. 765. Which collieries send out coal containing a large amount of pyrites? The West Wallsend, Wallsend, and Brown's.
Hyde.
- 4 Sept., 1896. 766. Are those the collieries which have led to the greatest number of accidents? I think you will find that that is so.
767. Do you know of any analyses that have been published of the coals coming from the various collieries? Yes.
768. Where are they published? I have a list of them now.
769. So that you have a definite reason for stating that those coals contain more pyrites than others? So far as we know, by looking at it.
770. Does not the analysis tell you? No.
771. If it is a complete analysis, it should mention the amount of pyrites? They are pretty well all the same; there is very little difference, but in the coals themselves there is as much difference as night from day.
772. If one coal contains more pyrites than another, it must on analysis yield a greater percentage of sulphur than the other? I avoid analyses. You find companies pick out a decent piece of coal for the purpose.
773. So that the published analyses are incorrect from bad sampling? I think so.
774. And that, though the analyses published do not show that the West Wallsend and Wallsend coals contain an excess of sulphur, you, nevertheless, believe they do? I think so; they only show a trace in the analyses.
775. You have noticed that those coals have led to trouble? Mostly those coals, with an occasional cargo from one or two of the other pits.
776. Do you mean that you have come to the conclusion that pyrites has something to do with the accidents? I think so.
777. You argue from the accidents to the pyrites, not from the pyrites to the accidents? Yes.
778. You are aware, of course, that a large amount of investigation has been made in regard to the influence of pyrites? In what respect?
779. As to its tending to increase the liability to spontaneous combustion? Yes.
780. All experiments, so far as I know, which have been made, have given a negative result—showing that pyrites has had little to do with it? I have never seen that.
781. You have no definite analytical information to set up against the experiments I refer to. It is a matter of impression with you? Yes.
782. We have heard something about trimmers leaving candles among the coals—is that within your knowledge? I have heard, in the case of a steamer, some years ago, that a candle, supposed to be fastened to the mast, was left when trimming, and that four or five days after the steamer got to sea, it was found to be on fire. There was smoke issuing out round the mast, which was a wooden one. The coal was Newcastle coal.
783. What was the name of the ship? The "Easy."
784. They were not able, I presume, to trace the fire precisely to the candle? They put it down to the candle being left there.
785. How did they know that the candle had been left? I do not know. That was the report that got about at the time.
786. Was any man's name associated with the occurrence, particularly? There was a man accused of it—one of the trimmers.
787. I presume he denied it? Yes.
788. It could not be brought home to him? It would be no use pursuing the matter. He may have left it there by accident.
789. It is not very difficult to make a mistake of that kind? It is easy enough; men scamper out in a hurry at the last moment.
790. And forget their candles? They are very apt to.
791. Do you think, that even supposing a candle were left, it would be sufficient to set fire to a cargo of coal? It seems hardly likely, unless there was something else to assist it.
792. Did you ever see a candle set fire to a lump of coal? It depends on what coal it is.
793. Any kind of coal. Supposing you wanted to light a heap, do you think you could do it with a candle? Yes; you can light a bit of Western Australian coal with a match.
794. Could you do so with Newcastle coal? I have never tried it.
795. Do you think you could light it with a candle? I do not think it.
796. Even under the most favourable circumstances? Not with a candle alone.
797. Mr. Pittman.] Who were the analyses made by that you refer to? By Messrs. Dixon, Abel, Watt, Liversidge; mostly by Mr. Dixon.
798. None of these show more than a trace of sulphur in the coal? Nothing more than 1 per cent.
799. That is getting into big quantities? [No answer.]
800. President.] Have these analyses been prepared to the order of the colliery proprietors? By the various companies, and have been collected from them at different times.
801. Mr. Pittman.] The samples were collected by some officers of the collieries? It would be taken by some of the officers and sent down to the Government Analyst.
802. President.] Can you give us any information as to the cause of the shifting of coal cargoes? It is in the trimming.
803. Tell us why you think the cargoes shift? I think a good deal is due to not having shifting-boards, and to bad stowing.
804. Do you think shifting-boards essential? I think so, and the majority of captains I have asked about them have been of opinion they should be used.
805. Either in wooden or iron ships. Some ships seem to require them more than others? It depends upon which way they are going to trim the ship.
806. Are shifting-boards of advantage in iron ships? Yes; a great benefit.
807. The use of shifting-boards depends, I understand, upon the captain of the ship; the trimmer has nothing to do with it? No.
808. How is it that trimming is done badly;—it seems so easy to trim well? I consider you ought to have

have someone to supervise the trimming. A trimmer takes a contract for a ship, and there is nobody to look after him.

809. Why does not the master of the ship look after him? He has to be on shore on business.

810. What has he to do? He has so much to look after. Some captains see the ship trimmed.

811. There is nothing in the operation of trimming to prevent a captain or mate from seeing that the ship is properly trimmed? Nothing to prevent him. Many of the trimmers will scamp the work if they get the chance, unless they are looked after.

812. They would not prevent the officers of the ship from looking after it? I do not think so.

813. In your opinion, then, the captains have no excuse for not doing so beyond that they are busy on shore? Yes.

814. Is that a valid excuse? It is in some cases.

815. From your experience, as a shipping agent, you can see that many captains are too careless, too reckless to trouble themselves about it? I would not put it as strong as that. They may be wanted ashore, and have to look after other business.

816. If you owned a ship, and you found the captain did not attend to the trimming, would you describe his conduct as careless? Certainly.

817. You would propose to remedy that by having some method of inspection? Yes; there should be somebody to supervise the ship.

818. Somebody in the employ of the Government? An independent man.

819. How many such persons would be required for the port of Newcastle;—you would want one almost for each ship? He could go backwards and forwards. It would take him all his time to look after a couple. They are working night and day.

820. How many ships are loaded at once? Sailing ships—on an average, seven or eight.

821. It would need four or five inspectors, at all events? Yes.

822. What sort of payment do you think would be requisite to secure competent inspectors? I should say you would want one head man, and he should have three or four under him.

823. Can you give us any idea for what a reliable man could be obtained for the purpose? I could not say.

824. Unless an inspector were well paid, he would be subject to continual temptation to take bribes from the stovedores? He would be open to that.

825. The inspectors would have to be given definite powers, would they not? Yes; you would have to give them full power.

826. Would that supersede the captain in the command of his own ship? I should say they should consult the captain, and he would tell them how he wanted his ship loaded.

827. They would take the captain's work off his shoulders? Yes.

828. In the event of the captain declining to have them on his ship, what would you propose? It depends upon the law. They could only go on a British ship.

829. Who should defray the expense of these inspectors? I do not know.

830. Will the coal trade bear an extra 1d. per ton? I do not think it. I should think it would be for the insurance offices to do it.

831. In your opinion, the insurance offices should have to bear this expense? It would pay them to do it.

832. Why do they not look after the loading now; is there anything to prevent them? I do not think they could have the power at the present time unless an Act were passed.

833. Have they ever tried to have any supervision? Not that I am aware of.

834. It does not look as though they wanted it? No.

835. Do you think that some stovedores intentionally slum their work? There are good trimmers amongst them and bad. I would not let some of them on board a ship.

836. Is the price paid for trimming so low that it is impossible for men to do a good job? It has been good lately. A man takes a contract, he knows what he has to do, and should be made to do it. I do not believe if the price were raised to any extent that you would get any better trimming done. They would simply benefit themselves. They would slum the work just the same whatever the price.

837. Is 3d. a ton a fair wage for trimming? It entirely depends upon the ship. It ranges from 3d. to 3½d, unless the ship has 'tween decks right through.

838. A witness has told us something about a ring of trimmers in Newcastle—can you tell us anything about it? I do not know that there is any special ring. They put in a tender for a ship and get as many as they can. They do not divide them. It is every man for himself. If one man could get all the ships he would take them.

839. Did you ever receive a tender yourself so low that it would be impossible for the work to be done honestly? I have a line of steamers, and I am sure the men cannot make much out of it. The tender is too low.

840. Do you supervise the trimming thoroughly? The captain and mates always look after it.

841. Have you had good supervision? We have often had to jacket them for not trimming properly, but officers and others can make them do what is wanted.

842. It is in the power of the officer if he is willing and anxious to get the ship properly trimmed? Yes.

843. What would be the effect of licensing trimmers? You would get ships properly trimmed and good trimmers to undertake to do the work.

844. Is trimming a difficult thing? The trimmer puts in at a low rate, and employs a lot of men not fit for the work—not workmen at all. There is a good deal of that going on.

845. You think licensing would have the effect of securing, at all events, competence on the part of the trimmers? You would get good men. Make them pay so much for it.

846. Pay a fee for the license? Yes; they are well able to pay it.

847. What would be the object of a fee? You would get reliable men then—men fit to undertake the work.

848. In the event of a ship meeting with an accident owing to the trimming, would you consider it expedient to withdraw the license? For bad trimming, I would cancel the license.

849. In the event of a ship being lost, you could not say positively that the cargo had been badly trimmed? You cannot account for all ships lost by bad trimming.

850. You would advocate supervision and licensing of the trimmers? Yes.

Mr. J. M.
Hyde.

4 Sept., 1896.

- Mr. J. M. Hyde.
4 Sept., 1896.
851. We have heard that some of the men employed in trimming work twenty hours on end? I have known them work thirty.
852. What is the reason for such an extraordinary thing? It was the time of the strike. They went right through the ship, and some men were there thirty and thirty-two hours. They started at 6 o'clock in the morning, and were finished by dinner-time the next day. They would get an hour or an hour and a half's sleep on deck while the hatches were being run up.
853. Is it the wish of the Union that the men who commence the ship should go through with it? I do not think so now. Usually they work twenty-four hours if the ship has to work at night.
854. Is it their own wish, or the wish of the employers? It is the wish of the men.
855. The object being to get the extra pay for night work? Yes.
856. You are of opinion there is considerable laxity in trimming? Yes.
857. That laxity is due to want of supervision by the captain and ship's officers? Yes.
858. That the master trimmers have a distinct monetary interest in slumming their work? Naturally.
859. That a remedy can be provided by efficient inspection in the hands of Government and by the issue of licenses to duly qualified persons? Yes.
860. With subsidiary regulations? Yes.
861. Do you think the coal trade would stand any increase in the cost of loading coal? I do not think it would. They want a reduction.
862. Coal, I suppose, costs to produce at the mouth of the pit some 4s. or 5s. a ton, does it not? It varies a good deal.
863. Four shillings or 5s. would not be out of the way as the cost of coal per ton at the pit's mouth? Over 6s. in a good many pits.
864. The coal costs to win some 3s.? 2s. 11d., I think—2s. 10d. or 2s. 11d.
865. Mr. Pittman.] So that the colliery proprietors are losing money? We are losing money at Stockton now.
866. President.] What do you sell the coal at? 9s., less 2½ per cent.
867. You sell it at 9s., and I understand it only costs 6s.? In some cases. The Stockton costs 9s. Ours comes to very nearly 9s. when we have finished with it. We only made a few hundred pounds last year, as you can see by the balance-sheet.
868. It looks as if in most cases there should be a good profit, and as if an extra expense of 1d. per ton would not make much difference? I think the traction is too high now.
869. Mr. Pittman.] Do you not think the coal trade could be loaded with another 1d. a ton;—do you mean to say there are no collieries to stand it? They are not making any profits now.
870. In some cases it would be possible? In some pits. You could not put it on them and not on others.
871. President.] Do you mean to say an extra 1d. a ton would shut up some pits? They are making nothing at it now. We do not clear a penny.
872. Supposing it might be shown that by incurring an additional expense of 1d. a ton, you improved the loading of the coal, do you think the coal trade would be able to struggle on? The Commissioners undertake to ship the coal, and they do not ship it; they sling it in.
873. Do they enter into a contract? Yes; to bring the coal from the colliery and ship it.
874. You think the present method of loading is not satisfactory? Well, I do not see how you can improve it, except they insist on lowering the waggons. Lately they do it sometimes, but at night-times they never do it.
875. A fall of 20 feet must be injurious to the coal? Yes.
876. Would the coal be more valuable to the steamers if it were not smashed? Certainly.
877. Do you think the dumping smashes it? Yes.
878. Do you think it deteriorates in value by 1d. a ton by the smashing? It would if going into a yard, where it is screened and they can only sell the large coal, but not where it goes right into works where it is wanted.
879. So if it were not smashed up, the coal merchant would make more money? Yes.
880. But if you were supplying steamers, it would not make much difference? It would make no difference.
881. Do you think that if it became customary to treat the coal better, so as to keep it in a larger condition, your customers would be willing to pay another 1d. a ton without thinking they were being hardly used? I do not think they would pay anything further. They would think it would make very little difference. They would put the price on to others.
882. They would pass the increased cost on to someone else? Yes.
883. It would make no difference to them? No.
884. Do you know of any improved method of loading which you could recommend? I know this, the companies would never go in for smaller waggons.
885. Why not? Because they have their own rolling-stock.
886. Mr. Pittman.] Does that rolling-stock belong to the companies? Yes.
887. President.] It would involve too great an outlay to alter the rolling-stock? Yes.
888. What is a waggon worth? I suppose about £60 or £70 each, for iron waggons. You might have 400 of these.
889. I suppose the new type of waggons proposed would cost about something the same? Yes; you would want more.
890. You are not able to recommend any improved system of loading? Not unless they had that patent loading machine in the hatch which breaks the fall of the coal.
891. Spencer's machine? Yes.
892. It would cost a little more to load that way? Yes; they would have to pay more for the trimming.
893. More for the trimming? Yes; trimmers will always demand more.
894. Why is that? They say it is humbugging work shifting the shoots about.
895. Would it increase the expense ½d. a ton? I could not tell exactly.
896. Would you consider a 1d. a ton as a fair thing to state as the probable increase in cost for trimming and loading? You would want fully a 1d. more.
897. Would 1½d. a ton cover it? That would cover it. The ships would have to carry the gear, or hire it here, and that would have to be paid for.

898. Is not the gear inexpensive? Still they would have to get it made. Some men would have a monopoly of them.

899. Do you think they would serve the purpose of preventing the coal being powdered under the hatchways? Yes.

900. *Mr. Pittman.*] How would you propose to deal with the fore and after hatches? The only way you could do would be to put them sideways in the fore hold. You could not put them lengthwise in some vessels.

901. Would it be impossible to use Spencer's machine in some hatches? In some ships you could use it. You would have to have the concern made to suit the different ships.

902. What do you think of Harper's distributor? I have never seen it; I have only seen Spencer's. Spencer's would distribute the coal better in the wings, and save the coal from breakage, but the coal would have to be dumped to fill up the hatch as is done now.

903. Is there anything you would like to bring before the Commission? I do not think there is. No doubt the hot weather we had had a good deal to do with ships catching fire. In one steamer we had, we pulled two men out of the hold in a state of collapse.

904. Do you think the hot weather might cause the men to be careless? The men could not do their work down the hatch. These two men collapsed, and had to be brought out. It was an iron steamer. You could not put your hand on the coal, it was so hot, through being in the sun.

905. You could not put your hand on it? You would take it off pretty quickly.

906. Something has been said about commissions being paid to captains by stevedores to let them alone when trimming? I have heard of that.

907. Did you ever hear of anything of the nature of a 5 per cent. commission as between stevedore, agent, or captain? Some of the agents get their commission.

908. What for? For giving the stevedore the business.

909. Does the captain of the ship ever touch any of that commission? I do not think so; he does not get the chance. Some agents have their own stevedore, and they always recommend him to the captains, and in nine cases out of ten he gets the job, but what their arrangement is, we do not know.

[Witness withdrew.]

Captain D. Williams sworn and examined:—

910. *Mr. Pittman.*] What is your name? David Williams.

911. What are you? Shipping manager to the Union Steam Navigation Company.

912. Have you been long in that position? I have been here twenty-two years.

913. During that time you have had considerable experience, I presume, in the shipping of coal cargoes? Yes; we have shipped a good many.

914. Has anything struck you in connection with the method of shipping coal here that would tend to explain the number of accidents that have happened from the heating of cargoes? I do not know anything about the heating of cargoes. It is a matter to which I have not given much notice.

915. Are you acquainted with the methods adopted here in the trimming of coal cargoes? I think the method here of trimming the coal is all right, if the master and officers of the ship would look after it.

916. You think it is the duty of the captain or officers to take the responsibility? Oh, yes, and to see that the ship is packed in the middle. These modern vessels are always liable to shift their cargoes unless they have a bulkhead at the end. When the "Poltalloch" came back here with her cargo shifted, I was called upon to survey her, and I made a pretty careful survey. Although the coal amidships had not been properly trimmed—not within 15 inches of the deck—it had shifted but little, but the coal had shifted at the two ends.

917. You think then, as a rule, the captains do not interfere with the stevedores? I do. I recommend they should wall the ship off with bulkheads.

918. *President.*] With wood or iron? Wood.

919. *Mr. Pittman.*] The trouble, so far as the shifting of coal cargoes is concerned, could be remedied by proper supervision? Yes. They do not square the ends of the coal at all. The cabins and fore-castle are all on deck, so that there is so much more space below that it is almost impossible to keep the coal from shifting without a bulkhead under the 'tween decks in the lower hold just abaft the lower hold, and on the fore part of lower hold forward.

920. Do you think the stevedores are inclined to slum their work for the sake of making more money? That is natural. They are sure to do that if they get a chance. We have never had any trouble with trimming.

921. Do you keep a special stevedore in your employ? We tender; but one man has had our ships now for the last ten or fifteen years.

922. Who is that? McNeil. It used to be McNeil and Taylor.

923. You found his trimming satisfactory? Yes.

924. Has any trouble occurred with any ship trimmed by him? One case only, I think. It was the "Lady Lawrence." The general opinion was that the ship was never going to reach her destination.

925. Was that since McNeil left Taylor? Before. Taylor is dead now. I think the vessel loaded partly with shale.

926. What was the nature of the accident? I should imagine she turned over. There must be a lot of precaution used in these modern ships.

927. Was the "Ellen A. Read" trimmed by McNeil and Taylor? She was supposed to have been fired by a donkey-engine.

928. The fire was forward of the main hatch? Under the donkey-engine house, I believe; but I am only speaking of what I have heard.

929. Can you suggest any remedy for inefficient trimming? Only by the supervision of the officers.

930. Do you think the appointment of Government officers would be of advantage? I do not think so. If I were a master I should not care about a Government man coming to see whether my ship was made seaworthy. I think a master should be able to do that for himself.

931. *President.*] Is it customary to employ bulkheads? They do not use them.

932. The usual procedure is merely to taper the coal off? Yes.

933. That is generally considered to be sufficient? In my opinion it is not sufficient.

- Capt. D. Williams.
4 Sept., 1896.
934. Have you had a definite case in point in which it did not appear sufficient? Yes; sometimes the coal stands on end 30 feet.
935. Do you consider that the configuration of the coal cargo is affected by the working of the ship? I do.
936. How much would you consider the keelson might rise or fall in regard to a line drawn through the deck? A ship lying in still water shifted her bottom 3 inches. When down to her marks forward and aft, the Plimsoll mark was 3" clear, showing the vessel to have come up in the middle that 3 inches.
937. Which ship? The "King James."
938. The bottom shifted 3 inches amidships? Yes. In a head sea I should think it would move 6 inches.
939. That would shake the cargo down? It would cause friction by grinding the coal together. On account of the vibration in steamships, I do not think they will deliver coal as large as sailors.
940. You cannot carry coal in such large pieces? We do not deliver in such large pieces.
941. You have no remedy to propose in regard to bad trimming? No more than proper supervision—to see the coal properly stowed.
942. It is impossible for the Government to make an unwilling captain supervise the stowing? Quite so.
943. There is nothing to make him if he will not do so himself? No.
944. It has been suggested that occasionally stevedores bribe the captain to leave them alone? There is no doubt about that. Many captains, I daresay, are open to that sort of thing, and owners are greatly to blame for it. To-day there may be seventy or eighty ships in the harbour, and you would find a good large percentage of them are paying not more than £10 a month, and the owners expect a man to be honest.
945. You think captains are underpaid? I do.
946. Do you think that any form of certificating stevedores would have a good effect—that is to say, that certificates should be issued to competent men under certain regulations to be determined upon? I do not think it would be a good thing. I think it would cause too much of a monopoly for those obtaining certificates.
947. Is it not possible that regulations might be so framed as to prevent those not competent from obtaining certificates, but which would not raise any obstacle to those who were competent? I do not think you could do it. It would be very harsh to make a man employ whoever the Government thought fit to do his work. There are lots of vessels running here trimmed by their own crews. Most of the Sydney vessels are trimmed by their own crews.
948. But not deep-sea ships? They generally employ a stevedore. I do not think the certificate would be any advantage; the stevedores would soon combine, and put the trimming up to a price that would be exorbitant. I think a fair competition does no harm.
949. I understand there are so-called stevedores who are not competent? But they employ a man who is competent.
950. So that there are no incompetent stevedores? I do not think so. It is a matter of rushing the ships to make money out of them.
951. The stevedore has a pecuniary interest in doing the work badly? Yes; there are lots of ships that run in 1,500 or 1,600 tons of coal without a man on board.
952. There is no remedy except for the captain and officers to take some pains with the work? To see that it is properly done.
953. Do you know of any system of loading other than that in vogue here? I have loaded coal in the north of England where they load coal quicker than we do here.
954. How do they load there? Through a shoot. They lower the waggons on top the same as here. These waggons can be lowered down the hold, and should be.
955. Some of the waggons cannot go down the hold? Most of the modern ships will take them down the hold.
956. Down the main hold, but not the others? The quarter and fore hatches are much smaller, but I think that is the only remedy to stop smashing.
957. To lower the waggons right down? Yes.
958. We have some reason to believe that it would be impossible for many of the collieries to afford to buy fresh waggons of a smaller size? They would have to do it.
959. Is it impossible to make the hatches of a ship larger? No; they could easily specify the hatches to be made larger. They would have to do that when building the ship.
960. Would it be a serious trouble to cut the hatches of the ships in existence? I should not think so.
961. Do you know of any nautical reason why hatches of ships should not be made large enough to allow all waggons to pass down? They approve of large hatches now. It keeps water off the deck, and a good high, large hatch leaves more room to work, and is more convenient. They made ship's hatches small to get more accommodation on deck. They carry now all their passengers and crew on deck.
962. So that from the point of view of the sailor there is no reason why hatches should not be made large enough to allow waggons to go down below; that is obvious in the case of new ships, and old ships might have their hatches altered? It would be expensive.
963. Would it cost some hundreds of pounds to alter the hatches for the purpose? No, it would not. A hatch could be altered for from £70 to £100 if clear of the houses on deck. The "Geneva M. Tucker," now in the harbour, had a new main hatch put in her. It cost £75. It is 25 feet by 12 feet, which would take any waggon. It is a splendid job, and was done in New Zealand some years ago.
964. So that there is no reason why the hatches should not be made large? Not a bit.
965. Neither on the score of expense or convenience? No, I don't think so. If the colliery people wanted to ship their coal properly they should go to the expense of getting a few small waggons until the hatch was run up.
966. I suppose you would not be prepared to suggest the alteration of the fore hatch and the aft hatch sufficiently to allow the waggons to pass down? Yes, I would, if the hatch was clear.
967. There is no reason why they should not be altered? Not a bit.
968. *Mr. Pittman.*] To take the large trucks? Yes; the trucks want the hatch to be 12 feet by 14 feet, I think. That is not very large.
969. *President.*] Would the alteration be more trouble in a big iron ship? No; it would be less. You have the iron beams to rivet to.

[Witness withdrew.]

Mr.

Mr. W. H. Cremor sworn and examined :—

Mr. W. H.
Cremor.

4 Sept., 1896.

970. *President.*] What is your name? William Herbert Cremor.
971. And your business? Coal-trimmer.
972. Are you a member of the Coal-trimmers' Union? Yes.
973. Do you hold any office in that Union? No.
974. Have you ever held an office in that Union? I have been secretary on two occasions.
975. For how long were you secretary? Eighteen months on the first occasion.
976. And on the second? I think about fourteen months; but I could not exactly tell you.
977. Are the officers elected by the members of the Union? Yes; by ballot.
978. Were you a candidate on the last occasion? No.
979. Did you resign your office? I resigned four years ago.
980. And have not been a candidate for office since? No.
981. I understand you work at coal-trimming? I am a practical coal-trimmer, working at it for my livelihood.
982. I understand it is a somewhat precarious business, in that you are not sure of getting work every day? It is all chance work.
983. How many days a week do you average? I averaged about 30s. a week last year.
984. How many days a week? Say three days a week; that would be 36s.
985. Would that be a fair average for most coal trimmers? A very good average.
986. Are there more trimmers in the port of Newcastle than are required? There are upwards of fifty more than are required to do the work of the port. That is in our body, and twenty or thirty outside of us.
987. It has been represented to us that in many cases the stevedores, or the men who contract for the trimming of a ship, have a direct pecuniary interest in slumming the trimming;—is that the case? In many instances.
988. In your experience, have you known, as a matter of fact, the work to be slummed in certain cases? It has been.
989. That is to say, the stevedore has ordered the men out of the ship before he should have done? If you will allow me to explain in my own way it may be better, as I cannot give you a full explanation of how trimming is carried out in the way you are asking me. I think one of the causes of the shifting of coal cargoes from the port of Newcastle is in putting too much stiffening in the vessels. Many vessels come over to the crane to take in stiffening. They may require 500 or 600 tons of coal, which would be quite sufficient to keep them from losing their equilibrium when shifting from the coal wharf to the ballast wharf. Through the rapacity of the boss coal-trimmer he tries to get a greater amount of coal than is required into the vessel, so as to get a greater profit, and he has not the labour to perform the work.
990. The boss trimmer tries to put too much stiffening coal into the ship? Yes.
991. That is to make more money? Yes.
992. Is more money paid for putting in stiffening coal than for the general cargo? No, they get the same price all through. Plenty of ships are endangered by the coal not being trimmed from the bottom, by dropping the coal indiscriminately into the vessel. In some vessels there are flanges 4 or 5 feet. If the coal is not trimmed from the bottom underneath these flanges; if you heap coal up and it is not trimmed in these recesses at the bottom of the vessel, when she gets into the trough of the sea the bottom of the coal shifts and there is a tendency for the coal to fall. The labour should be put on in taking in stiffening.
993. Too much coal is put into the ship before labour is put on to trim? Yes, when the ship comes under to take the remaining portions of the coal, the body of the ship is made too large—is taken too far forward.
994. The main hatch is taken too far forward? Yes, in many instances; they make a big main hatch. When the main hatch is made too big, the wall is made perpendicular very often.
995. The forward wall? Yes; the consequence is that when they come to the fore-hatch—generally the last hatch to be trimmed—sometimes they drop the required amount of coal right underneath the fore-hatch.
996. There is not sufficient coal then to back up this wall? Then the boss coal-trimmer generally pricks the wall or knocks it down to minimise the danger.
997. He makes it sloping? Yes; therefore, my argument is, if the main hatch were smaller and the fore hatch of a ship plugged, thus stopping the fore hatch up and allowing the coal to run on the plates from the 'tween decks, the vessel would be safer and the coal properly levelled in the ends of the ship.
998. *President.*] In your experience have you known a case in which the sides of the ship in the neighbourhood of the fore hatch have not been properly trimmed or filled with coal? In the neighbourhood of the main hatch I have known it.
999. The cause of that, I understand, is from the contractor being unwilling to spend more money in wages? That is the case.
1000. He therefore orders the men out before the work is completed? Yes.
1001. Is it competent for a captain of a ship to insist on having the work done properly in spite of the stevedores? The captain in many cases does so, but very often he sends an officer below who has no idea as to the practical part of coal-trimming.
1002. You think the officers of a ship are very often unable to give proper supervision from want of knowledge? Yes; I am quite certain of it.
1003. Do you think the difficulty could be overcome by proper inspection? Yes, by a practical man—one who thoroughly understands the work. In the old times the vessels were filled tight, and they arrived safely.
1004. Has the trimmer any pecuniary interest in slumming his work? None whatever. The longer he is there the more he gets.
1005. Some witnesses tell us that many trimmers will work for at least twenty hours;—I think one said thirty hours? I will tell you the reason of that. On these wharves men are employed by bosses constantly. They are not employed all round. Some stevedores have eight or nine men whom they keep going. The men do not get work from anyone else. A man may only get one job a week, which would last twenty to twenty-five hours, at a steamship, and may amount to 30s. or 35s. He depends on that stevedore for a living.

- W. H. Gremor.
4 Sept., 1896.
1006. You have had considerable experience of trimming? I have had thirteen or fourteen years in Newcastle.
1007. It is pretty hard work? Yes; it is very hard work.
1008. What sort of state are you in physically after you have done twelve hours' continuous work? If I work for twelve hours, I want to get a wash and go straight to my bunk.
1009. Do you think a man who has worked hard for twelve hours is to be trusted to do fair and honest work for another eight hours? They are trusted, and they give satisfaction.
1010. In your experience, do the skippers of ships, as a rule, pay proper attention to the loading of their ships? Of late years they do on account of the great loss of coal-laden vessels.
1011. They have become aroused to the necessity of it? Still it is not carried out as it should be.
1012. Is it the exception or not for an officer to do his best to superintend the loading? I think they do their best, but they have no practical idea of looking after it like the man whose business it is.
1013. The remedy you propose is the appointment of a Government inspector? Of a practical man.
1014. How many inspectors would be required for the port? One for the day and one at night.
1015. To do the whole work? Yes. Vessels do not finish at the same time. Where he wants to be most is in the body of the ship.
1016. So that to an expert man very little superintendence would suffice? Yes; if you have a man to inspect the body of a ship you can always get at the fore and aft hatches of the modern built ship.
1017. They can be examined at any time? Yes, at the buoys even.
1018. Would it be necessary, in order to make the inspection of any avail, for the inspector to have powers placing him above the captain in regard to this particular work? Would that make the Government responsible for the loss of the ship?
1019. You admit there is a difficulty? There is a very great difficulty, if the Government would have to take the responsibility for the safe arrival of the vessel, but it would show that the Government had done its part.
1020. You think, for the safety of the ship, there should be expert supervision? Yes.
1021. No doubt occasions may arise when officers may be deluded or deceived, but that would be the exception? I consider in many instances they are deluded. Officers are never down at the finish of the main hatch in the lower hold.
1022. *Mr. Pittman.*] There is nothing to prevent their being there? No; but when in close quarters they should remain.
1023. If it is possible for a trimmer it is possible for an officer? They do not go down.
1024. *President.*] It has been suggested that trimmers may throw coal at ships' officers in the hold? That was stated at a conference of coal-trimmers, held at the Chamber of Commerce, and was uncalled for.
1025. Is it untrue? Yes.
1026. Have you ever heard of any such thing being done? No, sir; no man insults anyone who goes into the hold to do his duty.
1027. Do you refer to the members of your society or to the trimmers generally? To the trimmers generally along the dyke.
1028. Do you consider the prices at present paid to stevedores sufficient to enable them to do a fair job? That is left to themselves.
1029. I understand they get from 3d. to 3½d. a ton? That is a fair price for some of the vessels, but I know for a fact that 4½d. or 5d. would not be enough for others—wooden vessels with closed 'tween decks.
1030. Is as much as that paid for trimming? Yes.
1031. Even then it does not leave a great margin for profit? Not a great deal.
1032. *Mr. Pittman.*] Is that paid in Newcastle? It has been paid—4d. and 4½d. for close 'tween-deck vessels.
1033. *President.*] We have had several witnesses say that 3d. or 3½d. is a good price? That would refer to large modern vessels. Once they get under the crane the men continually drop coal into them.
1034. As a possible explanation of the firing of coal cargoes, it has been said that trimmers leave their candles down among the coal? I think the firing of coal cargoes is beyond my ken.
1035. Such a thing does occasionally happen? I have never known it to happen since I have been trimming in any vessel I have been on. When a candle drops from a candle-stick some one extinguishes it.
1036. Is it not possible you might get walled off from your candle? No, your candle is always in front of you.
1037. There should then be no excuse for a man leaving his candle in the hold among the coal? No excuse. We sometimes pick up substances of this kind. [*Witness handed in piece of a fuse used in mining.*]
1038. Is that left among the coal by the miners? It comes in the waggons. It consists of gunpowder. Once there was a bag of stuff found in the coals which was set on fire.
1039. A bag of powder? I do not know; it was fusible matter.
1040. *Mr. Pittman.*] You think that may get into the coal without the miners knowing anything about it? I do not know how it comes there—we find it there.
1041. *President.*] You have occasionally found powder? Yes.
1042. The powder used in compressed cartridges? No.
1043. You do not mean to imply that anyone could have been wicked enough to put a bag of explosive matter among the coal purposely? I do not know how it came there. A man called Davis picked it up. I think it was in the "Industry." The men were well nigh suffocated by the smoke from it.
1044. Have you had experience of either Harper's or Spencer's machines for distributing the coal? No; I have seen Harper's tried to be worked, but I think it was a dismal failure.
1045. What about Spencer's? I have never seen Spencer's.
1046. You have had no practical experience with these appliances yourself? No.
1047. I suppose some of the trimmers on the dyke have had experience of them? I think only one man—Whittaker.
1048. Have you ever trimmed a cargo of coal that afterwards heated? I do not remember one.
1049. So that you cannot give us any information about the trimming of a cargo which has heated? No. I have never trimmed a vessel that has afterwards been lost.
1050. Is there any other matter you would like to bring before the Commission? I think the stevedores should be licensed, and be examined by a practical man as to their competency to trim a ship. The inspectors could be the examiners.
- 1051.

1051. Is it proposed he should pay for the license? By all means. It would pay the Government for the inspector's salary.

1052. What would be the effect of a license do you think? I think no man should put in a tender unless he is licensed. Men come from the back blocks and start as stevedores, and influence may be brought to bear upon the captain to employ them, or the captain may do so from economical ideas of his own, and he is not made aware of the incompetency of the men he is employing by his agent. I have known for a fact where a man came from Mudgee and tendered for the trimming of a vessel, and was successful in getting it.

1053. You have known of a man without previous experience obtaining a contract for trimming? Yes.

1054. Although himself incompetent, I presume the men he employed would be competent? They were in many cases incompetent. An incompetent stevedore does not care so long as he gets a vessel down to her marks.

1055. The object of licensing them would be to secure better trimming? Yes.

1056. It would have the same effect as the appointment of inspectors? Yes.

[Witness withdrew.]

Mr. A. Wallace sworn and examined:—

1057. *President.*] What is your name? Alan Wallace.

1058. I understand you are the agent for Spencer's system for distributing coal? Yes.

1059. You claim that the use of the Spencer distributor will prevent the pounding up of the coal when dropped in the hatches? Yes.

1060. It has been suggested that even when this distributor is used, it will have to be removed while yet there is a large space unfilled in the hatchway, and that the coal would have to be dumped down into that space finally, just as in the usual way? Not if the apparatus is properly used. There is no reason why the few waggons that will be required to fill up the square of the hatch might not be lowered on to it. It is a matter of only 3 or 4 feet.

1061. That would necessitate trimming back from the heap? Trimming back from the ends of the distributor.

1062. It would rather, therefore, tend to increase the amount of trimming, and necessarily the cost of trimming? It would increase the trimming in the hatchway, but reduce it in the wings.

1063. So that it would leave the total amount of trimming about the same as now? I have a statement showing the time occupied in loading ships as at present, and with the use of the distributor.

1064. Have you used the distributor in this port? With several vessels.

1065. Is there a particular line of ships for which the use of it is specified? Yes, the Firth line.

1066. Is there one of the Firth line in port just now? Not at present. It could be arranged for the distributor to be used, if desired, in a vessel.

1067. Could it be arranged that the Commission could see an exhibition of the use of one without expense to the Commission? Yes.

1068. *Mr. Pittman.*] Does that particular line always use Spencer's distributor when the vessels come here? Yes.

1069. *President.*] How many times have you used it? Six times since August, 1894.

1070. Has there ever been any trouble with the shifting of cargo, or of spontaneous combustion, in cargoes loaded by means of this distributor, either here or in England? Not that I am aware of.

1071. Would you be aware if such had happened? I should most probably be aware.

1072. It has been suggested to us that the hatches of ships might be made larger, so as to admit of waggons being lowered; do you know of any reason against that? None whatever.

1073. You are acquainted with ships? Yes.

1074. In your business? Yes.

1075. You are a shipping agent? Yes.

1076. Is there, from a commercial point of view, any objection to the making of larger hatches? I don't think so, as long as ships are built according to Lloyd's rules.

1077. Do they specify the size of the hatches? I think not, because hatches are of all sizes.

1078. Would you be inclined to raise any objection if asked to increase the size of the hatches of your ships? With the main hatch, I should think it would not be a matter of importance. With the fore and after hatches it depends a great deal on the occupation of the deck space—the deck-houses and distribution of winches and working gear of the ship. The fore and after hatches are invariably smaller than the main hatch.

1079. Would you charge a royalty in the event of Spencer's distributor being adopted in this port? Yes; I presume so; but could not say without referring to my principal in the matter.

1080. Have you any idea as to why it is not more universally adopted? I have no idea. I have put it before insurance companies, and they say it would be a good thing, but they do not seem inclined to insist upon it. It was through the insurance companies putting up their premiums that first drew my attention to the distributor.

1081. Do the insurance companies here lower their rates for ships loaded with the distributor? I have not heard anything from them to that effect.

[Witness withdrew.]

WEDNESDAY, 9 SEPTEMBER, 1896.

[The Commission met at 2:30 p.m. at the Custom House, Newcastle.]

Present:—

PROFESSOR RICHARD TRELLEFALL, M.A., PRESIDENT;

And EDWARD FISHER PITTMAN, Esq., A.R.S.M.

Mr. J. May, M.E., sworn and examined:—

1082. *President.*] What is your name? Jonathan May.

1083. And your business? Lecturer on coal-mining at the Technical College here. I am a mining engineer and colliery manager.

1084. What experience have you had in coal-mining? As a boy, up to the age of about 17, I followed the usual occupation of boys in mining.

1085:

W. H.
Cremor.

4 Sept., 1896.

A. Wallace.

4 Sept., 1896.

J. May.

9 Sept., 1896.

- J. May.
9 Sept., 1890.
1085. Where was that? In the north of England—County of Durham. From 17 to 21 I studied the principles of mining under a gentleman who was mining engineer for the Duke of Cleveland. I hold the highest diploma—first-class certificate—as a colliery manager, under the English Act; and from that age up to the present I have had control of mining operations in every official capacity.
1086. With regard to spontaneous heating of coal, have you read the work of Richters on the subject? Only extracts; I have read Lewes more particularly.
1087. What work of Lewes do you refer to? Only those papers which he laid before one or two different societies.
1088. Did he write a book on the subject? They are only fugitive papers.
1089. Have you had any personal experience in investigating the cause of spontaneous combustion? Only what crops up in our institutes.
1090. You have made no laboratory experiments? No, not of any consequence.
1091. As a matter of fact, your opinion is drawn from Lewes and other writers on the subject? Yes, principally.
1092. And you have no practical knowledge of the matter? I have made no personal investigation to compare with those of Abel, Percy, and Lewes.
1093. Do you subscribe to the theory put forward by Richters and Lewes that the cause of heating is from the absorption of oxygen by the carbonaceous matter of the coal? Yes, I am perfectly satisfied with that theory; it is now generally accepted.
1094. Do you consider that the presence of moisture is of any consequence as a factor in heating? Decidedly.
1095. Does the presence of moisture increase the liability to spontaneous combustion? It does increase the liability, according to the experiments of Richters and Lewes.
1096. Do you consider that the action of moisture in promoting spontaneous heating is traceable to the decomposition of pyrites, or do you consider it has a specific action? I would not like to say what its specific action was, except that its result has been to increase the danger of spontaneous combustion.
1097. Can you give me any fact to justify that? Not having made any experiments, I only take the later conclusions arrived at by Lewes, Richters, Abel, and Percy.
1098. With respect to the conclusion arrived at by the English Commission in 1876, you are of opinion that later researches have shown that the influence of water is not to be neglected in considering the chances of spontaneous ignition? Yes.
1099. Can you give us any information in support of that? I think researches have been made in regard to the different classes of coal and different degrees of moisture by Abel. These will be most reliable.
1100. You are more particularly accustomed to the handling of coal? Yes; the chemical portion, I think, is best left to expert chemists.
1101. Do you admit that the pulverising of coal during the process of loading into ships is of importance in regard to the question of spontaneous combustion? It is of very considerable importance.
1102. Do you consider that the finer the coal the more likely it is to spontaneously heat? Yes, distinctly; because it is generally reckoned that if you take 100 bushels of charcoal and pulverise it, it will almost invariably take fire on exposure to the atmosphere. Oily waste becomes similarly oxidised.
1103. Can you suggest any means that might be adopted to lessen the breakage of coal when put on board ships? I think something might be done almost from the beginning. It is just possible that mining appliances will be improved. The old-fashioned tippler, or kick-up, throws the coal forward, and it gets very much smashed; but the side tippler—and both can be seen in practice in the district—causes very much less breakage.
1104. If the spaces between the bars of the screen are of the same size, will not the coal reach the trucks in the same condition by whatever means it is loaded from the skip? The pieces may be large enough not to go through the screen, but they receive such an immense amount of smashing on the screen that, when they get to the trucks, they are pulverised. Then there is the pulverising journey to the wharf, and again when the coals are dropped, perhaps 30 feet, into the hold. The whole process is one of making small coal, from the screen to the hold of the vessel.
1105. Can you make any suggestion as to the way in which coal might be more gently lowered into the hold of a ship without causing any great increase in the expense of loading? You might adopt the same method as is used at Cardiff and Tyne Dock.
1106. What method is adopted there? They have a subsidiary box, which the coal is loaded into and then lowered gently into the hold of the vessel. They have a spout, and the truck lets the coal into that spout, and then into the box.
1107. And that is done until the hatch is nearly full? Yes.
1108. Though that method will no doubt reduce the breakage of the coal, it will add to the expense and the time occupied in loading? The additional expense should be paid for three or four times over by the increased value of the coal.
1109. For what purpose would it be of increased value? Because large coal is always more valuable than small.
1110. We have been informed that large coal would be of no greater value for steamboat purposes, and a great deal of the trade consists in supplying steamboats? That may be; but the larger the coal, I think its commercial value will be greater.
1111. You do not agree with that opinion, that the coal would be of no greater value for steamboats? It is altogether opposed to all I have been taught. We are always very anxious and careful to get the best coal at the mines. The miners are paid for large coal only.
1112. So that you think whatever extra expense may be incurred in the process of shipping which you propose, that expense would be more than recouped by the increased value of the coal? Distinctly.
1113. Supposing that arrangements were made for lowering the first portion of a ship's coal into the hatches by means of subsidiary boxes, can you tell the Commission what additional appliances at the dyke would be necessary? That is simply a matter of mechanical arrangement.
1114. Would you be prepared to give a definite engineer's opinion as to the alterations at the dyke which would be necessary? Yes; given sufficient time to examine the site.
1115. Are you prepared to do so now? Yes. If you look into the report of the English Commission you will probably see it. The Cardiff authorities would no doubt be able to supply you with particulars.
1116. Which authorities? The officers connected with the harbour there, or the Marine Board.

1117. *Mr. Pittman.*] Do you know of any objection that would hold in regard to screening at the wharf? I am afraid it would not do. Mr. J. May.
9 Sept., 1896.
1118. Can you tell me why? Speaking as a practical mining engineer, it would not be thought of.
1119. Are you not aware that it is done at Cardiff? That may be possible. There are more private people there. One particular firm may be shipping a large amount of coal, and it would probably pay them to screen that coal at the wharf if they could get accommodation, but where you have so many different companies it would not do. With a firm like the A. A. Company, if they had sufficient ground, I could understand it. To get all the firms to work in one groove like that would be difficult.
1120. *President.*] To work harmoniously, you mean? Yes.
1121. *Mr. Pittman.*] You think the question of space of very great weight? That would be an important matter, but you can see the difficulty in having twenty or thirty firms doing a thing like that. You could not get them to work together.
1122. *President.*] Have you had any experience of distributors? Not personal experience, but I can quite see the idea is a possible one.
1123. Is there any matter which you would like to inform the Commission of? I would like to point out the danger of allowing cotton-waste to drop into the holds of vessels, and of putting the sweepings of the wharfs into the vessels. These sweepings include the grease dropping from waggons.
1124. Is there anything else? I am perfectly satisfied in my own mind that the idea as to the danger of pyrites is practically exploded.
1125. That is a matter of impression with you? It is a matter of distinct conviction.

[Witness withdrew.]

Mr. J. Whittaker sworn and examined:—

1126. *President.*] What is your name? John Whittaker. Mr. J.
Whittaker.
9 Sept., 1896.
1127. You are a coal-trimmer? Yes.
1128. How long have you been a coal-trimmer? Between England and here, a little over forty years.
1129. Where were you born? At Liverpool.
1130. When a ship arrives for coal, what is the first thing you do? Take out so much ballast and put in stiffening.
1131. How much stiffening coal, as a rule, would be necessary for a ship going to load 4,000 tons of coal? I should think about 1,000 tons.
1132. Where should that coal be put? If it could be done, it would be best down the main hatch.
1133. Why can it not always be put down the main hatch? The ballast may stop it.
1134. Cannot the ballast be moved aside? If the captain will do it. The stevedore wants to get his coal into the fore and aft hatches.
1135. Why does he prefer to put his coal into the fore and aft hatches? So that he can put more coal in with less labour—perhaps with one or two men.
1136. In your opinion, stiffening coal should be put down the main hatch? Yes.
1137. It is to the interest of the stevedore to put it down the fore hatch and the aft hatch? Yes.
1138. Does that lead to the trimming being less perfect than if put down the main hatch? Yes, because the men are not there to trim the stringers in the fore and aft hatches. There is no labour put on to trim.
1139. Cannot that labour be put on afterwards? No, not to get at it very well, because they run the main hatch up when she comes under the crane again with those two men.
1140. In your opinion, the stiffening coal should be put down the main hatch, and the trimmers should be put in at once to trim the coal as it goes down? To trim the stringers right along.
1141. That would make more work for the trimmers? Yes, and make the cargo safer.
1142. Supposing the stiffening coal has been put in, and the ship has come back to take her full cargo, will you describe what is done then? If she has taken the stiffening in the fore and aft hatches, she starts in the main hatch, and the men should be put on from that time.
1143. How much coal should be put down the main hatch for a 4,000-ton cargo? That depends how far they carry the wall between the forward and main hatches; some men carry the wall further than others and straighter.
1144. Is that a matter which is settled by the captain, or the stevedore? By the stevedore.
1145. Can you give us your opinion as to how much coal ought in reason to go down the main hatch with a cargo of 4,000 tons? Say 2,000 tons, or close upon it, would be quite sufficient to go down the main hatch.
1146. Supposing the stiffening coal has been already put down the main hatch, would you go on filling up the main hatch when the ship comes under the crane again? Yes, sir.
1147. You would take nearly the whole cargo through the main hatch, and only put a comparatively small part down the fore hatch and after hatch? Yes. It lies with the stevedore how big he makes his main hatch. Some men will take the wall further forward than others. Some men have different ideas as to how large a main hatch should be.
1148. Which system would lead to the best trimming? The smallest main hatch with a sloping wall, so that there would be more coal to put down the fore hatch to back the wall up.
1149. That would have the effect of getting more coal into the two ends of the ship? Yes.
1150. Why does a small main hatch lead to the best trimming? By making a big main hatch you leave less coal for the fore hatch to back up the wall between the main and fore hatches. It does not matter about the aft part of the main hatch, because the aft hatch and the coal from the main hatch will meet in most ships, so that the wall is always backed up. It is in the forward wall where the danger is, through there not being enough coal to back it up. The reason for making a big hatch is this—when you have finished the aft and main hatches, and you come to the fore hatch, the stevedore knocks the labour off and keeps perhaps four men on just to put the plates ashore. Very often there may be no work in that hatch except to knock the top of the heap off and level it down. They usually have twelve men for a ship.
1151. Independently of any question of labour, you consider a ship is safer with the wall built nearer to the main hatch than stevedores are accustomed to build it? That is the only way to trim a ship. [Witness, with the aid of a diagram, then explained the manner of building and the position of the wall between the main and fore hatches].

- Mr. J. Whittaker.
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1152. If the wall is put too far forward, the balance of the ship's cargo which can be put down the fore hatch, consistent with keeping the ship trimmed, will not be sufficient to support the foot of the wall? That is it.
1153. *Mr. Pittman.*] Do you build a wall between the main and after hatches? Yes; but you see the hatches are so much closer.
1154. *President.*] Supposing that what you consider the proper method of trimming were adopted, would it cost the stevedore more in wages to trim? Yes.
1155. Do you find that those stevedores who take work at a low price do worse work than other contractors? That is a thing I could not say anything about. I do not know what prices they get for the work.
1156. Have you any opinion about the matter? I have an opinion that the man who takes a cheap job at anything must slum it somewhere to make it pay.
1157. Have you known a ship to be badly trimmed in the port of Newcastle? Yes, the American ship "Hanz Morise."
1158. Who was she trimmed by? Hestelow and Williams, I think it was.
1159. What was wrong with her? She was a close deck ship, and by some means or other the captain found out the ship was not properly trimmed, and he sent for McNeil and Taylor to get them to trim the ship right, and it took about fourteen men between nine and ten hours to do it.
1160. Were you one of them? No, sir, I only went on board to see her.
1161. She was not properly trimmed in the wings and lower hold? Yes.
1162. There were spaces left in the wings and lower hold? Yes.
1163. So that the cargo could shift? Yes.
1164. Was that the fault of the stevedores or the captain? The stevedores.
1165. How do you know? Because he ran that ship up all over before the men came on. They ran up the three hatches, and when the men came on they could not get properly at the wings to fill them. It is a dangerous thing, if the wings of the main hatch and right along to the fore and aft hatches are not filled.
1166. Did you see, in this particular case, that the hatches were all run up before these men were put on? Yes, the three hatches.
1167. What is the longest time you ever worked? I have worked sixty-five hours at one ship.
1168. Why was that? I was working for some men who were doing the ships for themselves—what they would call a co-operative body. The men working for the other stevedores were threatened if they came and worked for these men, but we took no notice. There was me and Robert McAuliffe; we did the work; we were not fit to work, but we stopped there for that length of time. There are men working thirty hours.
1169. Do the stevedores insist upon the men working such hours, or is it by the men's own wishes? A stevedore employs a certain body of men, and when a steamboat comes under the crane and takes thirty hours, the men are kept on. I have worked thirty and forty hours, and my flesh was very crumbly and curious after it. Ten hours is long enough.
1170. How many days a week can you expect to get work;—do you work three days a week? I do not work three days a week. There may be reasons why I do not get work three days a week. The average man gets three days a week.
1171. When you get a job, you like naturally to make the most of it? Yes, you do.
1172. Is that not the cause of your working so many hours? The stevedore has it in his own hands. He can relieve you if he likes.
1173. Do you not like to work as long as he will let you, if you can get extra pay? Not at all times.
1174. Sometimes? Sometimes a man will work if he has had no work for a week.
1175. So that he might ask the stevedore to allow him to stay and work a double shift? It would be no good his asking him.
1176. Did you ever ask a stevedore to keep you on? Never in my life, and I do not think any other man did it.
1177. Surely a stevedore would lose money by keeping a man on for so many hours? I think he would. I have had many an argument about not relieving us, and getting a fresh gang on.
1178. You think a stevedore will, in some instances, keep you working more than ten hours, because he believes he can get more work out of you than out of a fresh gang? That is just so, but it is a foolish idea.

[Witness withdrew.]

Mr. A. Gardiner sworn and examined:—

- Mr. A. Gardiner.
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1179. *President.*] What is your name? Archibald Gardiner.
1180. And your business? Civil and mining engineer.
1181. Where were you born? In Scotland.
1182. You are a lecturer at the Technical College, Newcastle? Yes.
1183. What do you lecture on? Mine surveying.
1184. You have nothing to do with shipping? Nothing.
1185. Have you had anything to do with coal-winning? Yes. I have a certificate as a colliery manager. I was manager at two of the mines in the district for some years.
1186. I understand you have made special experiments with the heated cargo of a ship which returned here? Yes.
1187. What was the ship's name? I think it was the "Morna."
1188. What happened to the "Morna"? I do not know anything about the ship. The coal was sent to the Technical College by Dalgety and Company.
1189. It was a case in which the stiffening coal heated? I believe so.
1190. What did you do with the coal? I experimented with it.
1191. In what way? I tested it to see whether we could get it up to ignition point.
1192. By heating it? Yes; and put it under conditions similar to those it would be under in the hold of a ship. We heated it up to only 500° Fahrenheit, as we had not a thermometer to go higher.
1193. And what was the result? The coal was not at all altered.

1194. With what object was that experiment? To see if it was possible at a moderate temperature to ignite the coal by heating. We then damped the coal and tried it again. The heat rose very rapidly up to 210°, and remained at that until the moisture evaporated.

1195. What did you conclude from that experiment? I concluded there were no grounds to say the cargo heated or would endanger the ship.

1196. Have you made any other experiments? Some years ago I was manager in India where the coal was full of pyrites, and it was a great trouble. The gob heated rapidly. When the debris was not packed up against the roof of the mine, leaving a cavity, it heated. The coal was of the same general character as the coal in the Newcastle mines. I also found that small heaps left in the Indian sun outside the mine heated in a very short time. The analysis of the coal was similar to that of the Newcastle mines.

1197. Have you made any experiments as to the effect of pyrites in causing heating? Yes; it was due to the pyrites that the India coal heated. It was due to the decomposition of the pyrites that heated the gob.

1198. How do you know it was due to decomposition? Pyrites there occurs in the coal in a different way to what it does here. It occurs in little pockets, and decomposition sets in very rapidly. You could see the effect of these pockets on the outside of the coal.

1199. You observed the pyrites decomposing? Yes, from day to day observation.

1200. Have you any direct evidence of the dependence of the heating upon the decomposition of the pyrites? We expected that.

1201. You took it on trust? Yes; we believed it was the cause.

1202. Have you any reason to suppose that the coal from some mines in this district tends to heat more than others? The coal in general is not coal that I should say was at all dangerous to carry by sea.

1203. Most of the fires have occurred with West Wallsend coal, have they not? Yes, I believe that is so.

1204. Does the West Wallsend coal, to your knowledge, differ conspicuously in character from the other coals in the district? It does not.

1205. Does it contain more sulphur? I don't think so.

1206. You know of no physical or chemical difference between the West Wallsend and other coals? No; I do not. I have examined the West Wallsend coal, and its analysis is familiar to me.

1207. *Mr. Pittman.*] Are you prepared to say it is not a more friable coal? It is not a more friable coal. It is very much of the same nature. It is not more friable than that from the Stockton Colliery.

1208. Some of the coals from collieries near Newcastle are more friable than those from the Minmi or West Wallsend seams;—is not the Greta coal harder than the West Wallsend? Yes.

1209. Is there any other coal besides the Greta which is firmer than the West Wallsend? The Great Northern is a harder coal.

1210. If you dropped a piece of West Wallsend coal and pieces equal in size from the Great Northern and Greta mines from a height of 30 feet, would you expect the West Wallsend to crumble more easily than the others? Yes, that is, it would break easier, but I would not say crumble.

1211. *President.*] Is the West Wallsend coal firmer than the A. A. Company's coal? The West Wallsend is a harder and firmer coal than the A. A. Company's.

1212. So that the A. A. Company's would break more easily? Yes.

1213. And yet the A. A. Company have had no accidents? I am not aware that they have.

1214. Have you formed any opinion as to the reason why this particular coal has apparently given rise to this trouble and the A. A. Company's not? I have thought the matter over a good deal, but I have not any materials to enable me to come to any definite conclusion in the matter. I must say I cannot understand how that is so with the West Wallsend more than with the A. A. Company's. I am not of opinion that any of the district coals would be dangerous cargoes to carry.

1215. *Mr. Pittman.*] Coal from Newcastle generally? Yes, that it is not a dangerous cargo. There may be more occluded gases contained in the West Wallsend and Seaham coals than in those nearer town.

1216. *President.*] That is only a probability? Yes.

1217. Is the coal won in a different way in West Wallsend? No; the practice of winning is very much the same. There is a slight modification during the last year or two in the system of working.

1218. What is that? A tendency to leave larger pillars.

1219. *Mr. Pittman.*] Nothing to cause greater crushing in the coal? No, but the workmen use more powder in the mining of the coal now than was done some years ago.

[Witness withdrew.]

Mr. J. Dixon sworn and examined:—

1220. *President.*] What is your name? John Dixon.

1221. You are Government Examiner of Coal Fields? Yes.

1222. How long have you been in that position? About six weeks.

1223. You have had considerable experience of coal fields before then? Yes. Fourteen years as inspector.

1224. What are your duties as Government Examiner of Coal Fields? Principally looking after Royalties and applications for coal lands. I have been doing inspections all the time besides.

1225. During your term of service have you had to make any inspection of ships whose cargoes of coal have heated? No.

1226. Have you had any experience of the heating of heaps of coal? I have.

1227. In this district? Yes.

1228. Will you kindly mention a typical case? I have seen on two occasions in the district where coal has heated in the pit.

1229. Where it has been stowed as rubbish? Left in the gob.

1230. It is very usual for coal to heat in the gob? It is not usual, but I have known of two cases where it has done so.

1231. Was the coal finely powdered? Yes.

1232. Was it damp? Yes, when it was put in.

1233. Do you think that was the cause of the heat in those cases? My opinion is, and I know I am in opposition to scientists, in this, that it is the iron pyrites that causes most of the trouble.

1234. Why do you think it is the pyrites? It is on one side of the big fault in the district, and it is the most peculiar place I have ever seen for pyrites. I have seen them the size of a dinner plate come out of the bottom where they have been thrown back into the gob.

1235. Where was the heating you refer to? In the A. A. Company's and Ferndale pits.

1236. And in both those places pyrites was a conspicuous feature? Not a bit of doubt about it.

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1237. Was it conspicuous in the gob itself? Yes.
1238. The gob contained more pyrites than the gob generally does? More than usual.
1239. Was the gob wet or dry? The coal was thrown back wet on the first working.
1240. That first coal contained this pyrites? It generally lay near the bottom; in fact it was on the bottom.
1241. This is in opposition to scientific theory? In opposition to some scientists. Those that I have read do not take much account of pyrites.
1242. You made no direct experiments, I suppose, to verify your theory? I have taken particular notice of it during some years—that peculiar place on the side of that fault, just on account of the pyrites.
1243. And there you have noticed that heating is a matter of frequent occurrence? Yes. I have noticed that small coal as closely as possible for thirteen or fourteen years.
1244. In the same pit? In the same pit, but not the same pyrites.
1245. Have you noticed in all cases in which heating in the gob occurred that pyrites was present, or only in some cases? Only in those cases I referred to.
1246. In the two heated gobs? Yes; both on the same side of the fault.
1247. Does pyrites occur in most gobs? It may to some extent, but not to the extent of the cases I am speaking about.
1248. How many gobs will there be which have pyrites to the same extent as the two gobs which heated? I don't say only two. There have been acres of that old working shut off, and the same feature with regard to pyrites obtained in every bord.
1249. Are there any other collieries in which that fault occurs? Not the same fault.
1250. So that it would only be in those two collieries in which that immense accumulation of pyrites would occur? Yes.
1251. And the gobs which are formed of coal containing this pyrites are very liable to heating? Yes.
1252. And no other gobs in the district have been known to heat? No.
1253. And no other gobs in the district are known to have the same pyrites? Not to that extent.
1254. *Mr. Pittman.*] Your opinion is based on the fact that where you noticed heating you noticed pyrites? Yes.
1255. You are not prepared to say from your own experience that the heating was due to the pyrites? No; I have never known what we may term an active flame. There was another condition brought to bear upon it, and that was about 6 inches of clay shale, almost of the consistency of putty, came down and carried a lot of moisture—a wet blanket I call it—and the moment that moist stuff came down the chief bord had to be shut off because we would get an active flame.
1256. *President.*] How long after the fall of clay? Not many days.
1257. The clay would allow the heat to accumulate? Yes, keep the heat in.
1258. In what respect does the pyrites you refer to differ from what are called brasses? You sometimes get them in great lumps as large as a man's head, but this pyrites was like an ordinary dinner plate. I have seen them beautifully put together—little square blocks of coal where this stuff had been running through and cementing them together.
1259. *Mr. Pittman.*] You know gob fires are very common in the old country? Yes.
1260. Have you sufficient experience of gob fires there to say there is always present an excessive quantity of pyrites? As a matter of fact, we had no gobs in the part where I was brought up in the old country. It was what was called the Hutton seam in the north of England, it was too precious to leave in the pit.
1261. Have you formed any opinion as to the heating of coal cargoes? I have tried to form some opinion. Say, for instance, a ship takes in a few hundred tons of coal in Sydney and comes up here, and then wet coal that has been reduced to "smalls" is put on top, you get the wet blanket I speak about.
1262. *President.*] You think the wet coal keeps the heat in better than the dry coal? I think the wet coal does the business.
1263. The effect of damp in the coal would be to make the coal more non-conducting of heat? It would simply cause fermentation, if you can allow that expression in the matter. Every little cell of the coal broken in the hold of the ship is giving off gas. Then with the coal going down there a certain amount of heat is created and will be retained, and by and by it will burst into flame.
1264. Do you mean the wet coal would act as a blanket? It would hinder the gas that has been occluded from escaping.
1265. What has that to do with what you call fermentation? If you get gas there which has accumulated, a certain amount of heat is given off all the time.
1266. You do not know, as a matter of fact, whether ships that have first taken in dry coal and then loaded wet coal are more liable to fire than those which have loaded all dry or all wet? I do not know, but that is my impression.
1267. As to the loading of coal, can you give us any opinion as to which would be the best way of preventing the breakage at the least expense? In the first place I believe the coal should not be sent away out of the pits in large lumps. They had a saying in the North of England when I was a boy, if you dropped a large lump of coal into a ship's hold you made about a thousand small ones. They reckoned small sized coal was better carrying to the port and better cargo on ship board. It looked better coal at the journey's end when it went in reasonably small. The lumps were not more than 14 or 16 pounds in weight and I think they got good results from it.
1268. What part of England was that? North of England. Our shipping port was Sunderland.
1269. I suppose it is just as easy to send coal out of the mine moderately broken up as in large lumps? Yes. I have seen them roll a lump as large as two men could move. If that goes into the ship's hold like that, there is a grinding process, and you break, perhaps, ten thousand cells with it.
1270. You think it really makes more dust and "smalls" than if broken into fairly reasonable pieces? That is my idea.
1271. You do not consider, I presume, that to limit the size of the lumps of coal put out from the pits would be a sufficient cure? No. I think there should be something done to put it out of the waggons into a shoot, instead of dropping it straight down the hatch in the way they do.
1272. You would have a shoot down the hatch? A shoot entering the hatchways, and then have a check shoot, the coal to go from one to the other.
1273. Do you think that could be adopted economically? I think so. I think it would be the most economical thing you could get. It simply means two pieces of wrought iron. 1274.

1274. A wrought-iron tube bent zigzag? Yes; it would make but little "smalls."

1275. You would only have one turn in the shoot? Yes.

1276. Do you think there would be any possibility of reducing the size of the waggons, or would that involve too great an expense? It would. If you reduce the length and breadth of the waggons, you would have to increase the height, and to do that would cause a lot of breakage at the screens. It would then amount to the same thing.

1277. It has also been suggested that the hatches might be made larger; do you think that would be a serious matter? I think it would in the building of some ships. It is rather an awkward thing getting a waggon down a hatch; it is an ugly thing to go through. I think it could be arranged by shoots or spouts to put the coal in with little breakage.

1278. Would that be better than the box system, in which the waggon is tipped into an intermediate box, which is then lowered? That would entail a lot of extra work. I remember a time here when they used to wheel it on board with barrows.

1279. You think the box system would involve great expense? It would.

1280. It would mean, practically, discarding the cranes? It would.

1281. *Mr. Pittman.*] The objection raised to distributors is, that the main hatch would have to be filled up in the ordinary way of dumping; to use the zigzag spouts, would save the coal in the wings but not in the hatchway? It would be an easy matter to shoot the coal and let it just fall down into the centre and beneath the hatch. It is only a question of a few small waggons to put down. It does not leave the main hatch or any other hatch particularly empty if you have anything to distribute it around. The coal will naturally be falling into the lowest level all the time.

1282. *President.*] Would it be possible to have waggons carrying suitable boxes for lowering down the hatches until the hold was somewhat full? They have some of the box-waggons yet in two compartments. They would go down the hatch.

1283. Why should not enough of those be provided to fill the vessel sufficiently to make a conical pile under the hatch? The difficulty would be how to manipulate the waggons at the collieries. You would want to know where you were filling into the vessel. There may be three or four collieries filling in the same ship, and the difficulty would be to provide the waggons accordingly. Boxes are out of date. They are getting rid of them as quickly as possible. The hopper is all the go now.

1284. Why, because it will carry more? We used to have the wooden boxes, but they took a lot to keep in repair.

1285. Suppose some alteration had to be made? Then the boxes would be the thing. I was in Wollongong a short time ago, and I noticed them loading a steamer. They had an immense shoot, and they used to keep that shoot pretty well filled. They had trimmers below trimming each box full. The coal going down the shoot was dependent upon what was taken away at the bottom, and it seemed to have an easy slide.

1286. To work such a system here would necessitate the entire recasting of the system at the dyke? The A. A. Company have something like it. They load a lot at their own shoots; they send very little to the dyke.

1287. But the chief trade is done at the dyke? Yes.

1288. I believe the contractor for the cranes gets now 1½d. per ton? Yes.

1289. Can you form any idea as to what extra expense would be incurred in loading the first few hundred tons from boxes instead of from the hopper, and lowering them down the hold? I cannot. It would take more time.

1290. Would it cost much more? It would cost more, and they would have to be very cautious the boxes did not catch anywhere.

1291. Would it cost half as much again? I daresay it would.

1292. Would it cost twice as much? I don't think so. I have watched them loading with the boxes, which have been wobbling about, and the man has enough to do to knock the bar up and get the coal to shoot fair over the hole. The boxes have to be tipped up at one end.

1293. Perhaps it would be better to have the boxes made with movable bottoms? That would be better still.

1294. We may say it would cost from ½d. to 1d. per ton more to adopt a more gentle method of loading? Yes.

1295. Do you think the trade of the port would suffer if it were found necessary to raise the price of coal 1d. a ton? No, I do not; nor with another 1d. on the top of that.

1296. There is no reason, therefore, why the colliery owners should not charge 1d. a ton more to pay for the extra care in shipping? There is no reason, in my opinion. Every care should be taken to preserve the lives of the poor sailors. I think everybody should try to make it easy for them. A 1d., or even 6d., should not stand in the way if it will make things better.

1297. With the additional care, the destruction of the coal would be reduced in lowering it into the holds of ships, and with it the risk of fire? That is my opinion.

1298. Do you think the Commission would be justified in making such a recommendation as has been indicated in regard to lowering the coal by boxes? I think you would be perfectly justified.

1299. Where would you begin to attack the trouble? I would begin at the pit.

1300. What would you do at the pit? Get them to send small coal away. If you can put large coal into the hold there is less fear of it than with the small coal, but the trouble lies in the way it is shipped. The large coal causes the mischief. I think you would then get a better class of coal.

1301. *Mr. Pittman.*] The larger the coal the greater the smashing? Yes.

1302. What means could be adopted to induce the colliery proprietors to send out smaller coal? They have simply to tell the men to do so. It is a great burden on the men filling large coal.

1303. *President.*] Should we recommend that the proprietors be advised or coerced in this respect? Advise them first of all. In large blocks of coal going away from the pit there may be a good amount of iron pyrites. I have known large lumps break at the mine, and exhibit 14 or 15 pounds of iron pyrites.

1304. Do you think proprietors would be willing to be advised in the matter? I do.

1305. You think moral suasion would be sufficient? I do.

1306. It would be quite unnecessary to pass regulations for the purpose? If they see the force of it I think they would soon do it.

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- Mr. J. Dixon.
9 Sept., 1896.
1307. *Mr. Pittman.*] What do you think a fair size to stipulate the coal should come from the mine? I think a cubic foot would be large enough for all purposes.
1308. There is no object gained by having it larger for trade purposes? No; it would show a better result at the far end, no matter where they carried it, if it were smaller. There is the rolling of the ship to be considered—the settling down of the coal and the grinding. They generally say where there is action there is heat.
1309. *President.*] Would it be inflicting much hardship on the colliery proprietors to insist on (say) the first 500 tons of a 3,000 tons cargo being loaded from boxes? It would entail a great hardship. They have not many boxes now.
1310. They are discarding them? Yes. When the companies first got them they used to be costly—£100 for a waggon and boxes.
1311. What would they cost now? They could get them for half that; but they all go in for the hoppers, both in the old country and here. I think it would be rather a difficult matter to get them to take to boxes kindly. At the mine you have a wide hopper waggon, and you can have a wide screen and get more space to clean the coal. That is where the trouble comes in. It could be done by making more screens, and having a screen for each box, but that would mean more tip-ups at the top of the pit. That would be a direct expense on the colliery proprietors. The more spread you can get on a screen the better and cleaner the coal you can get over. With a small screen a great deal of foreign matter would pass over.
1312. It has been suggested that there should be inspectors appointed to see to the loading of ships, and that they were properly trimmed;—have you thought of that? I think that would do good, if they were men up to their work.
1313. It seems that owing to captains and officers having so much work, or being too anxious to get ashore, or from some other cause, they do not supervise the loading of their ships properly? That is correct.
- 1313½. And that it is to the interest of the contractor to put the coal on board as quickly as possible? I can understand that.
1314. And that consequently some form of inspection would be advisable? I think it would be a wise thing to have.
1315. Such inspectors would be in a very responsible position, and their remuneration would have to be sufficient to place them beyond temptation? They would have to be beyond suspicion.
1316. Have you any idea what they should receive? £300 a year each.
1317. You think honest men could be got for that? I think so. Our inspectors are only getting £270, and they have a responsible position.
1318. Are they exposed to the same temptation? I do not know where the temptation comes in.
1319. The temptation is very obvious;—the stevedores merely wish to be left alone, and will pay for that? I would have the inspectors teetotallers.
1320. Are you a teetotaller? I have been a teetotaller for twenty-eight years.
1321. Have you any idea how many inspectors would be required? I have not thought the matter out.
1322. Do you see any objection to the proposal from the point of view of Government interference? I think it would be quite right. When I saw it mooted in the papers I thought it was the right thing.
1323. Do you consider colliery proprietors are benefited by your inspection? I think so.
1324. They do not object to it? They have kicked once or twice. All inspectors will get their kicks.
1325. The trade has not been hampered by it? No; some people look on inspectors as spies—spying their work. As Englishmen, we do not like the name of spy.
1326. With what object would they be spying? Perhaps going about where it was thought they should not be. It is all right if you can get men that will act honestly—men to be looked up to. We have men in this port who understand coal-trimming enough to become inspectors, and good sound men too.
1327. Would you have a head inspector, with subordinates? I would give one man a classification above the others, so that they could report to him. If they all reported from their own standpoint, things would get into chaos.
1328. There should be a head man and subordinates? Yes; supposing you gave the head man £300, and the others £250, I think you could get good men for that.

[Witness withdrew.]

THURSDAY, 10 SEPTEMBER, 1896.

[The Commission met at 2:30 p.m. at the Custom House, Newcastle.]

Present:—

PROFESSOR RICHARD THERELFALL, M.A., PRESIDENT;
And EDWARD FISHER PITTMAN, Esq., A.R.S.M.

Mr. A. Ross sworn and examined:—

- Mr. A. Ross.
Sept., 1896.
1329. *President.*] What is your name? Alexander Ross, junior.
1330. What is your business? Colliery manager.
1331. What colliery do you manage? The Wallsend Colliery.
1332. It has been shown that several of the ships whose cargoes have heated have been loaded with your coal;—do you know of any reason why your coal should be particularly liable to lead to those accidents? I am not aware, sir, that the loss of those vessels has been due to that fact—to over-heating or firing. I certainly have heard of ships on our coast having become over-heated, but I cannot see any reason for it.
1333. There is no question of your coal having over-heated in the case of the “Knight of St. Michael”? I have no knowledge of that, and would like to say I have had a very large experience in this district in managing coal mines, extending over nineteen years—twelve years with the Newcastle Coal-mining Company and seven years with my present Company. I have also a knowledge outside of that of ten years, or about twenty-nine or thirty years’ experience in coal-mining in this district.
1334. Are there any particular deposits of pyrites in your mine? There are some; the same as in all coal mines in this district.

1335. Neither more nor less in yours? I cannot say that there are more than I have observed in others. The percentage of brasses or pyrites is not at all large with our mine.
1336. Have you any analysis of coal from your mine? Not taken by myself.
1337. I presume the company has obtained analyses at different times? I believe they have.
1338. From whom could those analyses be obtained? I think Mr. Binney, the secretary, will have them. I think there was an analysis taken at or about the time when the "Knight of St. Michael" was in Sydney. We ship a very large quantity of coal to foreign parts, and I do not know that we have had an excessive number of heated cargoes, considering the amount we send away. I daresay we send from twelve to fifteen, or more, ships away per month.
1339. In loading your coal, do you send out very large pieces? Not extra large.
1340. I presume you do not differ from other collieries in that respect? I do not ask the miners to fill excessively large coal. I have always looked upon very large coal as being a factor tending to make more small coal, not only in the waggons when coming over the screen, but again in the ship's hold.
1341. Do you find a ready market for the small coal from the screens? We have a very large output of 500 to 600 tons a day of small coal.
1342. Where does that go to? I do not know where it goes to.
1343. Is it shipped abroad or not? I think it is shipped principally in coastal steamers.
1344. Who can tell us where it is shipped? Captain Cross, the shipping manager of our company.
1345. It has been suggested that the breakage of the coal might be reduced by lowering the first quantity down into the hold of the ship instead of letting it drop from the coamings of the hatch. In order to accomplish this it would be necessary to have small waggons for the first portion of the cargo;—is there any very grave objection to that from your point of view? There would be with us, I am afraid.
1346. What is the objection? We have such a large quantity of rolling-stock—720 7-ton waggons. With our large output of fully 1,400 to 1,500 tons of large coal it would mean a very large increase of capital cost to have to make waggons for the first loading of ships.
1347. Could your present waggons be modified or altered in any way? No.
1348. If that proposal were carried out it would mean that you would have to buy more waggons? Make or buy more.
1349. Can you give me any idea of the cost of a waggon with three boxes, holding 3 to 4 tons each? Wood or iron?
1350. Either? With wooden boxes it would cost from £50 to £60 each.
1351. Each waggon with boxes would cost £50 to £60? Yes.
1352. Can you suggest any other way in which the breakage could be reduced in dropping into the ship's hold? The only way I could suggest is having distributors or shoots in the hold of a vessel to lessen the speed of the coal in falling—that is, for the first 400 or 500 tons.
1353. So that you would distribute the coal to the side, and then trim back under the hatch? Yes.
1354. Does that appear to you to be the most feasible way of reducing the breakage under the hatch? It does. Either that or by increasing the size of the hatch, to allow the present rolling-stock to go down lower. It does occur to me that the great heating power comes from immediately under the hatchway, and of course the small coal generates heat much more rapidly than the large.
1355. Supposing the distributor were adopted, would that increase the cost of loading? It would increase it somewhat. I have not seen a distributor, and would not have much idea as to what the cost would be.
1356. Supposing it increased it 1½d. per ton for the first 1,000 tons, would it be a matter of impossibility for the coal trade to stand that? If it is finally relieved of the heating, I don't think 1d. or 1½d. would be grumbled at by whoever the party might be who had to bear it.
1357. Is it a fact that at the present time you are unable to insure your ships? That I cannot say.
1358. Supposing that by spending, say, 1½d. per ton in loading part of the cargo the insurance rates were reduced, it seems reasonable to think that the final result might be more favourable than the present prices? Yes, I quite agree with that.
1359. You have fires, of course, in the gobs in your mine occasionally? I have never had a fire in any mine that I have had any connection with in my life.
1360. It is very usual to have fires in gobs? It is not very usual in this district. I only know of one single instance that is attributable to spontaneous combustion.
1361. *Mr. Pittman.*] What colliery was that in? The A.A. Company's.
1362. In which pit? The No. 2.
1363. Is that the sea pit? No; the Borehole Pit.
1364. Can you tell us approximately how many waggons would be required, having two boxes, to carry out the system of lowering the first portion of the cargo into the hold of a ship? We have 720 waggons to keep our trade going, and to load the first 500 tons of a shipment would require, approximately, one-fourth of that number.
1365. 180 waggons? Yes.
1366. Yours may be regarded as the largest colliery in the district? The largest in the Colony.
1367. So that number may be regarded as the maximum? I do not say that.
1368. It is reasonable to suppose that no other colliery would require a larger number? I do not think any colliery would require more than that quantity—say 200 waggons.
1369. *President.*] What is the capital of your company? £100,000.
1370. All paid up? I think so.
1371. *Mr. Pittman.*] If capitalised, the cost of the waggons would represent £450 a year at 5 per cent.? Yes.
1372. *President.*] In what position is the coal trade just now;—is it in a flourishing condition? It is flourishing, but that is attributable to our unfortunate three months' strike. We are doing the trade that accumulated during that time. Up to the present we have had, so I am informed by our secretary, very few, if any, orders from foreign parts since we started.
1373. So that, although there is somewhat of a boom at present, it is not really favourable trade? No; there is no doubt the strike has thrown back the fine trade that was beginning to grow in Newcastle.
1374. Where is the coal obtained from now? I cannot say. There was a splendid boom and increased confidence beginning in the Newcastle district in regard to foreign trade up to the commencement of that strike. I could not keep pace with it. It was gaining on me every day, although we had such a large output.

Mr. A. Ross.
10 Sept., 1896.

- Mr. A. Ross. 1375. *Mr. Pittman.*] Did you notice in the newspapers last week an account of the "Flora P. Stafford" being abandoned on account of her cargo taking fire? Yes.
- 10 Sept., 1896. 1376. Do you know whether that vessel was loaded from your colliery? I do not; I do not think so, however.
1377. *President.*] Is there anything you would like to lay before the Commission? Going back to your first question as to whether I could attribute a reason why our ships fired, I do not, in the first place, attribute it to the presence of iron pyrites, from my long experience in the coal trade in Newcastle, and seeing such large quantities of iron pyrites heaped up and alongside of coal-heaps. While I have had several small-coal heaps fire spontaneously, I have never observed iron pyrites in heaps fire at all.
1378. You are referring to iron pyrites alone? There was a certain mixture of small coal with the iron pyrites.
1379. But the greater part was iron pyrites? Yes; there is a very small percentage of iron pyrites in our seam, as well as in all seams in our district, but all, more or less, have iron pyrites in them. The fires which have occurred lately have been first attributable, in my opinion, to the grinding of the coal into a fine state under the hatchway. I believe, but cannot speak from experience, that improper trimming has very often had a great deal to do with the rubbing of the coals in the cargo when the ship is rolling about at sea, and creating heat. It has been my experience, in observation, that most ships that have been missing or have taken fire have been loaded, in our greatest heat—during our summer months. Many days last summer the sun was 130°, and then at night a heavy shower of rain might come and moisten the coal, thus generating heat. I know that opinion is adverse to that of many best authorities. We have at our mine a very large wooden hopper containing about 3,000 tons of small coal when filled. I have, before any rain, experimented in that hopper to ascertain the heat—not by a thermometer, but by a rod of iron; and also after a shower of rain—not immediately after, but a fair time after.
1380. What do you call a fair time? A few days; sometimes I have gone as long as a week after and found much more heat generated after rain, and have also found the heat ease off if the weather continued fine.
1381. Was the heat generated at a point to which the damp could have penetrated? It could percolate right through the small coal. It is about 40 to 50 feet thick in the centre. The rain passes right through the small coal.
1382. Does it? It does.
1383. You have tested the heap of small coal after it has been sodden by rain, and have found that within a certain length of time thereafter the heating has been greater than under similar circumstances, when the coal was dry? Yes; when I have found that I have eased off the coal in the hopper. I have three roads underneath it.
1384. Would there be any chance of your being able to place that hopper of coal at the disposal of the Commission, or is it in daily use? It is not in daily use, and I have not the least objection, but permission must be first obtained from our secretary. Large quantities of coal are shipped in Newcastle by night, and there must necessarily be a deposition of dew. I have found the lighter the rain the greater the heat in my hopper. After a very heavy rain I have not taken the trouble to test it. The lighter the rain the more probability there was of heating.
1385. What you call light rain was sufficient, I presume, to allow the moisture to get into the coal? Yes.
1386. You refer to ships having been lost chiefly when loaded in very hot weather;—is that the result of real experience, or is it an impression you have formed? It is really from observation with the secretary, Mr. Binney. I think the "Knight of St. Michael" was loaded during the greatest heat wave we experienced last summer. I think the cargo of the ship following was heated: it heated coming from Sydney to Newcastle. She was stiffened in Sydney.
1387. *Mr. Pittman.*] The "Ellen A. Read"? I think that was the name. I think her first shipment was shipped here during a very hot day and sent to Sydney.
1388. *President.*] Is there any record kept of temperature? Not, I believe, in Newcastle. The Observatory in Sydney has telegrams every day from Newcastle as to rain and heat.
1389. It is a fact, of course, that the firing and heating of coal cargoes has become greater in recent years? I must admit that from what I hear.
1390. Have you any idea as to the cause? Last summer was the hottest I have experienced.
1391. This trouble started before last summer? I attribute it to the fact of our ships becoming much larger than they were. It was a very rare occurrence in years gone by for a ship to reach 2,000 tons in Newcastle; now it is not a rare occurrence to have them 4,000 tons. A large number come between 3,000 to 4,000 tons. I do not know how many ships have loaded with our coal during the last few years, but I have a list of the quantities of coal shipped during the last sixteen years.
1392. *Mr. Pittman.*] Have you been down the Borehole Pit? Very frequently.
1393. Did it strike you there was an incontestably larger amount of pyrites in the coal there than in any other pits you are acquainted with? It did not.
1394. Did you notice the pyrites occurred in large saucer-shaped aggregations? I noticed that.
1395. Do they occur frequently? No, not very frequently. I never saw the fire really burn there. In conversation with the manager, he and I agreed it was owing to the increased richness of the coal going towards Newcastle.
1396. *President.*] What do you mean by increased richness? The Borehole Pit is about 2 miles from Newcastle; and as they come towards Newcastle the seam thickens, and also increases in richness.
1397. What is richness? In giving more gas per ton.
1398. *Mr. Pittman.*] In having more hydro-carbons? Yes.
1399. It is a semi-bituminous coal? Yes.
1400. Were the heaps of slack in which the fires you speak of occurred on the surface? Yes.
1401. The fires were not due to the presence of an abnormal amount of pyrites? I do not think so.
1402. Have you known fires occur in the heaps of slack at the other collieries in the district? I have known others, but they were only really heaps of slack by itself. I do not think iron pyrites was mixed through them.
1403. They were similar coals to your own? Yes.

[Witness withdrew.]

Mr.

Mr. H. Harper sworn and examined:—

Mr.
H. Harper.

10 Sept., 1896.

1404. What is your name? Henry Harper.
 1405. And your business? I am a mining engineer.
 1406. Are you engaged practically in that profession in Newcastle? Not now; but I have been all my life.
 1407. You are, I believe, the proprietor of an appliance for spreading coal in vessels? Yes.
 1408. What is it made of? Iron entirely.
 1409. The idea is to provide a channel to shoot the coal down slowly into the hold? Yes, instead of dropping down the main hatch it is shipped on to the apparatus and runs where required.
 1410. Have you ever loaded a ship with this appliance? No; we have always had nothing else but opposition from the stevedores and all interested in the shipment of coal.
 1411. Why are they opposed to it? I suppose they think it is going to reduce the labour; that it is going to do away with the cost of trimming. It will, no doubt, do that when properly used.
 1412. Why should stevedores be opposed to it on those grounds? Because they would, perhaps, have to do the work at a reduced rate.
 1413. We have heard that a difficulty lies in the time occupied in getting the appliance in and out of the ship? It can be put down with four men in half-an-hour. It can be taken out in branches between the intervals in the shipping of the waggons.
 1414. You have never had a fair trial of it? No; we have had it altered and made ready to put in the ship at any time.
 1415. You have already made an attempt to put it on board a ship? Yes; but there was a misunderstanding between the captain and me about a beam that was across the ship. The hatch was big enough—16 feet in length, but the beam reduced it to 11 feet.
 1416. Can you only use it in a large hatch? We can work it now in a 12-foot hatch.
 1417. By what width? 9 feet.
 1418. So that you could work it in a hatch that was too small to allow a waggon to be lowered through? Yes.
 1419. Could you work it, as a general rule, in the fore and after hatches of a ship? If we make any more we could make them a little smaller. It is only necessary to put one end in those hatches.
 1420. What is the cost of your apparatus? About £60 to £70.
 1421. Would that include patent rights? Yes, everything.
 1422. Who would you regard as a possible purchaser of the apparatus? I would sooner let it on a royalty. There is so much opposition to it, and shipping is a bit out of my line.
 1423. So that you would charge a royalty to the stevedores who made use of it? That is it, sir.
 1424. It seems fairly obvious that with this apparatus the coal would have to be trimmed back to fill up the well of the hatch? Its own gravity will bring it in. As we take the sections off the coal will run back into the main hatch under the apparatus.
 1425. You consider the coal will not require to be trimmed in? Not the slightest bit.
 1426. *Mr. Pittman.* What is the material point of difference between your patent and Spencer's? I have never seen Spencer's.
 1427. What is the weight of your machine? About 35 cwt.
 1428. We have been told it weighed 3 or 4 tons? Nonsense; Morrison, the maker, will tell you.
 1429. Perhaps the first machine you made was heavier? No, sir; we have only made one.
 [Witness withdrew.]

Mr. W. Marsden sworn and examined:—

Mr.
W. Marsden.

10 Sept., 1896.

1430. What is your name? William Marsden.
 1431. What is your business? Stevedore.
 1432. Did you take part in a deputation to the Premier on the 20th August last? Yes.
 1433. What was the object of that deputation? To try to better the position of the stevedore and the working classes generally.
 1434. Does that include the trimmers? Yes.
 1435. Are your interests and those of the trimmers identical, or in opposition to each other? They are identical, I should imagine.
 1436. You are paid so much per ton for trimming? Yes.
 1437. You pay the trimmers so much an hour? Yes.
 1438. The amount of money you make on a job depends on the difference between what you pay the trimmers and what you receive for the work? Yes.
 1439. It looks at first then as if your interests were exactly opposite? Yes, it does, but we proved they are not in the co-operation we made when we went to the Premier.
 1440. You refer to the two trimmers on the deputation? Yes.
 1441. What was it you went to the Premier to obtain? To try to bring about the licensing of stevedores, if possible, for stevedores to go through a proper practical examination.
 1442. Why were you anxious to have the stevedores licensed? Because Tom, Dick and Harry come from the bush, go to an agent who gives them a ship and very often nobody gets any money from him and sometimes you never hear of the ship again.
 1443. We have had a list prepared of casualties from shifting cargoes, would you be surprised to learn that the names of well-known trimmers occupy a very conspicuous place in that list? Quite correct, that man does 50 ships to anybody else's one.
 1444. Which man do you refer to? Mr. Russell. I am of opinion that no matter how some ships were trimmed they would shift coal.
 1445. It was solely in the interest of the safety of the ships that you called on the Premier, to prevent them being trimmed by incompetent people? Another thing, the stevedore does not finish his work as he should do. I admit it myself. The ship may be safe but she could be made a little safer, made perfectly safe. I know very well there are jobs, with the competition that exists, where you have to use every point imaginable to get that work done to make it pay.
 1446. You must not pay your trimmers too much I suppose? I pay them the highest rate going. I have knocked off sailing ships.
 1447.

- Mr. W. Marsden. 1417. I cannot see that the issue of a certificate will prevent stevedores slumming their work? Not if you have a proper practical man to see the ships thoroughly trimmed.
1418. Your proposal involves the appointment of an inspector as well as the issue of certificates? Yes.
- 10 Sept., 1896. 1419. Was that part of your proposal to the Premier? Mr. Reid said he would not protect either the stevedores or the trimmers, but he would protect the lives for the future, if our statements were true.
1450. Did you ask Mr. Reid to adopt the system of inspection? I do not think we mentioned it; but our ideas were that.
1451. Your proposal would have the effect of reducing the competition in stevedoring business? I believe it would.
1452. There would be money in it for somebody? I do not know that there would be money in it. I reckon if it came to the point the Government could classify ships for trimming.
1453. So that there would be a Government rate for trimming? Yes; the Government at one time gave all the trimming to Mr. Russell.
1454. That was sometime ago? Yes.
1455. The effect of licensing would be to reduce the number of tenderers? I believe it would; it would keep a lot from going into the field that were not qualified.
1456. The people who come in from the bush obtain work by putting in absurdly low prices? Yes, as a rule, and they clear away without paying their men.
1457. The adoption of the licensing system would benefit you financially? Certainly; better than what I am now.
1458. Mr. Pittman.] Have you ever used a distributor at all? No, sir.
1459. Or seen one used? No; I have seen the machine, but have not seen it used.
1460. President.] Have you any objection to using such appliances? I have no objection so long as I am paid for it.
1461. Do you mean to say it costs more to use these machines? A lot more.
1462. Can you explain how you know it would cost much more to use them? I have seen it landed on board, but I have never seen it in the hatchway.
1463. How long would it take to lift on board? Spencer's patent I know, I should think it would take an hour or two to rig it up properly.
1464. How much does it weigh? The centre part of it, I suppose; about two tons.
1465. Do you know the whole thing only weighs 35 cwt.; I do not see how it would take an hour to lift that on board? It would take me an hour. Some men might do it quicker.
1466. One person might not be able to lift it on board, but it could be done by mechanical appliances? Yes.
1467. Would it take an hour then? I would not like to say much about it; I have never put it on board.
1468. Suppose some similar sort of appliance had to be used in ships above a certain size it would lead to extra expense? Yes.
1469. You trim for about 3d. to 3½d. a ton, do you not? I think, as a rule, it is a good deal less.
1470. What is the price? I put in tenders at 3d. per ton, and I cannot get them for that. I think they average between 2d. and 3d. per ton at present.
1471. Would 1d. extra a ton cover the cost of using the distributor? The men we employ have rules that you have to pay them while you are running up the hatch, and we should have to pay the same with this machine.
1472. Mr. Pittman.] You have to pay for labour you are not using? Yes.
1473. Is it not a fact that some of the stevedores do not employ the men while they are running up the hatch? This last three or four years the rules have been lying dormant. Since the strike they have brought these rules forward again. We discussed them at a meeting last Monday night, I think it was.
1474. Do not some of the stevedores at the present time run up the hatch without employing trimmers? Yes; the question is still at issue.
1475. President.] So that there are some stevedores who pay and others who will not? Some do not pay. The trimmers are trying to force their rules on us, and we should have to get extra money to pay them.
1476. In fact they are trying to squeeze you, and you would have to squeeze the ship-owner? Yes.
1477. You say the rules have been in abeyance for four years? Yes. When we take on labour we are not allowed to sack the labour.
1478. You mean to say you are not allowed to sack a man who is incompetent or a drunkard? Yes; I have power then.
1479. Under what circumstances have you not power to sack him? You are not allowed to sack a man now while the hatch is running up and then take him on again after the hatch is run up.
1480. You have to keep him standing idle while the hatch is running up? Yes, unless you have something else for him to do connected with trimming.
1481. We have had a great deal of evidence to the effect that many stevedores are in the habit of making what the trimmers consider an unprofitable contract; and then trying to make money by not putting labour on until the hatches are absolutely run up? The stevedores have the last three or four years been putting an extra quantity of stiffening into ships, no doubt. In the matter of stiffening, they give the stevedores the privilege of putting up one, two, or three hatches, whichever he likes.
1482. I suppose putting the coal in for stiffening is the same operation as for the other portion of the cargo? Yes.
1483. Mr. Pittman.] Is there any rule of the Union whereby a stevedore employing a certain number of trimmers to commence the trimming of a cargo must keep all the men on to the finish of the work? That is in the rules—that is the gang rule.
1484. We have been told that certain men have worked for as long as thirty hours trimming a ship;—is there any rule of the Union to explain why that is? No; there is a rule which says they should not do it.
1485. Is it their own wish to work thirty hours at a time? I am almost sure it is their own wish, as a rule.
1486. Is it not against your interest as a master trimmer to employ a man who has been working over eight hours—is it not a fact he cannot do such good work then? It is.
1487. Why do you sanction a custom that leads to the employment of a man as long as thirty hours? There are little things that crop up I don't care to mention to anyone. When there is a bit of a rush on he

he won't come for you, and when I get my own men I keep them, and let them stop on as long as they like. I have a steamer, the "Argus." My men went there yesterday at dinner-time and only worked four hours. I relieved them at 7 o'clock; this morning I relieved that gang at 6; at night I relieve them again at 6; to-morrow morning I relieve them at 6, and that gang will finish her.

Mr.
W. Marsden.
10 Sept., 1896.

1488. Do not the men complain about having the work taken from them? In many instances; but not since we discussed the rules.

1489. They are kept on because the master trimmer finds a difficulty in getting other men to suit him—is that it? Some bosses get a gang of men, and a good gang perhaps, and get them used to their boats, and don't care about taking on any, perhaps, inferior men.

1490. They would sooner employ men absolutely unfit for work by reason of exhaustion than take on fresh men? That is so. The bosses are having a meeting on Saturday, I think, over the full-gang rule. Many ships come in from sea, and you go to a hatch that only wants eight men to trim it, but perhaps the main hatch wants twenty men, and you have to have the twenty from the start.

1491. *Mr. Pittman.*] That is what they want to force upon you? They did it for many years, but they have not been doing it for the last few years.

1492. They want you to pay twelve men while remaining idle? Yes. I have been one of those but all night and never struck a blow, and got paid for it.

1493. *President.*] You have been a working trimmer yourself? Yes, twenty-four years; in nothing else but the coal trade.

1494. You know the ins and outs of the business? I was one who helped to make the rules. Where the trouble comes in is that there are two different classes of labour here; one class works for 1s. an hour, the other class for 1s. 3d. and 1s. 9d.

1495. *Mr. Pittman.*] What do they pay the first class for night-work? 1s. 6d.

1496. Are those men skilled trimmers? No; they are here to-day and gone to-morrow. I have seen them trimming, and they have shipped in the same vessel that they trimmed.

1497. *President.*] Have you heard of any accidents to ships in which you have been engaged? Yes.

1498. Can you mention a case? The "Ben Cruachan."

1499. Did you trim her as stevedore or as working trimmer? As stevedore.

1500. Was there any abnormal smashing of coal on that ship? No. She had coal in the forepeak, but I would not swear whether it was Newcastle coal or not. The fire occurred in the forepeak in the harbour.

1501. Was it due to a lighted candle, do you think? We were not down the forepeak.

1502. You do not know anything about it? I know something about a lighted candle. I happen to be the gentleman referred to by one witness in regard to a lighted candle on the "Easby," which it was thought caught the bulkhead at sea.

1503. What happened on the "Easby"? A lighted candle was left, and she fired in the bulkhead.

1504. Did you leave the candle alight? I got the blame for it. I denied it. I don't believe I did or I should tell you. I was on the "Aristomenes"; she was on fire. I have taken notice of all the ships which have had fires in the harbour, and the fires have been in the forepeak, or under the transom, or in where the dunnage stuff lies.

1505. Do you mean to say the majority of ships afire in the harbour have fired in places other than under the main hatch? Yes.

1506. Is that from your own experience? I have just quoted ships.

1507. And you attribute them to the rubbish thrown fore and aft? I would not like to express my opinion as to how some fire.

1508. You do not mean to imply that they have been purposely set on fire? I do not know whether I am liable for expressing my opinion that way.

1509. *Mr. Pittman.*] Did the "Ben Cruachan's" cargo heat simply, or was she afire? Afire.

1510. You do not know whether it was due to the coal? It might have been a light dropped down; in fact, they did not know themselves.

1511. You could not get any satisfactory information as to whether the fire originated amongst the coal spontaneously? No. There is one thing I have noticed in the coal, and that is the fuse. I got a piece to-day a foot long. It was sticking out of the corner of the hatch, and it was dry, and I put a match to it and it went off. Sometimes you see it four or five times a day—fuse left in the coal that never went off.

[Witness withdrew.]

Mr. W. R. Logan sworn and examined:—

1512. *President.*] What is your name? William Robert Logan.

1513. And your business? I have no business. I am a retired public officer. I was Sub-Collector of Customs at Newcastle, and have just retired from the Service.

Mr.
W. R. Logan.
10 Sept., 1896.

1514. *Mr. Pittman.*] Were you for many years in the Service? Forty-nine years and five months; twenty-seven years and five months in the Customs, and twenty-one years in the Immigration Department, and one year previously in the Executive Council Office. I was transferred from the Immigration Department to the Customs in 1869.

1515. Did you have a large knowledge of the coal trade during your term of office here? Nothing except what was obtained from the facts put before me—the statistics in connection with the clearing of the vessel's cargo of coal. I never left the office from one week's end to another.

1516. Can you tell us anything about the heating of coal cargoes? Only that I had some correspondence with the Board of Trade some time ago in regard to the loss of the "Gowanburn," "Colintrave," and others, and I could obtain the papers for you. They sent out to ask me to make certain inquiries. They were holding an inquiry, or about to do so, and asked me for information, which I obtained.

1517. *President.*] How long ago is this? In 1894, I think.

1518. Did the inquiries refer to the shifting of cargoes or to heating? They wanted to find out the cause of the fatalities—whether they were due to the shifting of cargo or other cause. We went so far as to obtain statements on oath from various experts with whose evidence we sent a diagram showing the section of the vessel in each case, the way she was loaded, and how she was loaded, from information obtained from stevedores and others.

1519.

- Mr. W. R. Logan.
10 Sept., 1896.
1519. *Mr. Pittman.*] Can you give us any satisfactory reason why trimmers are sometimes employed for as long as thirty hours continuously? Perhaps it is because they want to get the trucks empty as quickly as possible for the colliery.
1520. Do you not think they would get them empty more quickly if they employed men in shifts? You would suppose so. I could not tell you the exact reason. The ships are obliged to take a certain quantity of coal every day under the regulations.
1521. They would ship a greater quantity if they worked in shifts? Yes.
1522. The men get greater pay at night? Yes. It creates a monopoly of work to a certain number of men.
1523. You do not know why the master trimmers adopt the practice? I cannot give you any information on this point. It may have been to try to reduce the time of vessels loading. We used to give a ship perhaps an hour to get alongside, and another hour to get away, but for the rest of the time tonnage rates were charged.
1524. How much used you to charge a ton? Half-penny a ton per day for a certain period, and $\frac{1}{4}$ d. later on. The charges are regulated by the "Wharfage and Tonnage Rates Act, 1880." That Act is administered by the Superintendent of Public Wharfs in Sydney, but here, I was appointed to collect the rates, with the assistance of the Railway Berthing Master and a wharfinger appointed independently of the Railway Department over at Stockton.

[Witness withdrew.]

Mr. J. O'Sullivan sworn and examined:—

- Mr. J. O'Sullivan.
10 Sept., 1896.
1525. *President.*] Your name is John O'Sullivan? Yes.
1526. And your business? Stevedore.
1527. Have you any other business? No.
1528. How long have you been a master trimmer? Over thirty years as a stevedore—twenty years as a master-stevedore.
1529. Have you ever had a ship lost trimmed by you? Only one. She had 650 tons of shale and tallow in the bottom of her.
1530. Under the coal? Yes; the coal was on top.
1531. *Mr. Pittman.*] Kerosene shale? Yes.
1532. *President.*] Is it known what became of her? She was never heard of. I told them she would never reach the other end.
1533. What made you think so? The last of the coal would make her shift either way; she was cranky. Captain Fisher was the master of the ship.
1534. Was it a ship called the "Cumbrae"? Yes, that's the name.
1535. In your opinion, she was too tender? Yes; there was not an ounce of room in the ship, and the captain insisted upon putting the coal in.
1536. So that it was too high up in the ship? Yes.
1537. Was she loaded in that manner by the captain's orders? Yes; he made me a present of a new hat for getting the coal in.
1538. What is the amount of the captain's "new hat"? As much as they can get, but all masters are not alike.
1539. What does it generally amount to? I cannot say. The "new hat" they get from me does not amount to much.
1540. What is the usual price paid? I should say £5.
1541. What is the stevedore's object in giving the captain a "new hat;" is it for not looking after the job? I could not really say what it is.
1542. When is it given? At the completion of the work, I suppose, if it is given.
1543. So that it would include the captain's good offices in leaving the master trimmer alone? Certainly it would.
1544. You have never given the captain a "new hat"? I cannot say that I have not given a "new hat" on different occasions, but very seldom.
1545. As a matter of fact, it would be necessary, or else you would lose the job? You may have a good and easy ship, and you might give the captain a "new hat."
1546. When you might legitimately give the captain a present? Yes.
1547. Because a stevedore gives the captain a present, it does not necessarily mean that the captain has sold the trimming to him or left him alone? Not at all. Some masters of ships will never look after the trimming; another will send an officer down. There are not many of this sort, you can generally do as you like.
1548. Was the captain of the "Cumbrae" one of that sort? He was a very careful man.
1549. He made a mistake then? He did. He was a careful man; I have loaded ships that Captain Fisher was master of four times.
1550. Have you loaded any cargo that heated? I do not know of any.
1551. Did you ever see the "Garsdale"? Yes.
1552. She was an iron ship of 1,645 tons register, loaded with Wallsend coal in December, 1895;—you have forgotten her? Did I load her?
1553. You appear as having done so—she arrived at Valparaiso with cargo heated? Oh, yes; I loaded the "Garsdale."
1554. Was she loaded in the usual way? Yes; I was there most of the time she was loading.
1555. The cargo was dropped down the main hatch? Yes.
1556. Is there not an excessive quantity of fine coal produced by that practice? Yes.
1557. She was loaded in hot weather? I cannot remember the month.
1558. On December the 10th, 1895? It would be in the hottest weather we have.
1559. What is your opinion as to the use of the distributor? I think no ship should be trimmed without it. If the small coal is the cause of heating, then no ship should take her cargo in without it.
1560. Suppose small coal is not the cause of heating, what would you put it down to? I should think it might possibly be from dropping a candlestick while the men are at breakfast. I have had to send men home for leaving a candle alight in the hold. I have found candles burning in the coal—not the coal, but the wick.
1561. Once or twice? Not more than three times altogether.

1562. Still, for every time you discovered it, you might have failed to discover it? It might have happened a good many times.

1563. I understand it is a thing that might very easily happen? When it comes to the last bit of candle it may drop, but they immediately put it out.

1564. If they see it? They must see it, because they are working by the candle, and they put a fresh candle in.

1565. Each man has his own candle? Yes, and candlestick.

1566. Do the men often leave the candles burning in the hold? They would do so unless you had proper supervision. I send a man home when he does it.

1567. You get rid of him? Yes, for a time, and then put him on again. They sing out, "Put your candles out," when they knock off for meals.

1568. Do you think a cargo could be set on fire by a candle? I have never tried it, and cannot say. It seems to me that ninety-nine times out of a hundred a cargo would not be set on fire by a candle. I have seen at the dyke the carbons drop from the electric lights right on top of the coal in the waggons, and then tipped immediately into the ship. Captain Porter, of the "Avonia," saw it happen.

1569. Was the carbon hot? It dropped down red hot. I saw that happen the other night. If it dropped in with the smoke and dust you would not notice it was afire when it came into the ship.

1570. But if any fire did occur it would get put out by the other coal? You would think so.

1571. Why is there so much opposition on the part of other master trimmers to the use of the distributor? It is harder to trim a ship with it. It costs more money to trim a ship with it.

1572. If it were made compulsory to trim a ship by the use of a distributor, it would have the effect of increasing trimming prices? Yes.

1573. The opposition on the part of master trimmers would then disappear? Of course it would. I have used it half a dozen times. I got $\frac{3}{4}$ d. a ton more for the trimming.

1574. Does that $\frac{3}{4}$ d. a ton go in wages to the trimmers? Yes, it costs more money.

1575. It costs more for labour? It takes longer, and you have the expense of putting it in and taking it out; you have to dig it out of your ship's main-hatch when nearly done.

1576. Have you had any sign of an accident when using this distributor? There is no possibility of an accident with it if you know how to put it in and how to use it.

1577. There is no difficulty about using it at all, with the exception of the extra trouble involved? The captain of the ship had got instructions to put it up. They showed me what to do with it, and afterwards there is no trouble, only the extra time. When the ship comes under you have it ready.

1578. Can you put Spencer's distributor into the fore-hatch as well as the main-hatch? The smaller portion of it.

1579. So that you can reduce the breakage in the fore and after hatches, as well as in the main-hatch? Just as well.

1580. What does Spencer's apparatus weigh? The big sheets, I should imagine, weigh a ton.

1581. What about Harper's apparatus? I would not like to say anything about it.

1582. You have not used it? I am not likely to.

1583. Why not? Not from what I have seen of it; but he tells me he has altered it now. (Witness here described the use of the appliance by means of a diagram.)

1584. Is there any reason other than mere prejudice why the master trimmers do not like to use the distributor? They do not like to be bothered with it. Some of the master trimmers never look at the ship getting trimmed; they never go down the hold; they don't know the way down the ship's hatch.

1585. What was the object of the deputation to the Premier? I do not know. I would not go with them.

1586. Supposing they attained their object, in allowing only licensed stevedores to load a ship, would that lead to reduced competition? Of course.

1587. That might reasonably be accepted as leading to contracts for trimming being obtained at higher prices? No doubt.

1588. What, in your opinion, was the object of the deputation? Some while before that they wanted us to take ship and ship about, and I said, "No." I do not know what their object was: I would not join them.

1589. *Mr. Pittman.*] You say you have actually trimmed several ships with this distributor? I have trimmed, I think, about six.

1590. You have trimmed all that have been trimmed? Yes.

1591. And the extra price you received was $\frac{3}{4}$ d. per ton? Yes. I would not trim a ship with it without getting $\frac{3}{4}$ d. above the regular price.

1592. Are you prepared to say definitely that you can properly fill a ship in the fore-hatch with one of these distributors? You can only put your shoot on one end; the fore end is always blocked up.

1593. But they are practicable? No doubt about it.

1594. Have the ships which you have trimmed with the distributor had average-sized fore-hatches? They were small enough.

1595. Smaller than the average hatch? Yes; the main hatches were a good size, but not the fore hatches.

1596. What size were the fore-hatches? Not more than 10 feet long, I suppose.

1597. We have seen some fore-hatches less than 10 feet? Iron ships have generally 10-foot fore-hatches; some 15 feet.

1598. *President.*] We have heard some curious stories about men working thirty hours together;—can you tell us how it can be to the advantage of the employer to allow men to work such long hours? No man should be allowed to work more than twenty hours at the outside.

1599. Can a trimmer keep to his work for twenty hours? He can.

1600. He can keep working fairly well? They have worked forty and forty-five hours. They have never worked for me like that, as a rule. If a man starts at 6 o'clock, I let him work to 12 at night.

1601. That is eighteen hours? I have had plenty work a day and night.

1602. And have they been able to work? Yes.

1603. That is a wonderful physical feat? Coal trimming is not so heavy as other work. Men have a sit down for an hour while the hatch is running up; or an hour and a half.

Mr.
J. O'Sullivan.
10 Sept., 1896.

- Mr. J. O'Sullivan.
10 Sept., 1896.
1604. And during their meal times? Yes. The men are not working the twenty hours. There is scarcely any hatch of a ship that will take twenty hours to load.
1605. What is the reason for allowing a man to work even as long as twenty hours;—does it pay you to keep them at work for that time? If men go on and don't start in the morning at 7 o'clock they growl. If you send them off at night, they say they don't get a night at the ship. The men themselves growl. They look for it, and demand almost to work at night.
1606. Are you conversant with these rules [handing witness the rules of the Trimmers' Union (*Appendix N.*), which he read]? Yes; those are the Union rules—the rules the trimmers work under.
1607. Is there anything in those rules to lead you to employ them for such long hours? Nothing.
1608. They simply like to work? Yes; if you send them home they are annoyed, and say, "Why don't you give us a show to work at night?"
1609. Night work being rather better paid for than day work, they like to get it? Yes.
1610. It has also appeared before us that trimmers do not get more than three days' work a week? Oh! yes they do. Some of them get more work than that. Some of them do not; some of them are drunk as soon as they get paid. They are not fit to go to work again.
1611. Supposing a man to be reasonably sober, he can look forward to more than three days work a week? I have had men receiving £4 15s. a week ever since the strike.
1612. It has been suggested that a comparatively easy way of compelling, to a certain extent, proper trimming, would be to put bulkheads fore and aft? A bulkhead, in my opinion, is worth nothing in a ship if the coal is put down as it should be. English coal is much heavier than ours, and you would have to keep shifting the bulkheads.
1613. You do not believe in the bulkhead method? You would have to have movable ones. If the coal is trimmed properly it can't shift.
1614. Whose business is it to see the ship trimmed right? The stevedore's.
1615. Is it not the captain's business? He should send an officer down.
1616. Does he as a rule? In many cases they don't.
1617. Is that on account of the "new hat"? I should not say so. It is carelessness in some cases. They tell the officers to look after it, and in many cases they do not. An officer may get a bottle of grog not to look after it. There are many shipmasters who will go down themselves.
1618. There is nothing to prevent them going down if they desire to? Nothing whatever.
1619. And you would always try to meet your skipper, would you? I like to see him go down. He knows the work is done satisfactorily, and you are satisfied.
1620. It has been proposed that inspectors should be appointed to see that ships are trimmed properly? I think the appointment of inspectors would be a good thing.
1621. I suppose there would be no difficulty in finding suitable men? Not at all.
1622. What do you suppose suitable men could be obtained for? A man would want £4 a week to take the job, that is, a good man, and that would be quite enough for him.
1623. How many inspectors would be required to look after the trimming? It would only take two—one for day and one for night.
1624. Could they do it all? There are only ten cranes as a rule working. The coastal steamers are all loaded in the daytime, and have bulkheads and compartments; you would not want to look after them. All you would have to attend to would be sailing ships, and there are never more than ten working. One man could go down once before dinner and once after dinner to see that everything was right. A practical man who knows where they could do any dodging is all that is required.
1625. Would it not be pretty hard work for two men? I don't think so.
1626. It would mean twelve hours a day? He would not be working; he would only be going around looking. A practical man knows where a ship should be filled, and knows what coal she wants.
1627. Would such men have to be obtained in this port? There are plenty of men in Sydney that have the desired knowledge.
1628. Do you think stevedores would be opposed to the appointment of inspectors? Some of them would. Any man that did his work properly would not care.
1629. Do you think captains of ships would object? I am sure they would be very pleased with it, for the simple reason they would know there was some proper supervision. I think captains would be very willing to pay portion of the expense.

[Witness withdrew.]

FRIDAY, 11 SEPTEMBER, 1896.

[The Commission met at 2 o'clock p.m. at the Custom House, Newcastle.]

Present:—

PROFESSOR RICHARD THRELFALL, M.A., PRESIDENT;

And EDWARD FISHER PITTMAN, Esq., A.R.S.M.

Captain H. R. Cross sworn and examined.

- Capt. H. R. Cross.
11 Sept., 1896.
1630. *President.*] What is your name? Herbert Robert Cross.
1631. You are Chairman of the Marine Board? Yes.
1632. Is there any power which would enable you, by means of your position, to see that the trimming of ships was properly carried out? That would depend entirely whether it comes under the amended Navigation Act, which deals with unseaworthy ships. I doubt it. It has never been attempted.
1633. In your opinion, would an improperly trimmed ship be unseaworthy to a certain extent? If it could be ascertained that she was improperly trimmed.
1634. Does not the present Act give you power to go on board a British ship? As regards trimming it would be useless unless the work was watched from the first.
1635. *President (after reading sub-section 4 of section 2 of the Act 45 Vic., No. 6.)* It will be admitted that this Act covers action against improper loading and ballasting? According to the wording of it, there is no question it does, but it has never been exercised.

1636. How many inspectors do you suppose would be necessary to supervise the trimming of the port? There are, say, a dozen ships loading at one time, night and day, and so long as trade is brisk you would want an inspector for every ship almost. You would want a relay of inspectors so that the night men could relieve the day men.

Capt.
H. R. Cross.
11 Sept., 1896.

1637. It does not come within your duty to inspect the loading of coal? No.

1638. It is really a matter of impression as to the number of inspectors that would be required? Yes, but to carry the inspection out fully, I maintain that for a person to swear to proper loading of a ship he must be there from the commencement of the loading to the end, and that is a duty which should devolve upon the captain and officers, as in the loading of any other kind of cargo. The safety of the ship is their care and responsibility.

1639. As a matter of fact, they do not properly supervise the trimming of a ship? I cannot say that. I should be very sorry to say they did not do their duty.

1640. It may be taken they do not supervise the loading. I think the evidence on that point is final? I think it is mostly left to the trimmers, but not in all cases; there are captains and captains.

1641. *Mr. Pittman.*] Are you prepared to say that one inspector could not supervise the trimming of three ships alongside one another? He might be able to go from one ship to the other. The loading is continuous, and a man could not be there all day and night.

1642. *President.*] Do you think ten inspectors—five for the day and five for the night—would be able to cope with the work? We will say they would.

1643. One witness has mentioned two, is that number too small? It is nonsense.

1644. *Mr. Pittman.*] Did you notice the account of the loss of the "Flora P. Stafford" in last week's newspaper? No.

1645. We wish to know with what coal she was loaded? The Wallsend Coal Company, of which I am manager here, did not load her.

1646. *President.*] Have you formed any opinion as to the cause of the heating of coal cargoes? I cannot say I have any particular theory of my own. There is a diversity of opinion as to the cause that leads to spontaneous combustion.

1647. There is an impression abroad that Wallsend coal has been particularly unfortunate in regard to accidents of that character;—is that borne out by your own data? No. You will find that, considering the large number of vessels we have sent out on long voyages, the proportion of accidents is not greater than with the ships loaded with coal from the other collieries.

1648. How many tons of coal do you load in a year for long voyages? About 300,000 tons.

1649. For foreign ports? Yes; our business is almost confined to foreign ports, the voyages averaging from forty to sixty days or more. We send to the West Coast of South America and California.

1650. Do you ship any coal to Sydney? Yes, bunker coal for local steamers, and sometimes to provide ships with stiffening. We have a steamer of our own for that purpose.

1651. Is that included in the 300,000 tons? Yes.

1652. Then you have to subtract from the amount the coal used locally? It is a very small part of it. You could say 300,000 tons for the foreign trade for the last few years, at any rate.

1653. You are not prepared to say your coal is more likely to heat than the coal from other collieries? Certainly not.

1654. Which do you consider to be the colliery doing the next largest business to yours? There are the A.A. Company, the Laubton Company, the Newcastle Company, and the Co-operative Company, but that does not approach us so nearly as the others do. We stand at the top of the list as to quantity.

1655. *Mr. Pittman.*] And the Duckenfield? Yes; Brown's comes up to us closer perhaps than some of the others I have named.

1656. *President.*] We have observed that there seems to be unnecessary breakage of the coal at the screen in falling into the waggons;—would you have any objection to an experiment being made at your colliery with the object of preventing that? That is a matter for the colliery manager. I would not interfere with that.

1657. The maximum breakage occurs, without doubt, in dropping the coal from the coamings of the hatch down to the bottom of the hold? Undoubtedly it does, and it is for that that some remedy should be provided. It is quite necessary to adopt some means to prevent the direct fall of the coal at the initial part of the loading of a ship. It stands to reason that falling from so great a height smashes it.

1658. Whatever might be adopted, it seems, would lead to increase in expense;—would the coal trade, in your opinion, stand an extra expense of 1d. a ton, or would that ruin the trade? No; someone else would have to pay for it.

1659. It would not make any difference to the coal trade? Not to the trade. It would make a little difference, perhaps, in the price paid to the trimmer.

1660. We have heard that the insurance companies will not insure coal coming from some of these collieries; can you get your coal insured? That matter does not come within my province. The purchasers of the coal are mostly in England or Scotland, and they look to the insurance.

1661. To whom should we apply for information regarding that? To Mr. Binney, the Secretary of the Wallsend Coal Company, in Sydney.

1662. It has been suggested that the size of the waggons might be reduced, or that the waggons might be replaced by others having three or four boxes sufficiently small to go down the hatches of the ship? That would involve too much expense.

1663. To the colliery owners? Yes.

1664. What method would you suggest, then, of reducing the breakage? The main hatch of these large vessels are capable of admitting our present waggons to be lowered. If this is done, a very great deal of breakage would be avoided. The fore and after hatches—there are three generally—are not likely to be altered, because there is not space enough on the deck. In the trimming of coal, there should be a lot of coal trimmed fore and aft when the main hatch is filled, to fall upon when the fore and aft hatches are filled, instead of falling upon the ship's bottom.

1665. So that you would actually run the coal from the main hatch to the fore and after hatches? That would be a matter for proper trimming; they do not trim that way.

1666. It seems a long way to run the coal? It can be done with plates.

1667. Are you quite right in saying the majority of ships have main hatches large enough for the trucks to go down? Yes, in the modern ships; not in the smaller ones. 1668.

- Capt. H. R. Close.
11 Sept., 1896.
1668. Ships of what tonnage? Ships over about a thousand tons register.
1669. Supposing the main hatch of a ship is not large enough, would it be a serious matter to make it large enough? It would mean cutting away the deck and beams.
1670. One captain showed us a hatch that had been enlarged at a cost of £60—would you consider that excessive? No.
1671. Is there anything you would like to lay before the Commission? Yes. Of the known losses I think you will find a number the result of bad trimming; their cargoes have shifted. I think there are more losses from that cause than from burning. The question comes in, also, whether the increase in the size of the ships of late years has not some bearing upon the heating of the coal cargoes. There was forty years immunity from anything of the kind, and it was considered there was no chance of Newcastle coal firing. There is a large breakage under the present system of loading which might be remedied, either by lowering the coal down into the hold, or by using some mechanical means of spreading, such as Harper's, or Spencer's. I could not say which would be the most desirable; it would be invidious for me to do so. Trimmers themselves admit they cannot trim properly, or do not do so, because, they say, they are not paid enough. That came out in evidence before the Chamber of Commerce.
1672. Did you take evidence there as a member of the Chamber of Commerce? I gave evidence; I did not take it. Perhaps the heating of the iron sides of a ship during the time of loading or waiting in port for some weeks may be a contributing cause to the heating of the coal. On very hot days, I should imagine, if the hatches were not kept off, there would be a tremendous heating in the hold. There is another point. Many vessels going to the West Coast of America go round the south of New Zealand, where there are some very dangerous outlying islands and rocks, and who can say but what they have run on them. Going to California, they have to thread their way through coral islands. It is not reasonable to attribute the loss of vessels to the cause of heating alone. The holds of vessels should be perfectly clear of rubbish and dirt, and the remains of old dunnage wood and matting.
1673. Whose business is it to see to that? The ship's business. Ships should also have proper surface ventilation. There should be some space between the top of the coal and the deck above; not too much, because you must carry the coal pretty high up amidships to keep the ship all right.
1674. Suppose the ship was not ventilated, what would be the effect? The effect would be to possibly produce heating.
1675. You consider that want of ventilation might be the cause of heating? It is a matter that should be carefully attended to. Nearly all large ships are provided with ventilators on deck. Where the weather will permit it, captains should take off the hatches. One of your witnesses has said that Wallsend coal contained a larger amount of pyrites than some of the others; it is a fact that the Wallsend coal has been singularly free from iron pyrites.

[Witness withdrew.]

Mr. G. Bewick sworn and examined:—

- Mr. G. Bewick.
11 Sept., 1896.
1676. What is your name? George Bewick.
1677. And your business? I am the shipping manager for the Caledonian Coal Company and the Seaham Colliery.
1678. And you are also Chairman of the Chamber of Commerce? Yes.
1679. How long have you been engaged in the coal trade? Between twenty-six and twenty-seven years.
1680. You recently held an inquiry at the Chamber of Commerce in regard to the loading of coal? Yes; in 1894.
1681. Were you on the committee that drew up the report? Yes.
1682. Did you investigate the question of the heating of coal cargoes? We did not.
1683. Did you investigate the question of the trimming of coal cargoes? Yes.
1684. Did you come to the conclusion that the trimming, as a rule, was carelessly done? We agreed to that.
1685. Who did you consider was responsible for that trimming? We considered that the competition was responsible to a great extent, and also the trimmers in not carrying out their contracts as we thought they should have done.
1686. There is no supervision to make them? No proper supervision on the part of the officers of the ship.
1687. It has been pointed out that the officers of the ship are so much engaged that it is impossible for them to supervise the trimming? The captain has a great deal to do on shore, but I do not think the ship's officer has; his position is on the ship.
1688. Do you think any system of Government supervision in the matter of trimming would be of advantage? I do.
1689. Was that the conclusion that the Chamber of Commerce came to? Yes.
1690. You made a recommendation to that effect? Yes.
1691. Did your recommendation extend so far as to suggest who should pay for that supervision? No; it did not.
1692. Did you contemplate that matter at all? We did; and we came to the conclusion that the supervision should be paid for by the Government in the same way as they pay for the supervision of the loading of a ship as regards her marks.
1693. And they recoup themselves for that by harbour dues? Yes; at the present time vessels to be loaded pay $\frac{1}{2}$ d. per ton register, per day, while occupying a crane.
1694. The Government receives that? The Railway Department.
1695. Does the money received cover the interest on the amount expended on the wharves? I should think it does.
1696. You have no means of ascertaining that? No; any large ship will pay from £5 to £6 a day while lying at the wharf, and smaller vessels have to pay in proportion to their tonnage.
1697. There is no reason, if the harbour dues will go far enough, why they should not be used for the purpose of defraying the expense of the inspection of coal-trimming? That is my opinion.
1698. You cannot say whether there is a credit or debit balance? No.
1699. With regard to careless trimming, do you attribute it partially to the competition amongst the stevedores that you referred to? Yes.
1700. I understand the trimming prices average from 2d. to 3 $\frac{1}{2}$ d.? 3 $\frac{1}{2}$ d. I think is about the highest price paid.

1701.

Mr.
G. Bewick.
11 Sept., 1896.

1701. We have had some trimmers say they cannot afford to load under $3\frac{1}{2}$ d., and others who admit they can trim for $2\frac{1}{2}$ d.? Yes.
1702. The trimming must necessarily be scamped at such low prices? With modern ships, I think anything under 3d. a ton is too little to do the work properly.
1703. Are you acquainted with trimming? Yes, I have often spent some time on the dyke.
1704. I suppose you have talked with reliable trimmers, and have got an idea as to how much they make? Frequently.
1705. It is on that you base your opinion? Yes.
1706. The trimmers themselves apparently are anxious for some sort of inspection; I suppose one reason for that is that they would really get more work to do? I suppose the idea is that the best men would probably get more work.
1707. Any interference by a supervisor or inspector would operate in their benefit in the direction of increasing the amount of trimming work? I think so.
1708. *Mr. Pittman.*] Were the dykes made by the Railway Commissioners or the Works Department? I think the dykes were originally made by the Works Department, and handed over to the Railway Commissioners some few years ago. The Commissioners do all the haulage and shipping of coal. They take the coal from our collieries, and put it on board at a certain mileage rate.
1709. Have you any experience with the putting of coal on board by means of distributors, such as Spencer's? I have seen Spencer's patent at work once, and I was to have seen Harper's twice, but, unfortunately, the thing did not get into the ship. My own idea with regard to placing the coal on board ship is that it should be lowered by waggons into the bottom of the hold where practicable. I practically demonstrated that in the case of the "Windermere," where I had the waggons lowered down two of the hatches and the coal placed at the bottom of the hold. The two other hatches, the fore and aft, were not large enough to admit of the waggons going down. The captain had boards placed across the 'tween deck hatches, and let the coal drop on them instead of into the bottom of the hold, and then roll from there. If a vessel has not a sufficiently large hatch, the coal should be shipped on to some contrivance at the top of the hatch, so that it will slide or roll into the bottom.
1710. Do you think the process of loading by means of a distributor entails an extra amount of trimming? Not if the distributor were workable, I should think not.
1711. There is the question of filling up the hatchway when loading with the distributor. The hatchway is left empty, and the same trouble would occur when filling it up? If the vessel has sufficiently large hatches, I should load the hatchway first in the way I have described.
1712. In the case where you are not able to lower the waggons into the hatch, what would you do then? I have not considered the subject very carefully, but I should not think it would increase the cost. It might a little, but not a great deal.
1713. *President.*] In regard to bad trimming, what remedy did you propose when you were sitting at the Chamber of Commerce on the matter? We proposed that the Government should be asked to appoint inspectors. We proved beyond a doubt that there had been great laxity in trimming. There was no question about that. Our opinion was that the stowage of coal was a serious matter, and we thought it should be supervised by Government officials.
1714. Did you form any idea as to the number of officials that would be required? We did not. I should say half-a-dozen at the most.
1715. Have you any idea as to what they should be paid? £250 to £300 a year, I should think, would be a fair salary for a man doing that work. You will understand it would be necessary to have men at night.
1716. That was the best remedy the Committee could offer? Yes.
1717. It has also been suggested that stevedores should be licensed. Was that matter contemplated by the Committee in any way? That matter did not come before us. It was not mentioned at that time. I see no objection, personally, to licensing stevedores, provided it does not create a monopoly, when it would be hard on the ship-owners.
1718. Setting aside the question of monopoly, do you think it would be of advantage or otherwise? If they were licensed whom would they be responsible to? The fact of their being licensed would hardly affect the matter, unless they were responsible to someone.
1719. If they did bad trimming their license could be taken away? Yes; but there would have to be someone to say there was bad trimming.
1720. That might be the loading inspector? Yes.
1721. With regard to the expense, I suppose the coal trade is going to benefit by this inspection? I do not know. Not to a very great extent.
1722. Who would benefit by it? The insurance companies, I should think.
1723. Does that not mean that the coal trade would, as I understand the insurance companies will not insure the ships? They will, at high prices.
1724. Practically, you cannot get them insured? We can; but most of the insurance is done at home. I have nothing to do with the insurance, that is arranged by the purchaser in England. I do not know what rate is paid; but I understand the rates have been increased on Newcastle coal.
1725. That is to the disadvantage of the ship-owner? Yes.
1726. Then it makes the expense of carrying your coal greater than it would otherwise be? Yes.
1727. Therefore the coal is more expensive when it arrives? Yes.
1728. Therefore it is inimical to the interests of the Newcastle coal trade? The advance of the insurance rates, unquestionably.
1729. Does it not, then, seem fair to you, supposing that inspection is going to be successful in preventing accidents and reducing insurance rates, that the coal trade should bear part of the expense? Well, the purchaser of the coal would have to bear part of the expense.
1730. That is a matter between you and your customer? Yes.
1731. Supposing the extra expense amounts to 1d. or $1\frac{1}{2}$ d. a ton;—is that going to destroy the coal trade? It would not destroy it; it would affect it.
1732. In what way would it affect it? The coal trade could not stand it.
1733. What is the present price of coal, on an average, delivered at the ship's side? The present price varies from 6s. 6d. to 7s. 6d. a ton.

- Mr. G. Bewick.
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1734. Taking the average price at 7s., supposing we increase the cost by 1d. per ton, that is a little over 1 per cent.? Yes.
1735. Would that increased charge seriously affect the coal trade? I do not say seriously.
1736. You said it would affect it? The coal trade could not stand anything more. The coal trade is already overburdened and could not stand any more.
1737. Is it not more overburdened by the increased cost of insurance and by the destruction of a considerable portion of the value of the coal owing to its pounding, than it would be by an additional charge of 1d. per ton? It is overburdened by the very high charges we have to pay before we get the coal into the ship.
1738. *Mr. Pittman.*] Do you think the cost of inspection would amount to 1d. a ton? Oh, no.
1739. *President.*] Would the cost of the supervision, extra trimming, and extra expense at the cranes amount to 1d. or 1½d. per ton? The ship pays for the trimming; we have nothing to do with that.
1740. *Mr. Pittman.*] What is the total annual output from the port? About two millions and a half tons. It might not be so much this year on account of the strike.
1741. *President.*] Do you think the expense of inspection and change in the method of loading could possibly amount to £10,000? No, it would not.
1742. So that a 1d. per ton would fairly cover the whole expense? Yes.
1743. Have you ever had any accident with the coal from the collieries in which you are interested? Yes.
1744. Can you give an example? The "Hollinwood."
1745. Loaded in December last year? Yes; she finished loading on the 9th December. She put into Lyttleton with a heated cargo.
1746. She was trimmed by Russell and Company in the usual way? Yes.
1747. The coal would have been dropped from the coamings of the main hatch as usual? In that case, yes.
1748. Do you remember whether the coal was wet or dry when it was put on board? I think it was wet weather when she started loading, and it was wet when she finished loading.
1749. *Mr. Pittman.*] Would the hatches have been open all the time? The hatches would have been open while she was taking in the last lot of coal. I think it was taken in during very hot weather. She took in stiffening on the 23rd November.
1750. *President.*] Was it the stiffening that caught fire, or the other part of the cargo? From the representations we had, it was the centre of the coal.
1751. You do not know whether it was under the main hatch or not? No, I do not.
1752. Would the centre of the coal mean under the main hatch? Not necessarily. I mean the centre between the deck and the bottom of the ship.
1753. It might have been under the main hatch? Yes.
1754. Have you had any other accidents? The "Ellen A. Read."
1755. Was she loaded with your coal? Yes.
1756. With West Wallsend coal;—is that one of your mines? Yes; the West Wallsend, Waratah, and Seaham.
1757. *Mr. Pittman.*] The "Hollinwood" was loaded with West Wallsend coal? Yes.
1758. *President.*] What is the output of the West Wallsend Company? About 400 tons a day.
1759. What is the average output of the Wallsend Company? About 1,500 tons a day.
1760. We have heard it suggested that the cause of the fire on the "Ellen A. Read" was a donkey engine;—did you hear anything about that? I think that is not at all unlikely. I cannot believe the "Ellen A. Read's" cargo fired through heat.
1761. Why? I think it would have blazed out before she left here. I am inclined to think the coal was alight before she got away. I believe it likely she was set afire, accidentally of course.
1762. By the donkey engine? Either by that or some other cause.
1763. Do you think so because the fire occurred so soon? Yes; that is one other reason.
1764. Where was the donkey engine? It was placed just between the fore and the main hatch. I did not see the ship; that is how it was explained to me.
1765. On the deck? On the main deck.
1766. So that the heat would have to get through the deck to get to the coal? Yes.
1767. Through wooden boards? Yes.
1768. I suppose those boards would be 2 inches thick? An inch and a half, or an inch and a quarter.
1769. There would have been a little space between the deck and the coal? There might have been a little; it depends on whether she filled up or not.
1770. *Mr. Pittman.*] The "Knight of St. Michael" left about the same time from Newcastle seriously heated? Yes. In the case of the "Senator Versmann," she received her stiffening coal on the 21st April, before the strike, and she started to take in the balance of her coal on the 12th August, nearly four months afterwards. The captain informed me he tried the temperature of the stiffening when it was in. He also tried it when the vessel started to load, and he found it exactly the same. She had been lying in port for four months with the hatches on, and the coal had not heated. I am at a loss to understand the heating of this coal. The coal is perfectly and thoroughly cleaned by means of a travelling belt of about 100 feet in the case of the West Wallsend coal.

[Witness withdrew.]

Mr. W. McNeil sworn and examined:—

- Mr. W. McNeil.
11 Sept., 1896.
- 1771.] *President.*] What is your name? William McNeil, of the firm of Taylor and McNeil.
1772. You are a master trimmer? Yes.
1773. Have you had considerable experience in that business? Yes, twenty years here.
1774. Do you consider it possible for a master trimmer to slum his work, if he wishes;—is there anything to prevent him? If the officer of a ship does not take any interest there would be nothing to prevent him.
1775. Do the officers usually take an interest in the work? Not as a rule.
1776. It is left to the stevedore? Yes; but there are any amount of conscientious officers who see that the ship is trimmed alight.
1777. What is this transaction which takes place between the captain and the stevedore, known as the captain's "new hat"? I have never been mixed up with anything like that. We have always been a cut above that.
- 1778.

1778. You have never presented a captain with a "new hat"? I have; but it is nothing to do with the business. I have presented clerks with a "new hat" if they do me a favour. With masters of ships that I have been doing business with the contracts have been carried out to their satisfaction as a general thing, and we always part as good friends as when we started.
1779. It has been suggested that the trimming of ships would be more efficiently and effectively carried out if there were some sort of supervision by Government inspectors? It would be no good. We work night and day, and to put an inspector at each ship the cost would be enormous.
1780. An inspector would not have to be on board a ship the whole time she was being trimmed? He would want to make a visit every three or four hours.
1781. He could look after three ships? He might possibly look after six.
1782. How many cranes are there? Fifteen.
1783. Numbered from one to fifteen? Yes.
1784. So that there could be fifteen ships loading at one time? There are the A.A. Company's shoots and at Stockton.
1785. The whole of the cranes and shoots are not generally busy at once? At times they are. I cannot see how an inspector could interfere with the master and officers of a ship. You cannot legislate to take away the authority of those men who have passed an examination by the Board of Trade to fulfil those duties. There may be two ships in this port—one may take her lower hold full, with the balance in her 'tween deck, and the other may take very little over a half, and have her 'tween decks full fore and aft;—how would an inspector be there? Overloading is a thing that any man can judge, but the sailing qualities are different.
1786. *Mr. Pittman.*] How does a stevedore judge at the present time? By experience; he does the work under the supervision of the master.
1787. What is to prevent the master making the same representations to the inspector? I do not see where the inspector comes in.
1788. To provide against bad work? If the owners had the interests of the port at heart they could do that without the assistance of the Government.
1789. *President.*] We have been told that master-trimmers do dishonest work, and to prevent that inspection has been suggested? I think the Sydney underwriters will cover my work before any other man's in New South Wales. I have never had any mishap.
1790. What rates are now being charged? I am not interested in insurance.
1791. Are you aware they will not cover the ships at all? I can't help that.
1792. Have you any objection to the use of the distributor? I use them myself when it suits me; but not those abortions they have at the Dyke, because they can never be used.
1793. Which do you refer to? Either Spencer's or the other.
1794. Neither of them is any use? Neither of them has been used to finish a ship with.
1795. One witness said he had used Spencer's to load six ships with? He partly loaded the ship, but he never finished a ship with it. One he tried and tore it to pieces in getting it out, and he never completed it since. The distributor must do good, because it will distribute the big and small coal away from the centre of the hatch, but the ideas that these men have are not adapted to this port.
1796. What kind of appliance do you use? I am going to rig mine up on Monday, to get to work on Tuesday morning. I am going to load the "Carnarvon Castle," partly with coal and coke. Mine is on the same principle as Spencer's, only worked with small plates instead of big lumps of iron. I am going to load with coal and coke, and that coal has to be loaded level, and covered with mats before the coke goes on top of it.
1797. Are you going to use the distributor for putting the coke in? No; I cannot. Coke does not require a distributor.
1798. *Mr. Pittman.*] What does Spencer's apparatus weigh? I suppose each piece weighs about 2 cwt.
1799. What is the total weight? I could not tell you. It knocks the coal all to pieces. The rivets, instead of being countersunk, are left up, and the lumps of coal get knocked to pieces by the time they get to the bottom. The "King James" was the first serious fire we had here. It was entirely the fault of Captain Drummond.
1800. Why was it his fault? He had about 40 or 50 tons of Cardiff coal, but I forget the exact quantity, and I wanted him to discharge it, and he would not. He boarded it over, and we stiffened the ship at No. 3 and No. 1. She was a new iron ship. We ran No. 3 up with stiffening.
1801. With Wallsend coal? Yes. From the time that stiffening was put in until she came back to load we had continuous wet weather, and during the time I was loading her it rained continuously. Nobody dreamed of anything like a fire in Newcastle before that.
1802. The coal was thoroughly soaked? Yes.
1803. The Cardiff coal as well? Yes, and the fire originated in the Cardiff coal.
1804. Not in the square of the main hatch? No, according to the evidence I read from San Francisco. The Cardiff coal reached to what you might call the square of the main hatch.
1805. Where there would be a great deal of fine coal from the loading of the ship? Yes.
1806. It might have been the fine coal, and not the Cardiff coal, that fired? We put it down to the Cardiff coal.
1807. That was because you had never had an accident with Newcastle coal before? Yes.
1808. Was she a large ship in those days? Yes, very large. It was her first voyage. I wanted the captain to sell the Cardiff coal, but he would not.
1809. *Mr. Pittman.*] She was burnt at sea? Yes, close to Frisco.
1810. *President.*] She was about one of the largest ships that came to this port at that time? Yes.
[Witness withdrew.]

Mr. R. A. Buhl sworn and examined.

1811. *President.*] What is your name? Robert Albert Buhl.
1812. And your business? I have been a stevedore here a few years.
1813. Have you ever been a trimmer yourself? Yes; I am about the oldest one at present.

3—§

Mr.
W. M'Neil.

11 Sept., 1896.

Mr.
R. A. Buhl.

1814. 11 Sept., 1896.

Mr.
R. A. Buhl.
11 Sept., 1896.

1814. It has been brought before us in evidence that there is a great deal of careless trimming done in the port? I believe there is.
1815. It has been suggested that the practice of giving the captain a "new hat" has something to do with that;—have you heard anything of that? Not in my time; it is only a new thing.
1816. You did not give captains "new hats" in the old times? They would not be mean enough to take it.
1817. They are now? So they tell me; but I never had one.
1818. You do not know how much the "new hat" costs? There are different prices, of course.
1819. Would £5 be a fair price for one? I daresay.
1820. It has been suggested that inspectors might be appointed to inspect the trimming;—does that seem to you a good idea? I think that would be a very good idea.
1821. Is there anything to prevent the inspection being efficient? Not if the man knows how to inspect.
1822. Do you think he could inspect six ships? Two could do it in the day and one at night, because they would not all finish a hatch at the same time.
1823. Do you think a man could efficiently inspect six ships? He could.
1824. It would not be too many? I have worked that many myself.
1825. Three inspectors for the day and three for the night would be sufficient? At night time you have only got perhaps two, three, or four ships. There would be a great urgency if there were five working at night.
1826. So that in general one inspector would do at night? Yes; it is mostly steamboats that load at night. It is very seldom you see one or two deep-water ships loading at night.
1827. As a trimmer you would have no objection to inspection? No.
1828. I suppose there is no doubt the captain and officers of a ship ought to superintend the trimming? I have been for years and never saw a captain or mate in the hold, and I never had one accident. I have trimmed some companies for eleven, twelve, and fourteen years. There is a company for whom I have trimmed over fourteen years. There are six ships in that line.
1829. What line is that? The China Navigation Company. I did the A.S.N. Company from 1867 to the day they were sold.
1830. Accidents occur generally in sailing ships? As a rule they go very long voyages.
1831. *Mr. Pittman.*] Steamers take their coal in bunkers? They coal them in the hold just the same.
1832. Is there anything in the peculiar build of ships that makes some require different styles of trimming to others? There is.
1833. Could that be considered an objection to the appointment of inspectors—would an inspector be able to know what kind of trimming was required? Yes, if he understood his work. I can give you an instance that happened last year. The "Poltalloch," was trimmed here, and badly trimmed. She was a peculiar ship in her 'tween decks. She had four big hatches and there was no 'tween deck between some, and in one place the 'tween deck came right up to her coamings. When they loaded the coal into that ship, she was never trimmed all along.
1834. *President.*] The coal had never been trimmed in the 'tween deck? Never. I went down in the aft hatch and came up the fore hatch. She went on her beam ends. I took 500 tons out of her lower hold and put it in her 'tween decks.
1835. It has been suggested that stevedores should be licensed so as to prevent incompetent stevedores from tendering;—do you think that would be a good plan? I think it would.
1836. Were you one of the deputation that waited on the Premier? No.
1837. Were you at the meeting at which the deputation was appointed? Yes.
1838. You were one of those who voted for the appointment of the deputation? I was asked to go there, and I went.
1839. With regard to the long hours which some of your trimmers work,—is that chiefly by their own wish or by yours? I would never keep a man on longer than ten hours, except in cases for perhaps five or six hours to finish a ship; but it is very seldom done. I see twenty to thirty hours mentioned; it is nonsense.
1840. Do you know of any reason why the distributor should not be used more than at present? I watched one, and I could not see what it was good for.
1841. *Mr. Pittman.*] Was that Spencer's? Yes. They had to dig the coal off and hoist it out and it was never put in any more.
1842. *President.*] We have been told that Spencer's apparatus has been used to load six ships? It belongs to foreign people who sent it out. I used to do their ships, but when they sent it out, I would not do them.
1843. Why not? It was a bother. I could have an easier distributor than that, by taking three spars and putting plates on them, and then you can run your coal where you like. With the other you must have the crane to hoist it and to lower it down.
1844. It would increase the trimming? It is a great waste of time. The crane has to be paid for for lifting it in and out.
1845. So that you think the Spencer distributor wants to be improved? It wants a lot of improvement. If they could make it to go into every ship and catch the coal at the coamings of the hatch it would be alright.
1846. What about Harper's apparatus? I have not seen that. It is on the dyke, but I have not seen it put together. I think it is something similar.
1847. Do you think a distributor can be made to work? It can be made to work.
1848. Do they load a ship safer? I don't know. I don't think so.
1849. Does it take twice as long to load a ship with the distributor? Yes; you have to dig it out of the coal. Spencer's patent will not go into a hatch if it is not a big hatch. I cannot understand how all these accidents have taken place this last four or five years.
1850. You have no idea as to the cause? No; unless it has been the wet weather and the sun being very hot.
1851. And the bad trimming? That is only through bad management. I have had twenty-eight years at it, and I have not had an accident. It is a thing that ought to be remedied.
1852. What is the cause of bad trimming? Perhaps a grocer's clerk or man may know an agent, who says to the captain, "This is our stevedore," and some of the men do not know the ends of a ship.

1853. Have you formed any idea as to the reason of the shifting of cargoes and the heating of cargoes? We have so many more stevedores; anybody can be a stevedore now.
 1854. You put it down to incompetence? Yes.
 1855. These people put in prices at which it is impossible to do a fair job? Yes.
 [Witness withdrew.]

Mr.
R. A. Buhl.
11 Sept., 1896.

Mr. G. Wycherly sworn and examined :—

1856. *President.*] What is your name? George Wycherly.
 1857. What is your business? Coal-trimmer.
 1858. A practical trimmer? Yes.
 1859. You have been called as a witness at your own request? Yes.
 1860. You have something which you wish to communicate? Yes.
 1861. Will you kindly say what it is? It is in regard to the slum trimming. The boss trimmers are the fault of it. If they make a profit of £10 out of a vessel at one time, they want to make £11 the next. They make it out of the labouring man or slum the ship, and they connive in every shape and form to slum. They won't put the labour where it should be put.
 1862. You mean to say they run the hatch too full before putting the men on? Yes.
 1863. Is that done by all stevedores? Yes.
 1864. Are they all alike in that respect? They all do the same.
 1865. Are you a member of the Coal-trimmer's Union? Supposed to be. They are reorganising the union.
 1866. Are you an officer of it? No.
 1867. Were you an officer of the old union? No, sir.
 1868. How long have you been a coal-trimmer? About fourteen years.
 1869. What you have to say is that the greed of the stevedores leads them to put on insufficient labour to trim the ships? Yes.
 1870. It is the captain's business to see that the ship is trimmed properly, is it not? I should think the officers of the ship ought to do that. The men do the trimming, and if there was anybody to watch the work the stevedores are of no consequence at all. I have known them to have as many as four vessels in at a time, and you never see the stevedore down the hatch. They pull down shifting boards and all manner of things to form temporary 'tween decks to keep the men working. When a vessel has close 'tween decks, I have gone away aft, and when I have come back there has been a hole there which was not there when I went down.
 1871. You mean to say they break a hole through the 'tween deck occasionally? There was no hole when I went down, and there have been plates let into the hatch.
 1872. *Mr. Pittman.*] Perhaps there were movable boards there? There are ships that way.
 1873. *President.*] A general statement, such as you make, does not carry much weight; can you name any particular ship that was not properly trimmed, so that we can investigate the matter? I never knew there was to be an inquiry, so I never took any notice of the names of the ships. I have come out of the ships and have thought it my duty to tell the captain, but would not on account of being afraid to be victimised by the boss trimmers.
 1874. You cannot mention any particular ship? No.
 [Witness withdrew.]

Mr. G.
Wycherly.
11 Sept., 1896.

Mr. W. F. Ossinger sworn and examined :—

1875. What is your name? Willaw Fletcher Ossinger.
 1876. You are the mate of the "Ellen A. Read"? Yes.
 1877. It has been suggested to us that the fire on the "Ellen A. Read" was caused by the donkey engine? I don't think so.
 1878. Would you kindly tell us where the donkey engine was? It is in the aft part of the forward house.
 1879. Would that bring it about over the fire? The fire was abaft that, where it was located first. It would be about 15 feet forward of the hatch where the donkey engine is.
 1880. And the fire broke out aft of the hatch? About 5 or 6 feet aft.
 1881. So that it would have been about 20 feet from the donkey engine? Yes.
 1882. Was there any question of anybody throwing hot ashes down? Not possible.
 1883. You had the hatch closed? Yes.
 1884. Was the donkey engine at work when the ship was being loaded? Yes; part of the time.
 1885. Do you think anybody could, out of mischief, have put hot ashes down? I don't think so.
 1886. You do not believe the donkey engine had anything to do with the fire? No.
 1887. How thick are the deck planks? Five inches.
 1888. The heat could not get through that very well? No, and an inch of cement on that and then 1½ inch tiles.
 1889. Under the donkey engine? Yes.
 1890. And the coal did not come quite up to the under side of the deck there? I suppose the coal was perhaps 1 foot or 15 inches clear of the deck.
 1891. *Mr. Pittman.*] Did you form any idea as to the cause of the fire? No sir; I was on deck when the fire was discovered, at 1 o'clock in the morning. The fire worked forward all the time to the ventilator. At first the captain suggested that somebody had set her on fire. I said it was impossible, because nobody could get down below. The day before, on the Friday, we stowed some fenders and baskets, and there was no sign of smoke or fire then.
 1892. The fire was on top of the coal? Yes; it was on the surface.
 1893. *President.*] Was it burnt down a foot from the surface? I suppose about a foot.
 1894. You can form no idea of anybody, from improper motives, putting a light down? It was impossible for anyone to do so.
 1895. *Mr. Pittman.*] Before the hatches were put on? I never thought of such a thing; the idea never occurred to me before.
 1896. *President.*] When your ship is being loaded do you watch the work? I go down below when they run the hatches up.
 1897.

Mr. W. F.
Ossinger.
11 Sept., 1896.

- Mr. W. F. Ossinger. 1897. It has been suggested that the Government should appoint inspectors to inspect the trimming—would you object to that? No; I would not object to it. Some stevedores in this port do not look after their business properly I understand. We have never had anybody but McNeil, and he looks after his business properly.
1898. Supposing an Inspector were to find out from the captain the way he wished his ship trimmed, it would not worry you for him to assure himself that the captain's work was carried out properly? Not at all, sir: to satisfy the captain is the principal part of my duties—to obey his orders implicitly. I have been with a good many coal cargoes, and they used to build a platform over the ship and put ventilators over the hatches. I think it is a good idea to have ventilators.
1899. You think it a good idea? If I had anything to do with it, I would have ventilators. I have known a quantity of coal to catch fire after heavy rain, on the dock at Alexandria, Virginia.
1900. How long after? Six or eight weeks after.
1901. It got very wet, and then six or eight weeks after, it caught fire? Yes.
1902. Was that bituminous coal? We call it soft coal, what they use for making gas.
1903. The fire was attributed at the time to the rain? Yes, sir.
1904. Was it small or large coal? It was mixed. There was a considerable lot of fine coal—it breaks up very easily.
1905. How much coal was there? I suppose between 300 and 400 tons.
1906. Did it catch fire in the middle? It caught fire in the centre of the coal.

[Witness withdrew.]

FRIDAY, 25 SEPTEMBER, 1896.

[The Commission met at 2:30 p.m. at the Custom House, Newcastle.]

Present:—

PROFESSOR RICHARD THRELFALL, M.A., PRESIDENT;
And EDWARD FISHER PITTMAN, Esq., A.R.S.M.

Mr. J. Gregson examined:—

- Mr. J. Gregson. 1907. *President.*] You are Mr. Jesse Gregson? Yes; Manager of the Australian Agricultural Company.
- 25 Sept., 1896. 1908. How long have you been in that position? Twenty-one years.
1909. And during that time the management of the collieries has come under your control? Yes; under my supervision.
1910. Do you know of any cargoes of coal which have come from any of your collieries having heated? I cannot say I do.
1911. We have a good deal of evidence to the effect that one of the causes of the heating of coal cargoes is the breaking up of the coal which takes place in loading. I understand the coal is broken up just as much in loading from your shoots as from the cranes? I imagine that is so.
1912. Have you given any attention to the matter of loading coal? Well, I have, but not with any result. It has never forced itself upon my attention as being a necessary thing to attend to.
1913. You cannot suggest any improvement that could be adopted whereby the coal might be loaded with less breakage? No means occur to me. I have heard of patents that have been proposed for the purpose of breaking the fall in some way, but we have never introduced them, and I have never heard of their coming into general use.
1914. Who are the chief purchasers of your coal? We send a proportion to the west coast of South America, but the greater portion goes to intercolonial ports—in fact, a large part goes to Sydney.
1915. What is the coal used for that is taken to the west coast of South America? Generally for gas.
1916. It does not matter, then, whether the coal is broken up or not? I presume not.
1917. You would have no reason to anticipate obtaining a higher price for it in the event of it being landed in better condition? No; we have had no complaint on account of it having been broken.
1918. Any expense incurred to avoid breakage would be a dead loss? Yes; so far as we are concerned.
1919. If the price of coal were raised 1d. or 2d. a ton to the consumer, would there be a likelihood of the trade being driven away? I doubt it very much. I could not see that a 1d. or 2d. would have the effect of driving the trade away, but any material rise would not be possible. I think it is generally admitted that any rise in price would be injudicious, and would probably have the effect of discouraging trade.
1920. It has been suggested that inspectors should be appointed to see to the trimming of ships;—have you heard that proposal spoken of? I have heard it mentioned. Personally, I have not very much to do with the loading of vessels, and it is only within the last few months that these questions have cropped up.
1921. Would there be any objection, from your point of view as a colliery proprietor, to the appointment of inspectors to see to ships being properly loaded? I should say not.
1922. There would be the question of who should pay for the expense. It would, I suppose, in the first place, be a charge upon the shipping interest? Upon the ship, no doubt.
1923. And that might react in a desire to reduce slightly the price of loading? Or in discouraging trade, which would be equivalent.
1924. Have you any idea of the margin of profit shipowners work upon? None whatever.
1925. It is safe to take it as being pretty narrow? They tell us so, not only in regard to the foreign-going vessels, but in the intercolonial trade.
1926. It has been said that in order to avoid breakage a remedy would lie in the lowering of the waggons of coal down the hatchways of the ships, but at present either the hatches are too small for that purpose or the waggons too large, and it has been suggested that there might be a return to the old form of box waggons to overcome the difficulty;—would there be any objection to that from your point of view? I think that would be very objectionable.
1927. Why do you think so? The hopper seems to be the most convenient instrument for dealing with coal, and there would be a loss of labour and time in shipping the same quantity of coal from two receptacles than from one. It would tend to add to the expense, but if it were clearly necessary for the purpose

purpose of safeguarding life or property the expense should not be taken into account. Unless it can be shown that it would be advantageous, it would be objectionable.

1928. It would put the colliery proprietors to some expense? A little; I do not think very much.

1929. Would you not have to provide new waggons? We would have to do that.

1930. That would be a source of expense? No doubt, if the old hopper waggons were to be condemned; but that, I take it, would scarcely be proposed.

1931. I only wished to hear your views as to what would be the effect, from your point of view, of insisting upon a partial change to the box form, so that the first portion of the cargo could be lowered? That would be objectionable if it were only a partial adoption of that form, because you would have the different classes of waggons to provide for in the sidings and at the pit.

1932. Would it be so inconvenient to load that way as to cause a considerable increase in the expense? I do not think it would—it would be more the hampering of the trade that would be objectionable. The efforts of a manager are to facilitate shipping and other work rather than to hamper it.

1933. There appears to be a necessity for some remedy, and whatever remedy is proposed, it would seem, must cost something? It does not matter about the cost, to my mind, if it can be shown that it is requisite to save life.

1934. Would it increase the expense very much if some portion of the coal was loaded from the waggons into hoppers, and the hoppers then lowered into the hold? It would double the handling, and have the effect of breaking the coal as well as being expensive.

1935. You have been a good deal troubled by fires in your Borehole mine? Yes.

1936. *Mr. Pittman.*] You do not seem to have any difficulty in keeping them in check? No.

1937. *President.*] Have you had any trouble with fires in your sea-pit? No; it is comparatively new. There have been waste heaps of small coal and rubbish about the district, and there have been cases where they have lain for years without taking fire, and then have subsequently taken fire without any apparent reason. The fires in the Borehole pit have occurred, I understand, in the gob, but we have never been able to make an examination to see how or why.

[Witness withdrew.]

Mr. G. Hewison sworn and examined:—

1938. *President.*] What is your name? George Hewison.

1939. And what is your business? Shipping and general commission agent.

1940. Have you had any connection with the Ferndale Colliery? Yes. I was the secretary of the last, but I represented one of the four proprietors by power of attorney.

1941. Your chief business is as shipping agent? Yes.

1942. And as such you have something to do with the insurance of cargoes? Yes; I am an insurance agent also.

1943. Can you tell us what premiums you charge for the insurance of cargoes of coal between here, say, and San Francisco? I have had very little to do with that.

1944. Can you tell us whether you charge more now than you used to charge four years ago? There is very little insurance done in that line now. I have had very little insurance on cargoes to do with.

1945. Are the premiums the same now or less than they were four years ago? I cannot say.

1946. I understood you to say you were an insurance agent? I was an insurance agent, but it was generally for hull risks. The business I was connected with more particularly had a floating policy, under which all cargoes were insured.

1947. Do you insure ships now? I have had no business in that line for five or six years.

1948. So that you have neither insured ships nor cargoes for five or six years? No; I know nothing about the rates.

1949. Have you had anything to do with the loading of ships? I came here for that purpose about thirty years ago. I had a large fleet of vessels that I used to load regularly. I was one of the principal shippers of coals in Newcastle.

1950. Did you do your own trimming, or did you have it done by a stevedore? In both ways—both by the stevedore and by the crews.

1951. Which was the most satisfactory way? I could not find fault with either.

1952. Did you have a case of shifting or heating of cargo in any of the vessels you loaded? I was here as agent for the Black Diamond Line, principally—a line that used to carry coals to Wallaroo, South Australia. There were about twenty vessels engaged in the trade, and I had to load those vessels, and I had to purchase the coal and do all the shipping business. There were eighteen vessels belonging to the Black Diamond Line, and over those I had full control in every way. The coals that I preferred shipping were generally small coals, and I have been told there was heating in the small-coal cargoes.

1953. That is between here and South Australia? Between here and Wallaroo, South Australia.

1954. Was there any case of heating sufficient to be serious? No, never. On one occasion, I am told, there was a vessel that I remember had a cargo of small coal, which made a long voyage of between thirty and forty days. When her cargo was being discharged it was found to be unpleasantly hot in the hold.

1955. What ship was that? I think it was the "Bosphorus."

1956. On what date was the occurrence? It is twelve to fourteen years ago.

1957. Where did the coal come from? I cannot tell you now. I used to buy small coal and mixed cargoes. I would have four or five different coals in one vessel.

1958. Was there any explanation or suggestion as to why this particular cargo heated? It was supposed to be on account of the long passage. The vessel was slightly leaky, and the sea-water tended to heat the cargo more than anything else.

1959. The vessel was leaky? She was leaky on that occasion.

1960. Can you recollect whether the coal was hottest where it was most moist? I cannot say.

1961. Have you had any other cases of heating? Only slightly. The cargoes would get hot, but not very hot. That was the hottest cargo I heard of.

1962. Did you have any experience of cargoes shifting? No, never. I never heard a complaint from one of our masters of any cargo shifting.

1963.

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1963. Did your masters always attend to the trimming themselves, or did they leave it entirely to the stevedores? They attended to it, to see their vessels trimmed; it was their duty to do so. My own opinion is that small coal is more liable to heat than large coal. At one time we had a heap of 15,000 to 20,000 tons lying at Wallaroo, and it took fire in the heart of the stack.

1964. The coal caught fire? Yes, the coal caught fire, and it was found necessary to cut a trench through the heap and lay a line of pipes—15-inch, I think—from the mine pumps to convey water to extinguish it.

1965. What was the theory of the cause of the fire in that case? That a cargo of coals saturated with salt-water had been put in that very spot where the small coal had nearly ignited.

1966. How long ago is that? About thirteen or fourteen years ago.

1967. On whose authority was it said that the fire broke out at the spot where the cargo of coal saturated by salt-water was? The party receiving the coal at Wallaroo. It was said that the fire broke out just where the cargo of this vessel—I do not know the name of the vessel now—had been put, and that the cargo was landed in a very wet condition.

1968. Was that the heated cargo you referred to, or another case? Another case.

1969. There is no reasonable doubt in your mind that the fire originated among that particular cargo of coal? Not the slightest.

1970. It has been suggested to us that very often the captains of ships have so much to do ashore that they have no time to attend to the trimming;—is that true? I do not suppose the captains will attend to the trimming personally, but they have officers, and, speaking from an owner's point of view, it is the duty of the captain and officers to see that everything is done in connection with the trimming and everything else in connection with the vessel to ensure her safety, and it is certainly the captain's and officers' duty to see the cargo properly trimmed. I always thought so, and I had a very large power over it.

1971. A large power to do what? Everything in regard to the vessels under my charge.

1972. What has the mate to do when the ship is in harbour that would prevent him looking after the trimming? He has to see generally to the stowing. I consider it is the second mate's duty to see the cargo properly stowed—the officers generally, both chief and second; the captain can hardly be expected to be in the hold himself.

1973. As a matter of fact, it has appeared before us that, as a custom, the officers leave it entirely to the stevedore? Yes; and the stevedore leaves it to the men. The stevedore ought to be responsible that the vessel is properly trimmed.

1974. A suggestion has been offered that inspectors might be appointed to, in reality, do the duty of the captain and officers;—do you think there would be any objection to that? I think there would be a great objection on the part of the owners; they already pay the captain and officers for the work.

1975. What is the pay of captains of sailing ships? In our employ the lowest was £17 a month. We had steamers as well, and we used to pay the captains £25 a month.

1976. What is the usual rate of wages now to captains of sailing ships? I cannot say. I have been told £10.

1977. Do you know what the wages are that are paid to the mate and second officer? We used to pay our chief officers £9 and £10, and the second officers about £8, on an average.

1978. Do they get those wages now, do you think? I do not think so; but with coasting vessels, it is not much under that.

1979. Do you know anything of the custom for a stevedore to make a present to the captain of a ship in order that he might be left alone in the trimming? Not to my knowledge.

1980. Have you ever heard of it before this minute? I have heard talk of it. I think a captain would be very foolish to go to sea with a vessel not properly trimmed.

1981. Would the stevedore or trimmer be likely to place any obstacle in the way of the captain's attending to the trimming of his ship? I do not see how they possibly can; the captain is master in his own ship.

1982. Is there any profit made in the shipping trade;—do sailing ships pay a handsome dividend? I do not think they pay much now.

1983. They have paid well? They have paid well, there is no doubt. Freight is not one-third of what they used to be. I have paid as high as 22s. 6d. and 23s. for a cargo from here to South Australia, where now you can send coals for 6s. or 7s. With regard to inspectors, speaking from an owner's point of view, the charges made in this port are considered sufficiently high already. The captain, with his officers, are the proper parties to see after the loading and trimming of their vessel. The captain knows exactly what his vessel will carry; how she ought to be trimmed—so much by the stern and so much by the head. If he engages a stevedore he may trust to him to carry out the work properly, still his officers ought to see that the work is properly done. If inspectors were appointed, I do not see how they could carry out the work. There may be fourteen or fifteen vessels loading at the cranes at one time.

1984. They would not all be deep-sea ships—some would be intercolonial? Perhaps a few of them might be intercolonial. There might be a dozen others. The inspector could not possibly be with them all, and the question is, who is to pay the inspector. I am pretty sure the coal proprietors would object, and the owners say they pay their masters and officers already to see to all that.

1985. *Mr. Pittman.*] What does that argument amount to when we have evidence to show that the captains do not do their work? They are amenable to the owners in that case.

1986. But when the work is not done, what satisfaction is that to the public—

1987. *President.*] Or to the people who risk being drowned through it? The captain runs the risk of being drowned himself.

1988. *Mr. Pittman.*] Your argument is that captains are paid to do the work, but when they do not do it, what remedy is there? I cannot say.

1989. If the Government think that, although captains may be paid to look after the work, they do not do so, you cannot blame them for appointing inspectors of their own to see that the work is properly carried out? If the Government intend to take the loading of ships, that is a different thing. If a man does not do his work, and the Government is going to take his place, the Government will have bear it.

1990. If the ship-owners do not get the work done under present circumstances, would it not be a fair thing, in the public interest, to take steps to ensure it being properly done? I think the inspection will go so far by and bye that we shall have to get inspectors to see that the inspectors do their work.

1991. If the Government undertook to provide inspectors they would obtain men who would see that the work was done? I consider the captain and officers ought to know the trim of a vessel better than any other person—better than an inspector.

1992.

1992. Is it your opinion that captains do see that trimming is properly done? If the captain shirks his work, or does not perform his duties properly, I have nothing more to say.

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1993. Do you think he does or does not do so? I have never had occasion to find fault with it, and I have had a large experience.

1994. You do not know of any case where a captain has left the supervision of the work of trimming to the stevedore? I really do not. I have often had captains come to me and speak of the stevedore, and I have never known a case where a captain neglected his duty.

1995. *President.*] You already have inspection to see to the loading of a ship as regards her marks? Yes.

1996. As an owner, would you object to an inspector seeing that a ship was not loaded below her load-line? No, decidedly not; it costs nothing.

1997. I take it your position is that, as an owner, you would not agree to anything that would increase the expenditure? Certainly.

1998. Would you rather anything than that? Decidedly not. I do not believe in sending a vessel to sea to be lost for the sake of the insurance money. That would be a dishonest arrangement. I should think the captain and officers have sufficient regard for their own lives not to go to sea in a vessel they knew was going to be lost.

1999. *Mr. Pittman.*] Do I understand, Mr. Hewison, that you contend the supervision of trimming is properly done at the present time, and that there is nothing wrong? I do not say that nothing happens. A trimmer may perform his work badly, but I consider it is the captain's duty to see that he does do his work right.

2000. Have you ever known or heard of a case of faulty trimming? Not in my own experience, and I have sent away hundreds—I may say thousands—of vessels from here, and I have never had a vessel lost.

2001. And you have never known a captain who failed to supervise the trimming? I have never known a captain to do so. Oh, yes; I had two vessels lost. One was driven ashore and another went down in a fearful storm.

2002. It might have been possible for one of your ships to go to sea without your knowing whether a captain had personally supervised the trimming? It might.

2003. As a matter of fact, you are not in a position to say, from your own knowledge, that captains have in every case supervised the loading of their own cargoes? I am not.

[Witness withdrew.]

Mr. R. West sworn and examined:—

2004. *President.*] What is your name? Richard West.

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2005. And your business? Foreman coal-trimmer for James Russell and Company.

2006. How long have you been in that business? About six years.

2007. You were a practical trimmer before that? Yes, previous to that.

2008. Your business now is to superintend the trimming? Yes.

2009. Do the captain and officers of a ship interfere with you in the trimming at all? Sometimes; not in every ship.

2010. In the majority of ships do they or do they not? They generally tell me how they want the ship trimmed, and we have to trim the ship to their ideas.

2011. Do they ever go down to see the work, or do they leave it to you? Generally one of the officers or mates is down below.

2012. That is the usual practice? Yes.

2013. Do you consider the supervision of the ships perfectly satisfactory—is it complete? Yes.

2014. It is your business to trim to the captain's orders? Yes.

2015. *Mr. Pittman.*] Have you ever seen a case where an officer of a ship has not been down? Yes.

2016. In many cases? A great many.

2017. Where there was no supervision by the officers at all? Neither by the officers or crew.

2018. *President.*] So that you could trim exactly as you had a mind to? When we go aboard a ship the captain generally tells us how he wants the coal shot. In many cases nobody comes to see that it is done.

2019. It is your object to get the ship loaded as fast as ever you can? Yes.

2020. I suppose a cheap way of doing that is to run as much coal into the ship as you can before you start to trim? It all depends on what kind of ship it is; if it is an open ship you have to do that.

2021. If it is not an open ship? You want to trim the lower hold as soon as ever it is blocked.

2022. You generally tip the coal from the coamings of the hatch—you are not often able to lower the waggons? No.

2023. You have lowered them on occasion? Yes.

2024. Can you give the Commission any idea as to what extra cost would be entailed to lower the waggons down the hold? A ship running 120 waggons would do that in from eight to ten hours; to lower the waggons down the hold would take something like twelve to fourteen hours.

2025. From that we can assume the increased cost? Yes.

2026. It would take about two hours longer? From two to four.

2027. How many men would you have employed during that time? At present, working under the Union rules, there would be six men.

2028. How much would they be paid? One shilling and threepence an hour; provided you have no coal in any of the other hatches; if there is, you have to have the full gang—that may be twelve to fourteen men. We are working under the Union rules at the present time.

2029. So that it would be fourteen men at 1s. 3d. an hour? 1s. 3d. in the day and 1s. 9d. at night.

2030. The maximum possible extra cost would be £2 12s. 6d. in the case of a ship running 120 waggons? Yes.

2031. How many tons would that be? It all depends upon what coal it is. If it were Duckenfield coal it would be about 1,000 tons, and Wallsend coal about 800 tons.

2032. In about 1,000 tons there would be an outside extra cost of £2 12s. 6d. to lower the waggons down the hold? Yes.

2033.

- Mr. R. West. 2033. What are the wharfage dues? Half-penny per ton per day on the ship's registered tonnage; but there are some new rules spoken of—I do not know what they are. At one time, if a ship went twenty minutes into the second day she had to pay a full day's wharfage; a ship carrying 1,000 tons would be about 600 tons tonnage.
2034. She would pay 600 half-pence a day? Yes.
2035. The total extra cost would be under £3? Yes.
2036. On the basis of a ship running 120 waggons? That would be a large ship going about 2,500 tons register. The 120 waggons are only to run the hatch up before you actually start shovelling the coal.
2037. About £3 12s. would be the extra cost for labour and wharfage dues, in that case, in lowering 120 waggons into the hold of the ship instead of dumping the coal from the coamings of the hatch? Yes.
2038. Would it pay the crane contractor to lower the waggons into the hold if he were asked to do so? I do not know if it would pay him; he does do so.
2039. He always does so whenever he is asked? If he can get the waggons down the hatch.
2040. Have you had any experience with any of the patent loading apparatus? No; I have seen a couple of them.
2041. Are they any good? I do not think so.
2042. Do you know that apparatus [*handing witness photograph of Harper's patent distributor*]? Yes, sir; but it was not like that when it was tried; it has been altered since.
2043. Does it look a likely thing to use? You can use it in some ships with very large hatches.
2044. You could use it in those ships in which you could lower the waggons—is that what it amounts to? Yes.
2045. In that case there would be no advantage in using it? No.
2046. How is it hung up? To the ring-bolts under the deck, or in the coamings, wherever they may be situated.
2047. Are there always convenient places to hang it to? No; some ships have no rings, and you would have to take a turn round the stanchions.
2048. Have you seen ships loaded with Spencer's apparatus? I have not worked it, though I have seen it put in.
2049. Did it appear to go in alright? I have seen the hatch run up first, and the patent put on top of the coal.
2050. Where? Two ships at the Dyke—two of the Firth line; I cannot think of their names.
2051. Who loaded them? Sullivan loaded one.
2052. The coal was actually dumped into the hatch first, and then Spencer's distributor put on top? Yes, in the aft hatch; in the main hatch it was there before the coal was put in. In the aft hatch the coal was run up, and the patent put on top.
2053. What was the object of that? They used it as plates to slide the coal down.
2054. Would it be any better than ordinary plates? Not so good, it would be more trouble. We mostly use a spar across the hatch. The most troublesome are the box waggons. You have to let them go high, and the whole lot of coal comes out at once.
2055. They would be easier to lower down the hatch? Much the same. They take the same room as the hopper-waggons—they have the tip chains.
2056. Although you may let the coal out of the hopper slowly, it must still fall the depth of the vessel? Yes.
2057. And that fall breaks it up? Yes; it breaks a good deal of it up.
2058. Do you recollect the details of the loading of any of the cargoes you have loaded which have heated afterwards? Several.
2059. The "Cedarbank" loaded in 1893, did you load her? Yes.
2060. Was she loaded with Wallsend coal? Yes.
2061. And at the cranes in the usual way? Yes.
2062. Was there anything special about the weather at the time of loading? I hardly remember that.
2063. You do not remember any particular circumstance? I remember how she was loaded. The coals were loaded up to about 18 inches or 2 feet from the deck. There was surface ventilation fore and aft of the ship. That coal was on the ship a considerable time.
2064. How long before she sailed? Over six months. She got dismantled.
2065. Three months for the time of loading and on her voyage, and three months in Sydney? Something like that.
2066. Did you know the cargo of that ship fired? I did hear she arrived at 'Frisco on fire.
2067. Do you remember any other circumstance? No.
2068. She was dismantled? She got outside, and the masts buckled and bent.
2069. Why was that? Bad weather and bad spars.
2070. Do you remember the ship "Alexandra"? Yes, I loaded her.
2071. Do you remember anything about her particularly? It was raining very heavily while she was loading. A heavy squall blew her adrift from the Dyke, and did a lot of damage.
2072. Did it damage the ship? Yes, some of her gear. She got foul of another ship, and part carried away.
2073. Do you remember where the fire broke out on that ship? Between the two hatches.
2074. Would that be too far away from the main hatch to be in the dust-heap that accumulates under the main hatch? I have not seen a dust-heap accumulate under the main hatch.
2075. There must be an accumulation of small coal there? It all goes together.
2076. Does not the big coal roll away? A certain portion.
2077. On the whole, the "smalls" stay under the hatch? Yes.
2078. Did this fire occur sufficiently near the main hatch for it to have been in the "smalls" generally left in the neighbourhood of the main hatch? Right clear of it. I understand the ship caught fire where the coal was trimmed.
2079. That ought to have been good-sized coal? Yes; you shovel the big and the small away together.
2080. They would not have shovelled dust probably? No.
2081. Do you remember anything more about that ship? No; only that it rained very heavily.
2082. Was the weather hot, do you remember? It had been hot a little previous to that, but not after.
- 2083.

2083. That was last year? Yes; three of them loaded at the same time. It rained when the three loaded, and the three caught fire. Mr. R. West.
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2084. Which were the other two ships? The "Brablock" and "Republic."
2085. *Mr. Pittman.*] You, perhaps, remember having to go away from your work with wet clothes? Yes; I was sick at the time. I was sent home, and it was raining all the time.
2086. *President.*] The three ships were the "Alexandra," the "Brablock," and the "Republic"? Yes; and it rained when the "Hollinwood" was taking her stiffening in.
2087. That was the end of last year, or the beginning of this? Yes.
2088. The general tendency of the weather was to be hot? Yes.
2089. Otherwise they were all loaded exactly in the same way? Yes.
2090. Do you know where the fire broke out in any of them, except the "Alexandra"? No, sir.
2091. In the "Republic" it broke out in the No. 2 hatch;—do you know anything about that? No.
2092. You cannot tell us anything about the "Hollinwood"? No; only that she was loaded in wet weather.
2093. Could we find out where the fire broke out in the "Hollinwood"? I am not certain whether she did fire or only heat.
2094. Did you load the "Knight of St. Michael"? Yes.
2095. What was the weather like when she was loaded? It was fine when she started—when she took her stiffening in it was fine and very hot. She went over to Stockton at the ballast wharf, and laid with her hatches off—the same hatches that the stiffening was in, and there came a thunderstorm.
2096. That was during that very hot week? Yes.
2097. That storm came on the Tuesday night? The day she took her stiffening in, at 11 o'clock at night. It was 112 degrees in the shade that day.
2098. Did you load the "Morra"? Yes; I think so.
2099. Do you recollect definitely whether you loaded her or not;—she caught fire in the harbour? That was only lately. She came up from Sydney with stiffening.
2100. Do you know anything about her? We loaded her. The trouble was over before I went to load her.
2101. It was in the stiffening coal only? Yes; the stiffening coal heated.
2102. She was loaded by Russell & Co.? Yes.
2103. Do you know anything of the "Invermay"? I did not do her.
2104. Did you load the "Ben Cruachan"? No.
2105. Or the "Easby"? No.
2106. Do you know anything about the "Dayspring"? I know nothing about it.
2107. Have you noticed, before this inquiry commenced, that the ships which heated were those which had been loaded while wet? Yes.
2108. Hot and wet, shall we say? There was one ship, the "Drumcraig." She was left in our charge, because the crew had to go to Sydney on account of having fever. They got orders to put stiffening in, and there was nobody to look after the ship. They put too much stiffening in the No. 1 hatch. When we were finishing loading her, they cut through that hatch, and it was quite hot.
2109. How many days after the stiffening was put in? Something like three weeks. The men could not stand on it to work the coal back.
2110. What kind of weather was it? Very wet, while she was loading—when she took the stiffening in.
2111. Was it hot too? I could not say.
2112. Was that in the summer or winter? It was in the summer time.
2113. Have you any other experience of heated cargoes? Several; with nearly every ship, if it is wet weather, when she takes her stiffening in, and if we have to shift that coal, we find it very hot—if it has been taken in in the rain, or rain has got to it.
2114. Is it decidedly your opinion that wet has something to do with the heating? It has a good deal to do with it. We have plain facts; all those ships loaded in the rain have fired.
2115. Do you think sulphur has anything to do with it? I do not know. I do not believe very often there is sufficient surface ventilation in the ships.
2116. That does not alter the heating? It does not give the air a chance of getting up and down. Everyone of the "bank" line has been trimmed to 18 inches or 2 feet up from the deck, and nothing ever happened to them, except the "Cedarbank," neither the shifting of cargo or anything else.
2117. Do you notice any difference in the coal;—is it the coal from any particular colliery that generally heats, or does the heating occur indifferently? The worse trouble seems to be in the small pits—the South Wallsend and the Cardiff coal. The "Alexandra" and "Brablock" loaded with that.
2118. You have not noticed yourself, before this inquiry began, any special relation between the pits and the heating of the coal? Oh, yes.
2119. Which pit do you consider gives the coal most liable to heating? It seems to be the Cardiff coal and the West Wallsend. We very seldom have any trouble with the Wallsend coal.
2120. Is the Cardiff a hard or soft coal? Very hard.
2121. And the West Wallsend? Something similar.
2122. Have you noticed any relationship between the heating and the smallness of the coal;—does it occur under the main hatch where the coal is, in general, broken up? As a rule, we never have any trouble in the main hatch after it is once blocked. It is only in the ends where we have to cut down. The main hatch is filled right up, and the ends have to be levelled off.
2123. You have no means of knowing, as a rule, whether the stiffening has heated or not? No.
2124. You are speaking almost entirely of stiffening coal now? Yes. With the other coal we are not at the ship long enough to know whether it heats or not.
2125. Is there anything you would like to bring before our notice in regard to heating? I do not think so, only it has been in most cases through rain.
2126. Or anything about trimming? The master trimmers, I see in the papers, are crying out about the price. It is not a matter of price. They get what they ask for the work, and it is the captain's and officers' place to see that the work is done properly.
2127. You think it is the fault of the captains that the work is not done properly? Yes; if our people were getting 1s. or 2s. per ton the work would be done no better. Inspection would be no one man's job,
or

- Mr. B. West. or three or four; it means about twenty men. It is no use any inspector going to a ship after she is finished to see if she is properly trimmed; he must be there the whole time the ship is loading and down the hold, and if the ship is working at night there must be a man to relieve him.
- 25 Sept., 1896. 2128. Several witnesses tell us a man who knows his business could look in now and again? It is no use whatever.
2129. *Mr. Pittman.*] Do you not think they could supervise three ships alongside one another? No, sir; you must be there the whole time. I am foreman for Russell, and it takes me all my time to watch them.
2130. *President.*] How many have you to watch at a time? Sometimes I have three or four.
2131. If you can watch them, I suppose another could? I cannot; I have to trust to the men.
2132. In your opinion, there would have to be some twenty inspectors? If the ships work night and day, you would want two for each ship.
2133. *Mr. Pittman.*] Under those circumstances, are you not drawing your wages unjustly, while pretending to do the work? I do the best to my ability. We always have one man on each ship to carry on the work if I am not there. I cannot watch the lot. I could not swear each ship was trimmed as it ought to be. We got it done as well as we can.
2134. *President.*] It is to the interest of the stevedore to do as little trimming as possible? Yes.
2135. He has a pecuniary interest in not doing it well? The way things have been going lately, we have tried to do our best.
2136. That is on account of the trouble that has arisen? Yes; on account of the missing ships.
2137. Do you think the trimming has improved in the port within the last few years? Greatly, since I have been here.
2138. It is the object, of course, of the men engaged in trimming to be employed as long as they can at 1s. 3d. an hour? You would think so, but as a rule, it is not.
2139. Why? They seem to try to get away as soon as they can.
2140. Do they not want to put in as much time as possible? They want to put in time, but, at the same time, if we are not there to watch them—
2141. They will not shovel the coals unless they have got to? That is it.
2142. Have you ever known a case in which the captain has been bribed to stand aside and allow the ship to be trimmed without supervision? No, sir. I have known captains, if they give the work, to accept something out of the trimming.
2143. That comes to the same thing? I cannot see how it comes to the same thing.
2144. It is in the nature of a commission? Yes. I would like to say that there is lots of rubbish thrown down many of the hatches when they finish off. Sometimes there will be lumps of tar and oakum, and kerosene, that have come off the rigging and rigging screws shovelled up and put down the hatches.
2145. Who does that? The crew, and they sweep all the rubbish up and throw it among the coals.
2146. Should not the officers and captain prevent that? Sometimes you load a ship and do not see the captain at all.
2147. What about the mate? He tells them to sweep it up, and does not seem to take any notice. A lot of shifting-boards are not sufficiently strong—1-inch beams put right across the hatch—and as soon as you let go the waggons of coal it breaks them up into matchwood.
2148. And this gets carried down with the coals? Yes.
2149. *Mr. Pittman.*] As a kind of tinder-wood? Yes, it would help a fire on.
2150. *President.*] It has been said that some of the stevedores would like to be licensed, in order to prevent incompetent men from tendering for the loading of vessels;—do you think that would be a good plan? I think it would save a great deal of this competition, and they would not have to cut a man down, and they would not be in such a hurry to get the men away.
2151. The effect would be to decrease the competition, and raise the price for trimming, and you think that would enable the work to be done better? I think so. If you got more for your work you would not be in such a hurry to get out of the ship, but the masters get what they ask for the work, and the officers should see that they do it. A good many of these ships have donkey-boilers standing over the deck where the coals are. We are loading at present a little French vessel, and the deck is so hot we could not put our hands on it. The coal is right up against that. We have had cases where a ship has been on fire while loading, on account of the donkey-boiler.
2152. Were the decks of wood? Yes; the coals out of the donkey-boiler set the ship afire in the 'tween deck.
2153. *Mr. Pittman.*] You say the deck is hot yet in the vessel you are loading? Yes; she is loading at No. 7 crane.
2154. What is the thickness of the deck? About 3 inches. There is an iron deck underneath.
2155. The "Ellen A. Read's" deck is 5 inches thick? The donkey-boiler is in the same position as in the "Ellen A. Read." In the vessel that fired the first thing we knew was that she was all ablaze. The coals had burnt through the wooden deck and dropped down.
2156. *President.*] How long ago is this? Some three or four years ago.
2157. The coals from the donkey-boiler burnt through the deck? Yes, and she fired.
2158. Do they ever work the donkey-engine at sea? Yes.
2159. To work the ropes? Yes.

[Witness withdrew.]

Mr. John Price sworn and examined:—

- Mr. J. Price. 2160. *President.*] What is your name? John Price.
- 25 Sept., 1896. 2161. And your business? Coal-trimmer.
2162. Are you a member of the Coal Trimmers' Union? Yes.
2163. Are you an officer of that Union? Yes.
2164. What position do you hold? I am the treasurer.
2165. How long have you held that position? Since we have started again, and I held the same position previously.
2166. It is by your own wish you appear before the Commission? Yes.

2167. Will you kindly tell the Commission what you want to lay before them? I understood the Commission would ask me questions, and that I only had to answer them. Mr. J. Price.
25 Sept., 1896.
2168. In the case of a witness who volunteers his information, we wish to leave it to him to state what he considers of sufficient importance to lay before us? What I consider of so much importance is the shifting of coal cargoes, and the only way that can be got over is by our colliery owners doing their own trimming in deep-water ships. My reason for that is that, in the first place, you will have no master, only the colliery proprietor to please. It is not whether the ship does or does not pay then. If you are a foreman you will not have to trust to what you make for your employer to keep your position. If you are a stevedore, it will not interfere with the gains that the companies make out of that ship or not. I consider the coal ought to be trimmed, and the trimmers paid as they are in England and Wales.
2169. How are they paid in England? By the ton.
2170. Would you rather be paid by the ton than by the hour? I should prefer it.
2171. How would it make a difference to you? We should get what we earn then. At present we do not. The middleman receives the benefit, not the labourer.
2172. Who is the middleman? The stevedore.
2173. He receives the benefit? Yes.
2174. Your proposal is that the colliery owners should add the business of stevedoring to the business they have at present? Have an inspector of their own.
2175. I understood you to say that the colliery proprietors ought to load the ships—that is to say, they should become stevedores? No; the trimmers would be the stevedores, and the colliery proprietors would have their own inspectors.
2176. *Mr. Pittman.*] They would be in the position of stevedores? Yes, with this exception—that it would not matter to them whether the ship paid or not. They would not be forfeiting their position in any way. They would be there to see the work done thoroughly well, and by so doing their company would have the chance of insuring their cargoes, which, I am told, at present they cannot do. They would file a plan of every ship they finished and leave it at the office, showing how that ship was trimmed.
2177. *President.*] Is there anything else you would like to mention to us? There is nothing else I wish to speak about. The firing of coal cargoes is a bit above my knowledge.
2178. Your evidence is to the effect that you think the trimming would be better accomplished if it were done under the supervision of the coal proprietors than that of the ship-owners or ship-masters? Yes.
2179. That is precisely what you want to say to us? Yes.
2180. Are you quite sure you have said what you wanted to say? Quite sure, sir.

[Witness withdrew.]

Mr. T. Burke sworn and examined:—

2181. What is your name? Thomas Burke.
2182. And what is your business? Coal-trimmer.
2183. How long have you been a coal-trimmer? Eight years.
2184. How old are you? Thirty-two years.
2185. You have come here recommended by Mr. Dick? Yes.
2186. I understand you have some information, which you think might be of service to the Commission? Yes.
2187. Will you kindly lay what you want to say before us? I will give all the information in my power, as far as my practical knowledge will enable me. I have both discharged coal and trimmed coal in vessels. I think by getting a 20 to 26 feet fall in the main body of a ship, there is a certain amount of breakage in the coal, and it leaves the small coal in a heap, and all the big coal rolls away to the side, and there is no chance for the air to get to the small coal. The air travels through the big coal, but not through the small.
2188. Do you consider the presence of air tends to help combustion, or to hinder it? To hinder it. I think if the air did not get to it, it would fire. I think there is neglect at the mines in allowing miners to put a certain amount of combustible in the coal that comes to the ship. In regard to one instance, the "Industry," there was a bag of powder, and about 5 to 6 feet of fuse. The men did not know what it was, and cut a bit of the fuse and put it upon the bag and off it went.
2189. The fuse? No, the powder. There is neglect, both of the coal-trimmers and stevedores about candles. Sometimes when meal hour comes, we have a candle stuck on the beam, with the candle half through the candle-stick, and as soon as we hear it is dinner, we run away and neglect our candles.
2190. Have you ever done that yourself? I have, sir. I have neglected my candle, but nothing ever occurred from it. On one occasion, when I was putting up a wall, my candle dropped out, and when I came back, the coal was a little heated.
2191. Have you ever been walled off from where a candle was left? No, sir.
2192. Is it possible for a coal-trimmer to drop his candle in such a place that he could not get back to it afterwards? He might fill up the place where it dropped, and not notice it.
2193. Has that ever been done, do you think? It might have been; it is quite likely to occur. I have only one point to say about the shifting of coal cargoes. We are trying to get over the difficulty as well as you gentlemen.
2194. Who are we? The coal-trimmers of Newcastle.
2195. The Coal-trimmers' Union? Yes.
2196. Are you an officer of the union? Yes; a committeeman.
2197. And what is your union going to do? We are trying to get over the difficulty by putting on the labour when the coal first goes into the ship in order to trim it. Before, there used to be 1,500 to 2,000 tons of coal put into a ship, without any labour being put on, bar one man, and one man cannot trim that amount of coal down below. Certain spaces in the ship want filling up, and these spaces were neglected. Captain Cross, at the Chamber of Commerce, asked one of the stevedores what he meant by making a ship pay, and he said, "To run up the fore hatch, and knock the top of it off."
2198. *Mr. Pittman.*] You mean to say the stevedores are in the habit of running up the hatches before they put on the men to trim? Yes, sir.

Mr.
T. Burke.
25 Sept., 1896.

- Mr. T. Burke.
25 Sept., 1896.
2199. *President.*] The Union want to make the master trimmers put on more men? The Union are trying to get Newcastle back the good name it once had. It has got a bad name, and it is put on the trimmers.
2200. On the contrary, witnesses all agree that it is not the fault of the trimmers? We get the blame.
2201. It has not appeared so before us? I am not saying it is our fault, but we are blamed for it.
2202. You are quite wrong in that. The men have been universally exonerated. You had a strike in connection with this matter the other day, which lasted a few hours? Yes.
2203. Was that an attempt to improve the trimming? To improve the port.
2204. You actually struck to improve the port? Yes; by gaining a name for the port we gain a point for ourselves. The ships have not been properly trimmed at the present rate the stevedores get for their vessels.
2205. What you want to say is, that the Union are taking steps to endeavour to obtain the employment of more labour on trimming for the good of the port? Yes.
2206. That is precisely the object of the Union? Yes.
2207. For the good of the port? For the good of the port, the good of ourselves, and the community at large.
2208. Is there anything else you wish to say on that point? No; only that when we were working under the Union rules before there were less casualties than since this system of cheap work started.
2209. When did this system of cheap work start? As near as I can say, three or four years ago.
2210. You were better paid before this? Yes; and the work was better done.
2211. You get 1s. 3d. an hour for day work; what did you get four years ago? We got the same, but we were put on before the hatches were run up.
2212. You worked more hours? Yes.
2213. Owing to the competition amongst the stevedores, the labour employed is reduced to a minimum? Yes.
2214. It is the object of the Union to force employers to use more labour—that is about what you want to say? Exactly.
2215. Have you anything else to say with regard to that? I have nothing else to say with regard to shifting. I was a seaman on board the "Riverside," and her cargo heated.
2216. Where did she come from? She left Newcastle bound for Wilmington.
2217. Where did her cargo heat? In the main hatch. I was one of the crew, and we had to discharge at San Pedro.
2218. The heating was not noticed at sea; it was while you were discharging? Yes.
2219. Was it on fire, or merely very hot? It was so hot you could not hold it in your hand.
2220. Did you notice whether that coal was much broken up or not? It was small coal stuck together in the wake of the main hatch.
2221. That might be caused through the heating? I think it would be.
2222. Do you remember whether it was damp or not? It was not damp when I got hold of it. It might have been damp when it went into the ship.
2223. It was not steaming? It was hot.
2224. Was it hot and damp? No.
2225. So that it sweated and steamed when you took it out? It smoked a bit.
2226. Did it steam? I could not exactly tell you. I know it smoked when you were breaking through it.
2227. How long ago is that? I could not really tell you. As near as I can say it is about ten years ago.
2228. How long had the ship been at sea—about sixty days? About sixty days, I think—between fifty and sixty.
2229. Were you in port when she took the cargo on board? I shipped here in her.
2230. Was it in hot weather or wet weather? It was summer time; hot weather.
2231. You cannot remember whether it was showery or not? No.
2232. Are there any other circumstances in connection with heating which you would like to lay before us? No, sir.
2233. Is there anything else you would like to tell us? No. What made me come here was I thought the case of the "Industry" was neglected. I never saw it in print.
2234. You are quite sure you have said all you wanted to say? Yes, sir.

[Witness withdrew.]

FRIDAY, 2 OCTOBER, 1896.

[The Commission met at 2:30 p.m. at the Chief Secretary's Office, Sydney.]

Present:—

PROFESSOR RICHARD THRELFALL, M.A., PRESIDENT;
And EDWARD FISHER PITTMAN, Esq., A.R.S.M.

Captain T. Laidman sworn and examined:—

- Capt. T. Laidman.
2 Oct., 1896.
2235. *President.*] What is your name? Thomas Laidman.
2236. And what is your business? Marine surveyor to the Sydney Underwriters' Association.
2237. How long have you been in that position? Five years.
2238. And before that? I was a shipmaster. I was at sea from 12 years of age.
2239. It is your business now to inspect ships for the purpose of insurance? Yes.
2240. Do you inspect ships loaded with coal? I inspect them to see that they have shifting-boards, and that they are insurable risks.
2241. You do not take any particular notice in regard to the cargo of coal? No; but I do of the shifting-boards in every sailing vessel that goes out.
2242. Do you insist on shifting-boards? We do not insist upon them. If they will not put them up we do not make them, but there is then some difficulty in insuring the coal.

2243.

2243. Would you charge different rates if shifting-boards are not in? I cannot say. The underwriters do that, but they are nearly always put in.

2244. Do you survey ships both in Newcastle and Sydney? I am supposed to be in Newcastle, but at present Captain Hall is away, and I am relieving him. I shall be in Newcastle to-morrow.

2245. Do you know anything as to the rates charged on ships carrying coal? No; that is out of my province. I merely see whether the ship is good, bad, or indifferent, and report to my employers, the underwriters.

2246. *Mr. Pittman.*] Will you tell us on what lines you base your report? If I think a vessel is in a very bad state in regard to the hull, equipment, &c., I advise the underwriters to have nothing to do with it. It rests with them whether they choose to accept the risk or not.

2247. Do you report also on the question of her being properly trimmed? No; I do not do that. I cannot say whether she is properly trimmed or not. I was called upon to inspect the trimming in one case about two years ago, and I condemned it, and it was trimmed over again.

2248. Do you mean to say insurance offices take no notice of the fact of a vessel being badly trimmed or not? I cannot say whether they do or not. We never heard of any of this bad trimming or the shifting of cargoes until the last four or five years—until so much competition set in. They only get half the money they used to.

2249. The insurance offices have no other survey to go upon than yours? No.

2250. And cannot know whether a vessel is badly trimmed or not? No. If I knew a vessel was badly trimmed I would make an inspection.

2251. Otherwise you would not inspect the cargo at all? Not the cargo of coals; in fact, I have so much other work to do in Newcastle and Sydney. We have got instructions to report on every sailing ship, whether shifting-boards are up or not. The majority of them are putting them up. We have a record of them at the underwriters' office.

2252. The tendency now is for all vessels to put them up? There are only ten that did not out of 209. Iron and steel vessels require them much more than wooden ones.

2253. *President.*] Do you think the chance of a coal cargo shifting through being badly trimmed increases the risk? Yes.

2254. How do you account for it that your employers do not take a survey of the condition of the coal cargo? You would have to be down the vessel's hold pretty well all the time.

2255. It is so important a matter that I should have thought steps would have been taken by underwriters to see that the cargo was properly stowed;—can you explain why they do not take such steps? I cannot explain that; you will have to ask them.

2256. They do, I presume, insure cargoes of coals, do they not? They are getting very chary about it lately on account of so many missing ships. There have been six ships missing lately—vessels above suspicion—all with shifting-boards up.

2257. You do not survey the condition of the coal cargo in any way? No. When I go to-morrow, I shall go below to inspect the shifting-boards, and to see whether they are up to my satisfaction or not; if they are not, I remind them of it. With reference to the "John Ena," which took fire between Newcastle and Frisco, I got official reports from the railway office, Newcastle, and from the Marine Board, as to the weather, and I found it was raining while she was loading.

2258. Is it your opinion that the wetting of the coal had a bad effect upon it? It would not have a very good effect. I have taken coals from Liverpool, but never had any trouble.

2259. Did you take them wet or dry? I took my chance with it. I think the cheap trimming has got something to do with the loss. I used to go to sea from Newcastle, and we used to pay 3^d. and 4^d., and now they are doing the work for 2^d. a ton.

2260. You think it cannot be done properly for 2^d.? It cannot be done. We never had any of this trouble when we paid a fair rate, but now there are so many amateur trimmers—men who know nothing about it, and I know most of the men personally.

2261. *Mr. Pittman.*] Why is it, with information like that, the insurance offices do not take steps to see that the cargoes are trimmed? I know the underwriters do not care about touching the coal risks on account of the losses.

2262. *President.*] How long is it since they began to avoid coal cargoes? During the last four or five years.

2263. Not since the Commission was appointed? Oh, no. I would like you to see the underwriters about that; they will give you better information.

2264. In your opinion, shifting-boards are necessary? Decidedly; more especially in modern vessels; they cannot be filled. They are nothing but large tanks. Wooden vessels do not require them so much, because of the heavy timbers, keelson, &c.; there is so much displacement. An iron vessel's hold is simply a huge tank. The trimmers are getting a little frightened now, because when a vessel is lost, they say so-and-so trimmed her, and it is a sort of discredit to the men, and they are more particular about it.

2265. How long is it since they began to be more careful? Since the loss of vessels. Last year we had six lost, and the year before that, four. That is home ships; and the singular thing is they are nearly all iron and steel vessels.

2266. That may be simply because they are the largest ones? Yes; during the last five years, I am quite safe in saying that from Newcastle there are only two wooden vessels missing that we cannot account for; all the others are steel or iron ships, new and old.

2267. Do you believe the majority of ships that have been missing have been lost through shifting of cargo or through general unseaworthiness? They were seaworthy when they left Newcastle. The "Cumbræ" was a new vessel, and she went out of Newcastle, and we have never seen her since.

2268. Was she an iron ship? No, steel; there are no iron ships built now.

2269. Was the "Cumbræ" a large ship? No; a barque of about 1,200 tons. She had some tallow and shale in her as well as the coal. Age seems to make no difference, whether 30 years or 12 months old, they go away, and we know nothing more about them.

2270. It has been suggested to us that it would be of advantage to have Government inspectors appointed to inspect the trimming? I think it ought to be so, and a professional man—a man who knows his work.

2271. You approve of the suggestion? Yes, I do. There was the "Lady Lawrence," she had a lot of shale on board; I looked at it, and asked the captain to shift it.

2272. She was too tender, was she not? Yes;

2273.

Capt.
T. Laidman.
2 Oct., 1896.

Capt.
T. Laidman.
2 Oct., 1896.

2273. *Mr. Pittman.*] There is a case where you did inspect the cargo ;—did I not understand you to say you did not inspect cargoes? That was only in regard to the shale; it was in the wrong place.

2274. How did you come to know about the shale? I went on board and saw it. I reported the matter to the Marine Board in Newcastle.

2275. You found it out by going below? By going aboard. I was not satisfied with my own opinion, and I instructed the Marine Board, and their inspector, and the Harbour-master and I went together. I thought you alluded to inspecting coal trimming.

2276. We wish to know how the insurance offices can judge by your report whether they can insure a cargo or not? Perhaps you had better ask them.

2277. *President.*] Have you a form, on which you write your report, with you? No; when I go to Newcastle I make a report on so many vessels, about ten or a dozen, as to their age and qualification. We have a classification or code.

2278. You fill up a form? We fill up a form.

2279. Can you procure one of those forms? Yes; if you will write to the Secretary of the Marine Underwriters' Association.

2280. I must ask you to send me one of the forms you fill up, so that the Commission may know exactly what questions the insurance offices consider necessary to be answered by you? It would not be made public?

2281. Certainly not, if it is not wished. Anything that is desired to be confidential will be regarded as such? The information that Captain Hall and I give is confidential—for the insurance offices alone.

[Witness withdrew.]

Mr. J. H. Storey sworn and examined:—

Mr.
J. H. Storey.
2 Oct., 1896.

2282. *President.*] What is your name? James Henry Storey.

2283. And your business? Shipping and insurance agent.

2284. With what insurance companies are you connected? The South British Fire and Marine Insurance Company and the Ocean Marine Insurance Company.

2285. What kind of position do you hold in connection with those companies? Agent for both.

2286. Are you the manager for either of them? My firm are the agents.

2287. You insure ships and cargoes? Yes.

2288. What relation has the Sydney Underwriters' Association to your companies? The two companies I represent are members of that association. Briefly, the association is for the protection of underwriting interests generally in the Colony, and for communicating with underwriting institutions all over the world.

2289. Captain Laidman tells us he is in the habit of making reports for the Underwriters' Association? That is so.

2290. Are those reports transmitted to the special companies who are interested? Yes; his report of all the surveys he has made is every week sent round to every office in the association. It is a confidential report.

2291. Is it on that report you base the rates you charge? Not the rates; but it is on that the underwriter carries on his business, in fact, as to whether he will take a risk or not.

2292. You have, of course, varying rates for different risks? We work on a tariff of rates for all the world, agreed to by the association. That is one of the objects of the association.

2293. Would the rates charged for a new steel ship be the same as for an old wooden one? No; there is a classification of ships.

2294. Is coal an insurable cargo? It is and it is not. Up to within the last ten years coal from Newcastle was looked upon as one of the best risks an underwriter could take, but the conditions have so seriously altered within the last ten years, and especially within the last year or two, that practically underwriters, in this Colony at all events, refuse to take them.

2295. On any terms? Almost on any terms. As an instance, I was asked to insure a cargo the day before yesterday, and with some difficulty I placed it at 4 per cent., instead of the usual rate of 1½ per cent.

2296. Was that with a steel ship? It is a good first-class iron ship.

2297. You would be more inclined to insure a cargo of coals to one port than to another? Some underwriters look upon coal risks to what are called eastern ports—Manila and China—as better risks than those going to America, but two of the last ships which fired have been bound to Manila. I insured the cargo of the "Flora P. Stafford." She was burnt recently, and I paid the loss yesterday.

2298. *Mr. Pittman.*] Can you tell us what was the rate that was charged on that vessel? It was the ordinary rate of 2 per cent. to Manila. The rates vary, according to the ports they go to.

2299. *President.*] Was that rate for the ship or cargo? The cargo.

2300. What would you charge on a coal-carrying ship? Very few of the ships which carry coals to foreign ports are insured in this Colony. We have no large mercantile marine; the vessels are small. These large ships are insured in England.

2301. Would you refuse to insure a ship engaged to carry a cargo of coal? Undoubtedly we would to foreign parts; Newcastle coal especially.

2302. Is that a matter in which your practice has changed within the last few years? Yes.

2303. Has it changed since this Commission has been appointed? No.

2304. It has been alleged that the rates have gone up since the Commission was first mooted—that it had been the cause of a rise in rates? I should say not.

2305. There is no truth in that statement? I do not agree with it.

2306. Supposing the rates had gone up since the appointment of the Commission, would you have known about it? Oh, yes. The rates on coal cargoes from Newcastle have risen to the present height during the last six months.

2307. *Mr. Pittman.*] Four per cent. is almost a prohibitive rate? Yes.

2308. *President.*] What is the war rate? Underwriters here have very little experience in war rates. England has not been engaged in war for many years, and we are practically ruled by London. If there

is any prospect of war our Association arranges with the London Association to advise what war rates are payable, and the same would be charged in Sydney. When the Japanese and Russians came to close quarters after the Chinese war we charged whatever was charged in London.

Mr.
J. H. Storey.
2 Oct., 1896.

2309. Suppose the usual rate was 2 per cent., would the war rate amount to 4 or 5 per cent. ? I would not like to say.

2310. I suppose there is a good deal of difference in the risk a ship carrying coals runs, according to whether the coal is well trimmed or not ? It is the duty of our surveyor in Newcastle to see that the ship is properly loaded and properly fitted with shifting-boards. That is almost a *sine qua non* whether the risk is taken or not.

2311. Who is your surveyor in Newcastle ? Captain Laidman.

2312. He has just told us it is not part of his duty to survey the stowing of the cargo ? I must qualify what I said. He does so only in a general way. He is there to supervise anything that affects underwriters, and his duty is to go on board the ships and see, not exactly to go down the holds for the purpose, that the ship is a fair risk for insurance.

2313. The safety of a coal-ship depends, eminently, on the care used in stowing the cargo, and yet the insurance companies who take those risks apparently exercise no precaution to assure themselves that the trimming is done properly. While that is so, I absolutely fail to understand the principle upon which insurance is done ? To a certain extent there is that laxity. There are no positive instructions given to surveyors to see that the trimming is done properly. To a certain extent, the underwriters take it for granted that the ship is stowed properly ; that the captain will not go to sea unless he has got his ship in trim ; that the Marine Board inspector will see to it.

2314. The Marine Board have nothing to do with the trimming—they have simply to see that the vessel is loaded according to her marks. Would it not be to the interests of insurance companies if some inspection of trimming was instituted ? Possibly it might, but the difficulty would be that no two ships trim alike. The master of a ship might say, " My ship will not be safe if she is trimmed as you want her." I think in a way we should raise a hornet's nest around ourselves.

2315. The shipmaster tells the trimmer how he would like the ship trimmed, and the question now is whether some sort of inspection with a view to seeing that the captain's orders have been carried out should be instituted ;—it is not a question of setting up anybody in opposition to the captain, but to appoint someone to see that the trimming is really done ? Against that is this, that practically the bulk of the insurance on coal cargoes is done in England. The business is not offered to the companies here. The coal is purchased in England, and the purchasers arrange the insurance in England. There is not the volume of business to offer to the Colonial offices to make them bother about the matter. Now and again cargoes are offered.

2316. Do not the English offices have representatives here ;—if they have no means of supervising or surveying in the Colony they must be taking unknown risks ? I am inclined to think that most of the coal cargoes are insured at Lloyds underwriters.

2317. Have they an agency here ? No.

2318. Do Lloyds, in London, accept these risks without any supervision of the loading whatever ? I can only account for it that they do, because the English offices represented here are like ourselves, adverse to taking them.

2319. As a matter of fact, do most coal cargoes succeed in getting insured, or do they fail to get insured ? That I cannot tell, but I should imagine they do get insured, otherwise the business would not go on. One of the reasons why we asked for this Commission was that we saw recently in English papers that shipowners were experiencing difficulty in getting their underwriters to cover ships coming for coal cargoes. It is a very serious matter to the trade of Newcastle.

2320. Would it affect you as an insurance agent, or as Chairman of the Chamber of Commerce, if the trade of Newcastle suffered in that way ? It was in my position as Chairman of the Chamber of Commerce that induced me to move in the matter. As far as the other is concerned, we do so little business in that way that it would be of little importance.

2321. What would be the result of a refusal of English underwriters to cover ships coming here for coal ? I can see nothing for it but that the ships would not come.

2322. Where would they go to ? They would have to seek employment somewhere else. The rates for freight would have to advance considerably in order to tempt shipowners to pay extra insurance. They would demand such a high rate for freight in order to pay the extra insurance that the shipper or consumer of coal would look elsewhere for the supply instead of coming to Newcastle.

2323. Do you know where the consumers of coal would go for their supply ? They would go elsewhere.

2324. Where is elsewhere ? We have been told Japan can supply any quantity of coal ; North America can supply coal.

2325. When you approached the Premier in connection with this subject, had you in your mind any idea what ought to be done in the matter ? My suggestion to the Premier was that the Commission should consist of scientific men. I am satisfied in my mind that the cause is to be found by scientists, and that it is not a question of stowing or trimming—I refer, of course, to coal firing.

2326. Of course you are aware that almost any remedy means the expenditure of money ? Unfortunately, you cannot do anything without money.

2327. We have had several witnesses before us who assure us the coal trade could not stand another 1d. or 2d. a ton ; the shipmasters inform us the owners can hardly make both ends meet ; the trimmers say that such a price is paid for trimming that nothing is made out of it ; the crane contractor assures us the minimum possible amount is paid for his trouble ; everybody agrees that something is required to be done, but nobody wants to pay for it ;—can you make any suggestion ? I believe it is purely a matter for the scientific mind. That is only my own opinion, of course ; but I do not see the slightest difference in the condition of the coal or the trade of Newcastle compared to what it was ten years ago. The ships undoubtedly are larger, but they do not carry much more thickness in height of coal. The ships of the present day do not draw much more water than they did ten years ago. The height of a ship's hold is not much more than it was ten years ago ; therefore a ship does not carry much more thickness of coal. The coal is shipped in precisely the same way—it is not broken any more. It is trimmed exactly as it was ten years ago. I thought the cause was that, perhaps, the coal in the mines had come from a greater depth, but Mr. Gregson assures me it is nothing of the kind. The coal is at no greater depth, and it is hewn in exactly the same way ; therefore, I think, it is purely a matter for scientists.

2328.

- Mr. J. H. Storey.
2 Oct., 1896.
2328. Assuming a remedy has been found, upon whom should the cost fall;—should the underwriters be asked to reduce their rates, subject to certain conditions that might be specified? If the underwriters could be satisfied that coal cargoes would be similar risks to what they were ten years ago, they would not ask for higher premiums.
2329. What would it take to satisfy underwriters that any recommendations we might make would be likely to render the shipping of coal more secure;—how could we secure their co-operation now? I am afraid the only thing underwriters would do is to say, "Let us have the experience," and if they see the coal cargoes go all right, they will reduce their rates again. It was thought the shifting boards were the cause of the trouble; but they were tried, and have not resulted in any remedy at all.
2330. Meanwhile, who ought to bear the expense, in your opinion, supposing recommendations involving expense were made? If, for instance, you came to the conclusion that the coal should not be dropped into the ship's hold, but should be lowered and gradually spread out, that would necessitate a greater charge being made by the Government for the crane. It would have to find its own level, and the expense would have to be borne by the parties shipping the coal, and would, eventually, be paid by the consumer.
2331. Would you consider that an increased expense in loading of 1½d. or 2d. a ton would make any serious difference to the coal trade of the port? I would hardly like to put my opinion against those of people better acquainted with the trade of Newcastle. They know to what extent they can go to compete with other parts of the world.
2332. Coal now, I believe, costs to raise some 5s., and I cannot think that a difference of 1d. a ton would seriously affect the trade? I should not think so myself. Coal is cheaper now than it was ever before, which, I think, is a great deal due to the competition. I have held the opinion for some time that there is no occasion to sell coal so cheap, but, as I said, I would not like to put my opinions against those of men who are trying to sell their coal in other parts of the world. My own impression is that coal is too cheap, and that the trade can bear the trivial expense you have suggested.
2333. It has been suggested that in order to lower the coal down into the hold, the hatchways of ships might be altered, but we understand there are some very strict rules in regard to hatchways, and objection might be raised to their enlargement? You would immediately come into opposition with Lloyds' rules in regard to the building and construction of ships.
2334. Are Lloyds' rules so fixed that everything must give way before them? Lloyds' shipping register and rules of ships is one of those old London institutions which is sworn by all over the world. It is almost an absolute necessity for an English ship to be classed at Lloyds' to enable her to get freight for cargo.
2335. It would be quite out of the question to persuade Lloyds to alter their rules to allow of hatchways being enlarged? I do not think they would entertain it. You will get ships from other parts of the world with which Lloyds have nothing to do.
2336. So that for foreign ships the objection based on Lloyds' rules would not apply? No; but foreign countries have all got institutions based on the same lines as London Lloyds.
2337. You think the objection made to the proposal to alter the size of the hatchways has some foundation? I should say so, most certainly. If you make a ship with big hatchways to carry coals, you might destroy her capability for carrying other cargoes. I should think the bigger the hatchways the weaker the ship.
2338. That is expressed by Lloyds' rules;—are you interested yourself in coal-mining operations? Only as shareholder.
2339. Are you on a board of management? No; I am simply a shareholder.
2340. I may sum up your evidence, to some extent, as follows:—There is some difficulty experienced by owners of coal cargoes in getting them insured; that difficulty has increased greatly during the last ten years; it has become acute during the last six months; and, so far as you are concerned, the only thing that would induce you to bring down the rates would be to find that the accidents to coal-laden vessels ceased to occur; until then no proposal on our part would induce you to alter your rates? No; I think we would await the result of your recommendation.
2341. *Mr. Pittman.*] In connection with what you said just now in regard to the height of the bulk of the coal in the hold not having increased during the last ten years;—do you know that as an absolute fact? The depth of ships built for oversea purposes has to be guided by the ports they go to. They could not come out of Newcastle drawing more than 22 to 23 feet.
2342. Could you not have a ship constructed so that you could have a greater depth of coal in her hold, and yet built so as not to draw more water than a ship of lesser depth? That is a question for shipbuilders and experts. As I have already said ships are now built to carry larger cargoes; they have greater length and breadth, far greater than in proportion to the depth. The depth of water at the various ports in the world has to be considered; take Newcastle, for example, a shipowner knows that there is only from 22 to 23 feet of water on the bar.
2343. *President.*] Have you had brought under your notice any of the appliances for the loading of coal in ships? I have never seen them; one has been brought under the notice of the Underwriters' Association within the last month or so.

[Witness withdrew.]

Mr. J. St. V. Welch sworn and examined:—

- Mr. J. St. V. Welch.
2 Oct., 1896.
2344. *President.*] What is your name? John St. Vincent Welch.
2345. And what is your business? Marine underwriter and fire underwriter.
2346. On your own account, or in connection with a company? As representing the Commercial Union Assurance Company of London.
2347. Do you represent that company alone? Yes.
2348. Do you insure cargoes as well as ships? Yes.
2349. Do you insure coal cargoes? Not now; we have not done so for some years.
2350. When did you give up insuring coal cargoes? About six or seven years ago.
2351. What was the reason for that? It was on account of so many ships being unaccounted for.
2352. And you do not, consequently, like the business? No; there were so many ships missing.
2353. Have you entirely ceased to insure coal now? Yes.
2354. When did you entirely cease? I think about six years ago—five or six years ago.
2355. Does your company in London still insure coal coming from English ports? Yes.

2356. But it will not insure coal sailing from Newcastle? They have insured in London some cargoes, I believe, within the last few years, since I gave up writing them here.
2357. Have they given up writing them now? I am not aware. I know they had a risk on a coal ship from Newcastle about eighteen months or two years ago. They do not advise me of the risks they take in London. They would be full cargoes, and would not affect me. It was a ship called the "Poltalloch."
2358. Do you insure ships that carry coal from here? No.
2359. Is it on account of the cargo that you do not insure the ship? Yes.
2360. Is there any difficulty in getting coal cargoes from English ports underwritten? I should not think so. There are always underwriters there who will take almost anything. There is great competition in London.
2361. It would not be true to say that it has become impossible to insure coal cargoes only since the appointment of this Commission, some two months ago? Oh, no.
2362. Is it more impossible to do so now than it was before? I do not think so.
2363. It is about the same? Yes.
2364. In fact, you would have nothing to do with coal ships before this Commission was appointed? I have not touched coal cargoes for five or six years.
2365. Speaking generally, do underwriters decline to touch coal cargoes? Yes. I know it is extremely difficult to get coal cargoes insured here.
2366. Did the other companies begin to hold off six years ago, do you know? Not so entirely as they have lately.
2367. What does lately mean? Say within the last two or three years. These things gradually arise. They gradually woke up to the fact.
2368. Supposing the Commission were able to make certain recommendations which, in their opinion, would lead to greater security for coal cargoes, I presume you would wait to see how those recommendations turned out before you would make any difference in the policy which dictates your underwriting? I should begin at once to take coal cargoes if certain recommendations were carried out which are what I think necessary. I have my own ideas as to what is the cause of these ships missing, or what I think is the cause.
2369. If the precautions were taken which commend themselves to you, would you be inclined to make a reduction in the rates at once or wait to see the results? I would make the reductions at once.
2370. Would you kindly inform us what it is you think might be done in order to induce you to underwrite coal cargoes? I think, in the first instance, that one of the main causes of the losses has been the imperfect stowing of the cargoes; the want of use of shifting-boards; and the improper trimming—the lack of proper trimming, principally through the want of side hatches in the 'tween decks. When the coals are piled up in the middle of the ship, and the ship gets to sea and begins to roll, the coals will go over to one side, and the ship will go on her beam-ends and founder. I think that has been the cause of the loss of the bulk of the ships. I may be wrong, but I believe that is the cause. Further, I think there should be another alteration in the way of stowage, which may possibly be the cause of the firing on board ships. That is, the coals are dropped from too great a height into the hold. There are too much "smalls" and fine dust formed, and perhaps the coals are wet at the time, and I think that possibly leads to spontaneous combustion. I think the greater number of vessels are lost through want of proper supervision in the stowing, not only from the want of shifting-boards but the want of proper trimming and the use of side hatches in the 'tween decks to ensure proper trimming.
2371. What steps did you take six years ago, when you used to insure coal ships, to see that they were trimmed? We used to have the services of a surveyor, or got a certificate from the surveyor that the cargoes were properly trimmed. One of the difficulties in seeing that a cargo is properly trimmed, I understand, is that the trimmers are in the habit, if they know that anyone is going to make an inspection, to throw up a wall across the ship, across the coals, and the consequence is you cannot see the spaces left behind this wall of coal. I have asked officers sometimes whether they have not, for their own safety, inspected the trimming, and their reply was it was as good as their life was worth; it was so easy to drop a lump of coal down.
2372. The matter of trimming makes no difference to you now that you do not insure coal? Yes.
2373. Supposing an inspector were appointed whose business it was to, practically, do the captain's duty for him—to see that the trimming was properly done; from the evidence already given there seems to be no doubt he could inspect efficiently? Could they do it efficiently?
2374. I think there is no doubt they could? A great deal of what I am now saying is hearsay, as it necessarily must be in my business. I am told that one of the causes of want of good trimming is the reduction in the price of trimming. It used to be 4d. a ton, and within the last few years it has been brought down to 1½d. or 2d. I think the Coal Trimmers' Union held a meeting some few months ago at which they passed a resolution stating that the loss of many of these ships was due to improper trimming, but, of course, there was then the question of the non-unionists arising—the employment of men who were incompetent trimmers.
2375. In the event of the trimming being satisfactorily inspected, would it make any difference to you in the terms on which you would be willing to underwrite these ships? Yes; if we could know it was thoroughly and efficiently done.
2376. You would be prepared to make a reduction? Yes; where the use of shifting-boards was adopted.
2377. With reference to the heating of coal cargoes, supposing the Commission were enabled to lay down rules which would increase the safety of the coal cargo, would that make any difference to you? Yes, I think so; though I do not think that so many of the ships that are missing have been lost through firing or heating. I see that in the last twelve months, from September, 1895, to this date, there have been only two ships actually on fire carrying Newcastle coal, and I think five have reached port with cargo heated. For the six years previous, I can only find cases of two ships with Newcastle coal having been on fire. I am speaking of oversea ships.
2378. Would you, as an underwriter, be willing to make a reduction in your rates, provided that certain conditions to improve the safety of the ship were carried out? Certainly.
2379. You would be willing to give a certain amount of encouragement in that direction? Yes; and only too glad to do so, because I do not want to throw away good business.

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- Mr. J. St. V. Welch.
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2380. Take the case of a ship sailing to San Francisco—what rate would you charge per cent.? Four per cent., if I took it at all.
2381. That would be on the value of the coal at San Francisco? Yes.
2382. Would £1 a ton be a fair value for the coal there? I do not know what coals are selling at now in 'Frisko, but I suppose it would be 15s. to £1 on to the price in Newcastle.
2383. So that £1 would be a reasonable price for a ton of coal in San Francisco? I do not know what they are selling there for now, but I should think it would be something like 20s. I would not like, however, for that to go forth to the world as my valuation.
2384. To what would you be prepared to reduce your rate, provided the great risk were ameliorated? To 30s.
2385. From £1 to 30s.? Yes.
2386. So that there would be a saving of 2½ per cent. on insurance rates? Yes.
2387. Two and a half per cent. is 6d. in the £, and supposing that £1 be the value of a ton of coal at San Francisco, there would be a saving in underwriting expenses amounting to 6d. per ton? Yes.
2388. Would you wait until you saw how the proposals of the Commission turned out before you made any reduction, or would you be prepared to make a reduction at once in favour of those ships which adopted any suggestion we might feel it our duty to make? At once, if the suggestions of the Commission put forward were such as commended themselves to my judgment.
2389. So that you would act on your own judgment? Yes.
2390. *Mr. Pittman.*] Who was the surveyor who used to act for you when you insured coal cargoes; was he the surveyor of the Marine Underwriters' Association? No; we used to have our own surveyor. I have not been a member of the Association for many years.
2391. Did that surveyor you employed actually inspect the trimming of the coal—did he give you a certificate that the coal was trimmed to his satisfaction? He had a special surveyor, who used to give him an official certificate of having inspected the trimming.
2392. There really was an inspection made? Yes.
2393. You did not trust to the surveyor without knowing that he actually took steps to satisfy himself that the coal was trimmed? No.
2394. *President.*] You were going to tell us something about the ship called the "Poltalloch"? I spoke of her, particularly, because it was the only ship brought specially under my notice since I gave up taking risks on coal ships. I found the insurance had been effected in our London office—that is the head office—and I made some inquiries about her. I was told the mate reported that when she was at sea the striking of the coal against her sides when she rolled was like the discharge of heavy artillery, and that you could walk all round the coal in the wings of the ship and fore and aft, showing that the trimming was absolutely inefficient.
2395. *Mr. Pittman.*] That would have been remedied if she had had side hatchways in the 'tween decks? Yes; if there had been shifting boards and side hatches. The shifting boards would prevent one-half of the cargo going to the other side of the ship, and if there are open side hatches the coal from the 'tween decks will find its way down gradually and trim the ship, thus they are bound to fill the lower hold in the wings. What I mean by side hatches is that there should be three or four streaks of board taken up all round the ship in the 'tween decks, and the coal would filter down into the lower hold and fill the spaces in the wings.
2396. *President.*] Some captains say they like a space left under the 'tween decks—it makes their ship safer than if filled up? It depends on the build of the ship. In the old days you could fill a wooden ship with coal on account of her greater buoyancy.
2397. The side hatches in the 'tween decks might not be a cure in every case. I understood you to say that one of the conditions that you would impose before you underwrote a ship was that there should be side hatches in the 'tween decks? I think it would be a cure in every case.
2398. No matter what the nature of the ship? I think so. I think the existence of these open spaces below is the great danger that leads to ships capsizing and foundering.
2399. You would have the open space right up against the ship's skin? Yes; a few streaks of the deck taken out.
2400. Is that your own idea, or have you heard it mooted by anybody? I have talked over this frequently with sea captains, and I have been engaged in this business as underwriter for twenty-three years, and I have formed my opinions from that.
2401. Have you heard any objections to it in any way? I have never heard it objected to.
2402. Is there anything in Lloyds rules to make it objectionable? Not that I know of.
2403. Has it ever been done to your knowledge? Oh, yes, in many of the home coal cargo ships.
2404. Do you know of any ships in which that precaution was taken, and to which an accident afterwards occurred? That I cannot say, because I have not been writing coal from any of the English ports for many years. My business has been in Australia. The ships that carry coals from here are ships that are not specially fitted for carrying coals.
2405. What are they? Ships that bring out general cargo from England and either go to San Francisco with coals, and then to take wheat home, or else load here with wool. They are not ships specially fitted for carrying coal.
2406. Is not any ship suitable for carrying coal? She is if they make her suitable, and if she has proper ventilation.
2407. That is surface ventilation? Yes.
2408. You do not advocate ventilation through the coal? No.
2409. The variations to make an ordinary ship suitable for coals would be very small? Yes; very small. It is merely a question of providing these side hatches and shifting-boards, and seeing to proper trimming and stowing, and preventing the accumulation of fine dust in the hatchways. I think that is the whole secret of it.
2410. As far as the provision of side hatches is concerned, that is not a serious matter? No.
2411. Either in a wooden or an iron ship? I should say not.
2412. Some ships have open 'tween decks? Yes.
2413. Would you rather insure such a ship than one with close 'tween decks? I think I would not; the weight would be more evenly distributed in a ship with 'tween decks.

2414. Your idea is to have 'tween decks to ensure distribution and side hatches to ensure packing in the wings? Yes. Mr. J. St. V. Welch.

2415. Have you any views about the building of the walls in the fore and aft of the ship to prevent the coal shifting? I do not think they make much difference. The pitching of the ship has not much to do with it. I have talked that matter over with old ship-masters, and they do not think that has much to do with it. 2 Oct., 1896.

2416. The chief trouble is in the rolling? Yes.

2417. In your opinion, the shifting of the cargo is a more important matter to deal with than the heating? I think so. I have been in communication with our London underwriter, Mr. Saunders, about this matter, and he is regarded as one of the greatest authorities in England on underwriting. He wrote on the 28th December to the effect that "no doubt a great change has come over the coal business, resulting in the loss of several vessels. The cause has not been discovered, but I do not think it can be because the chief part of the vessels are built of iron and steel, as these vessels are regularly employed in the coal trade from this country (England), and carry their cargoes better than wooden ones. I believe it is some change in the nature of the coals, such changes occur from time to time with North of England and North Wales' coals, which now and again appear to reach a seam very subject to spontaneous combustion. There are certain coals here which cannot now be shipped, as no one will write them." He recommends "that inquiries be made to ascertain from which collieries the coals in missing and burnt ships came, to see if any particular mines can be 'spotted,' and then to see if their coals are of a different nature to those formerly produced." And, later on, said, "It was a pity the use of shifting-boards could not be made compulsory." In the case of two ships, particularly, when the masters returned to port, they said their ships had been saved from foundering by shifting-boards. The "Parthia," which sailed for Valparaiso in 1894, arrived dismasted, and on her beam ends, and the captain said that, in his opinion, she was saved by the shifting-boards. Again, the "Caradoc," which put back in January, 1895, was saved, the captain said, by shifting-boards. I see there were nineteen vessels between January, 1889, and April, 1896, missing.

2418. Where did you get the information from? I have been compiling this for years, and lately a list was prepared by a manager of an insurance company here, Mr. De Gyulay, and a paper was read by him recently before the institute of which I am president; it is also from that I get the information. The ships which have reached ports with their cargoes shifted, or have been known to have foundered from that cause number ten.

2419. I understand your position is this, that at present the insuring of either coal ships or coal cargoes is found to be bad business to touch? Yes.

2420. In the event of the trimming of coal cargoes being better carried out, and to your satisfaction, and proper precautions being taken against those causes which lead to heating, you would be prepared to resume the business of underwriting coal ships? I should be only too glad, because one likes to get all the sources of business one can—that is, good business. I used to write these cargoes to San Francisco freely some years ago.

2421. What used the rate to be then? When I came here first, in 1873, we used to get 40s. per cent., and that was brought down by competition to 30s. or 35s. until attention was drawn to the great number of ships missing.

2422. That was six years ago? Yes; it gradually dawns upon one. You cannot possibly state the exact date you began to find the trade not a safe one to go on with. I suppose the first time I began to notice the trade was becoming very bad would be, probably, more than that—eight or nine years ago.

2423. If an insurer came to you now and insisted on your underwriting a coal cargo, what price would you name? If I were compelled to do it on account of other business I would accept 80s. to £5.

2424. Per cent.? Yes. I think you might say 4 per cent. You must not take that as being in accordance with the percentage of losses on sailing ships. If you could get a full average line on every ship that sailed, I dare say it would be safe to do the business at that, but you may have to cover the very vessels that are lost. It was the number of ships lost and the loss of life that moved me to get a return called for in the House twelve months ago, and I suppose it was that that drew attention to this matter. I have been trying to stir up public attention to this in the papers for the last four or five years.

[Witness withdrew.]

Mr. S. H. Smith sworn and examined:—

2425. *President.*] What is your name? Samuel Hague Smith.

2426. And what is your business? Manager of the New Zealand Insurance Company.

2427. Do you insure ships and cargoes? Yes.

2428. Do you insure coal ships? Not now, unless it becomes a matter of absolute necessity.

2429. If it is a matter of absolute necessity, what rate do you charge? From 4 to 5 per cent., according to the destination of the ship.

2430. How long is it since you began to discontinue this business? I suppose about twelve or eighteen months.

2431. Is it true you have only given up insuring coal cargoes since the appointment of this Commission? No, previous to that; from the time fires occurred.

2432. Is it chiefly on account of fires, or on account of shifting of cargo that you do not care for the business? Both.

2433. Which do you consider to be the most serious evil, the shifting of the cargo or its spontaneous ignition? They are both of great importance.

2434. You cannot tell us which it is that has operated most unfavourably? The fires, unquestionably.

2435. Would you now decline to insure either ship or cargo of coal? Yes.

2436. Supposing the Commission were enabled to make some recommendation, for instance, that some stringent inspection of the trimming of ships should be exercised, would that enable you to reduce your rates in any way? Yes.

2437. Would you wait to see how it worked, or would you be able to make a small reduction immediately? I would make it immediately if it were carried out.

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2438. Have you any system of inspection of the trimming of a ship now? Nothing, except the report occasionally from the surveyor of the association we have.
2439. Captain Laidman? Yes.
2440. You go by his report? Yes.
2441. He never makes a report as to the trimming, I understand? He does not.
2442. There appears to be no kind of inspection as to trimming? I think there is some, because Captain Hall has frequently reported in his reports to the association that shifting-boards are used in certain vessels, and they give a certain degree of safety.
2443. Shifting-boards may be used, but yet the trimming may be very badly done? Quite so; the trimming itself is not inspected.
2444. What is the reason of that;—you find it good to inspect in some particulars, but not in others? Simply because it would require more men than could be paid for by the amount of business. One man could not possibly do it with the inspection of the other vessels.
2445. Now you do not care about it because you do not insure these vessels? I care very much about it, because I want to have the business again. I should be quite willing to get proper inspection or survey of the ship, but the cost would be too great for us to do for ourselves.
2446. As it is important for the ships to be trimmed properly, it ought to pay you to have them inspected? We have no power; we have no control. I do not know but what the Marine Board there is the only body that could do so.
2447. You have a power in this way, that you could refuse to underwrite? Many of the cargoes are covered at home.
2448. Are they not so particular in London? You can insure almost anything in London.
2449. At a reasonable price? At any price. It is not a matter of price whatever at Lloyd's. The bulk of the ships are sent from home, and their cargoes are insured under open policies, and all they know is that a cargo of coal was shipped, and there is an end of it. As to the terms, this one particular business may be a loss, but others are a profit.
2450. They have the advantage of average, and are able to reduce the rates? Yes; the volume of business is larger. It is a very important thing in the loading and trimming that shifting-boards should be used.
2451. I understand the use of shifting-boards is very usual now? Yes; they are used very much now.
2452. It would be difficult to find a ship that would put to sea without shifting-boards? I think many of them use them, but very often captains are cut down in their expenses.
2453. Is the rigging of shifting-boards an expensive matter? It is not; but every bit of rope they have to account for.
2454. Owing to the profits of the trade being so low? Yes; many of the ships are run very bare.
2455. What sort of inspection would satisfy you—would Government inspection satisfy you? It would.
2456. Who ought to pay for it;—would it be worth your while? No; it would not; we are not getting enough premiums to do that. I think the ship ought to. In reference to fires in the harbour, we send down an engine, put out the fire, and render every assistance we can, but we cannot charge that to the ship; the fire brigade office cannot make any charge whatever. I suggested to Mr. Reid some time ago, before this Commission was formed, that some action should be taken in reference to that. The vessel and cargo are saved, but no charge can be made on the ship.
2457. Who pays the Government? The insurance offices, who have an interest in the cargo, pay.
2458. If the vessel had been lost, you would have had to pay the insurance? Yes; for the cargo. The ship is insured in London.
2459. In the event of there being Government inspection, can you suggest any way in which that inspection could be paid for? That is a difficult question. There is comparatively a small amount of insurance effected in Sydney, therefore, it would not do for the insurance companies to pay for an inspection from which they derived no benefit. I do not think the volume of premiums is sufficient to justify the insurance companies paying for it.
2460. I understood you to say you would be glad to insure the ships if you could get the business back? Yes; but the volume is not sufficiently large.
2461. We understand it is somewhat difficult for a shipmaster to see that the trimming is properly done? I think the stevedore who engages to load the ship wants to do it as cheaply and as quickly as possible, and, therefore, there is not the proper care taken.
2462. So that you would have Government inspection? I think so; and have the Government pay for it.
2463. And have the Government pay for it? I think the shipowners would save a large amount in premiums, and should pay something for it.
2464. Could that be levied by means of harbour dues? I should think there should be a special charge for inspection.
2465. It is already alleged the harbour dues in Newcastle are very high; is that the case? I do not know. It is always said the charges are too high.
2466. Have you ever had a cargo, which you have insured, on fire? I have not.
2467. What we want to know is whether in the event of certain suggestions of the Commission being adopted, you would be prepared to reduce the rates of insurance? We would make a reduction.
2468. Would you do that at once, or prefer to wait? We would do it at once.
2469. You would have confidence in the Commission to that extent? There is no doubt about that. There is an impression that the coal is taken from the mine or pit, and is not exposed to the air long enough before it is put on board, and often it is very wet; and that the coal falls from so great a height that it smashes and becomes so pulverised that it generates combustion.
2470. What sort of reduction would you make? At least 50 per cent.
2471. You would go down from £4 to £2? Yes.
2472. Would the insurance be reckoned on the value of the coal here or on its value when landed? On the value here with expenses and profit added; the freight is insured separately.
2473. It comes to the same thing in the end? Yes; but it goes under a separate policy.
2474. What is the freight per ton on coal from here to San Francisco? It varies so much, and depends on the ship. The arrangements are made at home generally. I suppose the rate would be as low as 15s., or it might be lower than that in emergency.

2475. If we took the price of coal at not less than £1 a ton, that would be on the safe side? I should think so.
2476. It would not be less than that? No.
2477. A reduction in the insurance rate on that £1 by 2½ per cent. would come to 6d. per ton? Yes.
2478. So that supposing the ship-owner could get the insurance rates reduced by 6d., and he had to pay 1d. per ton more to load his coal, he would make a profit of 5d., is that so? Yes; but I do not think it would increase the expense to have a proper method of spreading the coal. It would be done almost as quickly.

Mr.
S. H. Smith.
2 Oct., 1896.

[Witness withdrew.]

FRIDAY, 9 OCTOBER, 1896.

[The Commission met at the Chief Secretary's Office, Sydney, at 2.30 p.m.]

Present:—

PROFESSOR RICHARD THRELFALL, M.A., PRESIDENT;

And EDWARD FISHER PITTMAN, Esq., A.R.S.M.

Captain W. Barfield sworn and examined:—

2479. *Mr. Pittman.*] What is your name? William Barfield.
2480. You are the captain of the ship "Alexandra"? Yes.
2481. I understand she caught fire before she arrived at San Francisco? Yes.
2482. What year was that in? This present year.
2483. Were you present in Newcastle when she was loaded? Yes.
2484. Do you remember what kind of weather it was then? We had very unsettled weather. There were continual southerly bursters, and there was a lot of electricity in the air.
2485. Was it in the summer time? Yes.
2486. Can you state whether the cargo got wet at all? Not more than usual; only just when the southerly bursters came on.
2487. Were there heavy showers? Yes.
2488. Whereabouts did the fire take place in the ship? In the No. 3 hatch to the mainmast.
2489. Had she four hatches? Yes.
2490. Was she a four-masted ship? No, she had only three masts.
2491. Did the fire occur under the No. 3 hatch? Yes; from the after part of the No. 3 hatch to the mainmast.
2492. It is not true that the fire occurred away from the square of the hatchway, and that it was only between the two hatches? No.
2493. It actually occurred below the No. 3 hatch? Yes; and mainmast.
2494. What is the tonnage of the vessel? 1,297 tons.
2495. What weight of coal did she carry? 1,923 tons.
2496. What is the depth of her hold? Twenty-two feet.
2497. Was the fire extinguished? The ship was scuttled in 'Frisco.
2498. What colliery did the coal come from? The Cardiff colliery, Newcastle.
2499. The ship was loaded by Mr. Russell? Yes. I have carried two cargoes of the same coal. The voyage before I went to Honolulu, and there was no heating. Both times the ship was trimmed splendidly.
2500. Do you remember whether, in the case of the other cargo, there was rain or not while the ship was being loaded? The weather was more unsettled in the case of the latter cargo, but the voyage before there were showers. There was no particular quantity of rain in this last cargo. In loading in Newcastle, my idea is that the coal goes so quickly from the mine that the rain has very little effect. The coal may be taken out of the mine in the afternoon or at noon and by midnight it is on board the ship.
2501. The cargo might become wet by the rain falling through the hatches? Yes. All the time we were loading the weather seemed to be very unsettled, and there was a wonderful lot of electricity in the air, and every twelve or forty-eight hours there was a southerly burster. I had no pipes down my cargo, therefore I could only take surface temperature. The temperature in the hold never exceeded 87 degrees, and even when I first smelt gas, I could get nothing more than 75 or 76 degrees. I smelt gas in the afternoon, and at 5 a.m. the following morning the ship was in flames.
2502. Did you ever have a cargo of coal heat before? No; I have only carried two. I have had coke, but not more than two coal cargoes.
2503. Did you personally supervise the trimming? There was always myself or an officer. I always had an officer looking on to see that it was properly trimmed.
2504. Do you think it is the duty of the captain, or one of the ship's officers, to do that? Yes; most of us always do so. In the trimming of coke I very often put on an overall and have a look at it myself, but with coal I trust to the officer. With Mr. Russell's trimming of the two cargoes I have had, I had no fault to find whatever.
2505. The trimmers never refused to carry out the instructions you gave them? No; just as I wanted the ship loaded, so it was done.
2506. *President.*] Was much coal loaded down the No. 3 hatch? I loaded the ship principally in the No. 3 and main hatches, and just trimmed her by No. 1 and No. 4. She would take ten or fifteen trucks down the after hatch and the same quantity down the fore hatch.
2507. Can you give us any idea of the amount of coal that went down the No. 3 hatch? I should think about 800 tons.
2508. Was there a heap of dust there? I did not notice any particular dust. The Cardiff coal I loaded seemed to be a very large coal. There was a certain amount of dust, but nothing particular.
2509. The coal was dropped from the coamings of the hatch? Yes.
2510. Out of hoppers? Yes; most of the hoppers we loaded with were not those in which the bottom came out, but were emptied from the front.
2511. *Mr. Pittman.*] Was the fire well away from the donkey-engine? There was no donkey-engine.
2512. *President.*] Did you put iron rods down? No.
2513. The coal would have got wet on the surface? Yes; a certain quantity of water went down.

Capt. W.
Barfield.
9 Oct., 1896.

[Witness withdrew.]

FRIDAY,

FRIDAY, 16 OCTOBER, 1896.

[The Commission met at 2:15 p.m. at the Chief Secretary's Office, Sydney.]

Present:—

PROFESSOR RICHARD THRELFALL, M.A., PRESIDENT;

And EDWARD FISHER PITTMAN, Esq., A.R.S.M.

Mr. C. F. Stokes sworn and examined:—

- C. F. Stokes. 2514. *President.*] What is your name? Charles Frederick Stokes.
 2515. You have some experience as a shipping agent, I believe? Yes, for a good many years.
 16 Oct., 1896. 2516. You do no insurance business, I suppose? Yes, I do.
 2517. Has there been any difficulty lately in insuring ships loaded with coal? Yes, considerable difficulty I can hardly get a cargo insured at all.
 2518. Do you insure cargoes yourself? No.
 2519. Not at any price? No.
 2520. How long is it since you gave up insurance of that kind? Some little time.
 2521. What does that mean? I suppose about two months.
 2522. Is that about the time the Commission was appointed? Perhaps so; I suppose about that.
 2523. Was it the appointment of the Commission that influenced you in giving up insuring coal? No, I think first of all the objection commenced in England, and filtered out to the Colony.
 2524. Sometimes you act as insurance agent, and at other times you endeavour to obtain insurance upon ships? Yes, as agent in both instances.
 2525. So that you see both sides of the matter? Yes. The difficulty now is to get vessels insured carrying cargoes of coal.
 2526. Do you act as an insurance agent for any company? Yes.
 2527. Is it the firing or the shifting of cargoes that you are chiefly afraid of? I do not know which it is. A number of ships are missing, and from what cause we do not know.
 2528. In the event of this Commission making certain recommendations for the proper loading of the cargo, so as to minimise the risk from firing, would you be prepared to take up the business of insuring coal-ships again on the recommendations being adopted? It is hard to say. One would want to know what would be recommended.
 2529. You would not make any change at once simply on the adoption of the recommendation? I do not think so.
 2530. Suppose an inspector were appointed to see that each individual cargo was properly trimmed? That might make a difference, but I think the objection would still exist until that measure were proved efficient.
 2531. So that you would wait until the inspection proved efficient? I am afraid we would.
 2532. Have any ships been lost for which you have acted as agent? There have been ships missing.
 2533. With regard to the trimming of the cargo, would you consider it was the duty of the captain and officers to see that it was carried out? Yes, certainly; every captain and officer should make sure the ship was properly trimmed.
 2534. It has been abundantly brought before us that captains do not attend to it, and it has been recommended that the Government should appoint inspectors to see that the coal is properly trimmed,—in that case, would the shipowners be prepared to contribute towards the expense of any inspection? I think it is the captain's duty to attend to it; or if not his, it is the duty of the officers, and they owe it to the owners to see their cargo is properly trimmed.
 2535. The fact seems to be that they do not? I think, as a rule, if an officer is any good he does see to it.
 2536. From the evidence we have had, I think there is no question they do not, and I ask you whether it would not be in the owners' interest to make some contribution towards the cost of inspection? It might be, but I hardly think it is a fair thing to ask them to do when these men are paid to do it. I have heard a lot about the greater fall there is for the coal now. Ships built nowadays carry a much larger cargo, but I do not think the fall is greater. The length of a ship now makes her carry a much larger cargo with less draught than with the old ships. I think the increased amount of coal may have to do with the trouble. Then again there is the question as to whether there has been any alteration at all in the seam of coal; that has not been gone into yet.
 2537. *Mr. Pittman.*] With regard to your statement as to the depth of the hold, do you know that as a fact, or is it an assumption? I know it as a fact. Twenty-five years ago I loaded a ship called the "Ellen Stuart," and she carried 1,600 tons of coal, and drew 23 feet of water. There is a greater fall there than with a ship carrying 4,000 tons now, which would draw about 22 feet.
 2538. *President.*] What you state is really an impression, I suppose. You have never looked into the matter in detail? No; but I do not think these latterday ships draw so much in comparison;

[Witness withdrew.]

Mr. T. J. Bush sworn and examined:—

- T. J. Bush. 2539. *President.*] What is your name? Thomas James Bush.
 2540. And your business? Gas engineer.
 16 Oct., 1896. 2541. You are engineer to the Australian Gaslight Company? Yes.
 2542. How long have you been in that position? Nearly eighteen years.
 2543. And during that time you have had considerable experience of heaps of small coal? Yes.
 2544. How much coal do you store at your Kent-street works? Not much over 5,000 tons.
 2545. Do you often have 5,000 tons of coal in stock? Yes, generally 5,000 tons.
 2546. Of small coal? Mixed—small and large.
 2547. How deep are the heaps? At Kent-street 14 ft. 6 in. is the deepest we ever had.
 2548. Have you ever had a fire in the coal at Kent-street? Only one small one. It was in a bunker, and I attributed it to the heating of ashes and spent lime underneath the floor.
 2549. It was not a case of spontaneous combustion? No.

2550.

2550. How much coal do you keep in store at your Mortlake works? About 8,000 tons; we have had some put outside.
2551. Have you ever had a fire there? Yes, frequently.
2552. A case of spontaneous combustion? In all cases.
2553. What is the depth of the coal at Mortlake? Twenty feet.
2554. Is the coal there under cover? All under cover; the 8,000 tons is under cover.
2555. Is it under cover at Kent-street? Part is under cover, and part is in the open.
2556. How much is under cover at Kent-street? About 2,500 tons.
2557. So that the coal is kept, practically, in precisely the same condition at Kent-street as at Mortlake, except that the heap at Mortlake is rather deeper? That is the only difference.
2558. Is the coal left to lie longer at Mortlake than at Kent-street? It is not left to lie so long at Mortlake; we are obliged to shift it. Some coal has been on the wharf in Kent-street for fourteen or fifteen months—since last June twelve months.
2559. From what colliery do you obtain your coal? For the last three years from the A. A. Company's.
2560. Does the same kind of coal go to Kent-street as to Mortlake? Yes.
2561. Precisely the same? Yes.
2562. What, in your opinion, is the difference which would account for the coal at Kent-street remaining cool, and that at Mortlake heating? It is nothing else but the depth; that is what I attribute it to—the difference between 14 feet and 20 feet.
2563. Whereabouts does the heating commence? Near the bottom, as a rule, so far as I can judge. I may say there is a slight difference in the unloading of the coal. In the one case it is unloaded in baskets which are tipped over, and the coal falls down the heap.
2564. Where is that? At Kent-street. The coal is tipped from the baskets and kept rolling down. At Mortlake it is unloaded in skips holding about 11 cwt. The skips are tipped into a truck, and the truck is taken into the store and tipped on to the heap opposite to where the elevators are. If the coal is coming in quicker than we are using it, it is worked back from the heap.
2565. The coal could not, however, be much more broken up by the fall than it was before it went into the store? I do not think it could be. It is small coal, and in some cases nearly all dust that we get.
2566. Do you notice whether it does get broken up by that extra fall? I take extra precautions not to break it up.
2567. At Mortlake, I understand, the coal is more likely to be broken? Yes. In the olden days we used to allow it to fall as it liked, and when it fired I thought that had something to do with it; so I started casing the coal down, but we still had fires.
2568. It made no difference? No.
2569. Have you any reason to suppose that wet coal is more likely to fire than dry, or *vice versa*? I have no evidence; I could not say whether it had.
2570. You have no experience in that direction? No. It is a most difficult matter to say whether the coal that took fire was wet when it was put into the store.
2571. Do you take any precaution to keep the coal dry while you are unloading it from the ship? No. We have to take the coal as it comes. It may be wet when it arrives.
2572. Is it ever wet with sea-water? Never with sea-water; rain-water may get into the trucks.
2573. *Mr. Pittman.*] I understood you to say that at the Kent-street store the coal is partly uncovered? Yes; part of it is uncovered and part under cover.
2574. So that if water had an effect in aiding spontaneous combustion, the Kent-street storage should be more liable to spontaneous combustion than the Mortlake? It has had a thorough saturation with rain. Coal has been out in the weather for twelve months, and must have had a lot of water through it, but it has not shown signs of heating.
2575. *President.*] There are several thousand tons in the store at Kent-street? I think there are 5,000 tons at the present time.
2576. Covered over? No; half covered over, and half in the open.
2577. Have you ever had the heap of coal in the open heat? No.
2578. At neither Kent-street nor Mortlake? No. We had some coal at Mortlake outside, but that never fired.
2579. How long does it take for the coal to heat after it has been put in the store? From six to nine months.
2580. It never heats in less time than that. It may heat, but not fire.
2581. Have you been able to connect the heating with the temperature at which the coal arrived? No; I have not noticed it; I have never tried the temperature of the coal at all.
2582. It was very hot last summer, and some thunder showers occurred, which, it has been said, seemed to have a disastrous effect on coal cargoes;—did you have any trouble about that time? No; our last fire was, I think, about March or April; the coal must have been in the store a long time before that. At that time I was getting coal in in very small quantities. As a rule, I like to empty the store once every twelve months, and I generally do that in the summer-time, which is our slackest time of the year, so that we should have had very little coal coming in.
2583. So that you were not in a good position to notice any extra trouble? Just so.

[Witness withdrew.]

Mr. T. Croudace sworn and examined:—

2584. *President.*] What is your name? Thomas Croudace.
2585. And what is your business? General Manager of the Scottish Australian Mining Company.
2586. What mines does your company hold? The Lambton, Burwood, and Durham. We have also copper mines both here and in Queensland.
2587. You represent the proprietors here? Yes.
2588. Have you had any trouble from any of your coal catching fire? No, not any, and we have sent some millions of tons of Lambton and a great deal of Burwood coal away, and have never had a single complaint of any kind as regards firing, or anything in connection with heating.
2589. *Mr. Pittman.*] And no vessels missing? None at all.

T. Croudace.
16 Oct., 1896.

2590.

- T. Croudace. 2590. *President.*] The New Lambton is a different mine? Yes.
- 16 Oct., 1896. 2591. Is that owned here? That is owned by Sir George Dibbs and the Honorable Alexander Brown.
2592. Have you had any trouble with the firing of gobs in your mines? None whatever.
2593. Or even of the heating of the gob? No. Sometimes at Burwood you may feel some of the slack or small coal, which is thrown back on the separation principle from what we call the round coal, slightly warmer under certain conditions.
2594. How many tons do you ship every year? The last year or two we have not been doing so much, on account of the strikes, but we used to average between 200,000 and 300,000 tons a year.
2595. Have you any idea as to why heating of coal on board ship has become more prevalent of late years? I think so.
2596. Would you kindly give us the advantage of your opinion on the matter? In the first place, I would remark, that many years ago (say) twenty or thirty, the system of getting the coal by the miners was much more perfect than it is just now. They used to undercut and nick up each side, and wedge down the coal, and only in narrow places used they to shoot. At that time the coal was much larger, much freer from being shattered to powder by the operation of blasting. During the last few years, ever since the 5s. a ton time, when we got men from all quarters of the Colony to become miners, we practically quarry the coal. The amount of undercutting or curving is not so properly carried out, and the nicking is very frequently entirely ignored, and blasting powder is used in its place. The consequence is—and I do not hesitate to say this—the coal is much more shattered and broken up. Where the coal is not absolutely small it is so cracked and disintegrated that it is more liable to be broken afterwards, when it passes from the screens into the waggons, and then into the very large vessels that are used nowadays to what used to be used, comparatively, a few years ago. We had not so many foreign ships then. A vessel of 1,000 tons was a large vessel, now we consider one of 2,000 or 3,000 tons quite an ordinary vessel, and only look upon one of 5,000 or 6,000 tons as a large vessel. You can see, in the first instance, where the lesser quantity was carried there was a much less depth of hold, and much less fall for the coal to be broken. Now, there is such an immense depth of hold in the larger vessels. I suppose I am within bounds when I say that from the top of the coamings there is a fall of 30 feet.
2597. *Mr. Pittman.*] What do you think it was in the old times? From 12 to 15 feet at the outside—the bigger ones. Vessels have undergone in themselves a difference in their construction. I maintain that the coal is much more broken up now, and begets a much greater quantity of very small coal than what it used to do, and it is only, so far as my knowledge goes, within the last few years that we have heard of any spontaneous combustion taking place.
2598. *President.*] How many years? I should say within six or eight years at the outside.
2599. It is not worth while going further back than that for the purpose of comparison? No. There was a sort of interval between the smaller vessels and the large ones, but even when carrying 1,500 to 1,800 tons we did not hear of any spontaneous combustion. With coal in large blocks, I should say it would be absolutely impossible, even with a 5,000 or 6,000 ton vessel, to have spontaneous combustion, but where you disintegrate and break up the coal and have nothing but small, there the power of oxidation is so rapid that you may have, and will have, a much more ready and simple means of obtaining spontaneous combustion. Then, again, it depends on the character of the coal, and the time at which it is shipped. Small coal is most favourable, also damp and hot weather, to spontaneous combustion. I do not exaggerate when I say that if in going along the wharf in hot weather you put your hand on an iron vessel you will take it off much more rapidly than you put it on. There is the heat to account for it, and the pressure of the immense body of coal, which, instead of being, as formerly, 10, 12, or 14 feet in depth, is now from 20 to 25 feet, and pressure in itself creates heat. I think these are elements all conducive to spontaneous combustion.
2600. You say the coal used to go out in larger pieces? Much larger; there was more large coal.
2601. Do you mean more large pieces, or that the largest pieces were larger than they are now? The larger pieces were much larger than now, and there was much more large coal than now.
2602. By falling down the hatchway of a ship are these large lumps not liable to be broken up and to pound the coal beneath them to a very great extent? That has been put to me before, but we always aim at getting large coal. If you commence with moderately small pieces of coal and drop them a distance they will break into, comparatively, much smaller pieces; whereas, if you drop a very large piece of coal it will break into two or three pieces, but still each of those pieces will be large coal.
2603. But, still, it will break the coal it falls on? Not so much as you may think. I am known as the "large and clean coal" manager in our district.
2604. Is not an ordinary principle of mechanics involved? You would think so; but if you will observe it carefully, I have no hesitation in saying there is a resistance of one large piece to another, which small coal will not give. As a corroboration of what I say, we have sent away some millions of tons from our Lambton colliery, and have never once known or heard a remark of heating or firing.
2605. Can you get the ships carrying your Lambton coal insured? Oh, yes.
2606. You have never any trouble about getting your coal insured? No; not up to the present time.
2607. Where does the coal chiefly go to? We have sent it all over the Colonies, and to San Francisco, Manila, India, China, and the west coast of South America.
2608. Do you know what rates you are paying for insurance to San Francisco? I could not tell you now. Our cargoes are generally arranged for in London.
2609. You do not know whether you are paying 30s. or 80s.? I would not like to express an opinion without referring to the office.
2610. They might be paying 80s.? I do not see why, when we have never had any complaint. Some of the collieries have had complaint. Some of them appear, so I am told, to produce a high demand for insurance.
2611. Have you ever had any trouble from faulty trimming of your coal cargoes? So far we have not had any fault of any kind.
2612. You have no control over the trimming? No; the captain of the ship attends to that.
2613. So that your coal is, practically, trimmed by the same trimmers as other companies' coals? Yes, entirely.
2614. You do not favour or influence captains to employ certain trimmers? No; I would not do such a thing.
2615. Your coal is absolutely loaded in the same way and trimmed by the same trimmers as other people's coals? Yes; absolutely the same.

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2616. The depth of vessels' holds has increased during the last twenty years? Oh, yes.
2617. Do you think the depth has increased during the last seven or eight years? I do. We have had larger vessels within the last two or three years than before.
2618. Do the large vessels have deeper holds than the small ones? Yes; as a rule.
2619. We have had several witnesses who say they do not? I mentioned just now about the different construction of vessels. Some are much larger, and have not such deep holds as others of the same capacity.
2620. Is the depth from the coamings of the hatch as great on some of the larger ships? The coamings are considerably higher in some of them. There was one in Darling Harbour, which, besides having about 18 feet of draught, was an immense height out of the water, and the moment I saw her I said we should not get that vessel under our cranes at Newcastle, and I telegraphed up to our shipping manager to say the vessel would be coming up, and to see what was best to be done; and they had a great deal of measuring and gauging before they could get her well under the swing of the crane.
2621. What cranes are they? The hydraulic cranes.
2622. The public cranes? Yes.
2623. In your opinion, the breaking up of the coal has a great deal to do with its heating? I state as an absolute fact, both gained from experience in the old country and from general knowledge, that coal will absorb much more rapidly the oxygen from the air when in a broken condition than it will when in a solid condition. If you are going to fire a gas retort you will not fire with big lumps, because the gas is not produced rapidly enough. Therefore, in a gasworks you will find they crush or break the coal up, or use unscreened coal, so that the gas may be given off rapidly and the work carried on freely.
2624. You mention the breakage at the mine;—I take it, from our point of view, that is immaterial, because the small coal is sifted out at the screens? No; the men use much more powder, and whilst you imagine that (say) the 2-foot cubes are solid, they are so shattered by the force of the powder that at the next fall they separate into a dozen different pieces.
2625. I presume you agree that the chief smashing occurs in falling down the hold? Yes.
2626. Supposing some means were adopted to first fill up the hatch carefully, so as to form a heap there, would the coal be so much broken up afterwards in the loading? If some pains were taken with the loading of the vessel, instead of rushing so many hundreds of tons in at the shortest possible time, much better results would be given. If any machine or slides were used liberally and properly, and the waggons lowered where the hatchways were big enough to allow the waggons to go down, there would be much less breakage.
2627. Supposing that upon the recommendation of this Commission, or from other reason, the coal first put in the vessel was lowered down the hold so as to form a heap, that would, I presume, add to the expense somewhat? I do not think very much.
2628. Who would pay for that expense? I suppose the ship.
2629. Supposing it cost 1d. a ton to lower down the hatchway the first 500 tons of a 2,000-ton cargo, would you be prepared to reduce the price of coal to cover that expense? At the present moment the price of coal is so low that any attempt to put even the small sum of 1d. upon it would have to be resisted. We are working the coal purely for the benefit of those who are employed.
2630. Are you not paying a dividend? No; we are not—not for some time past.
2631. You cannot afford to be charged another 1d. a ton? We could not. Competition is so keen, and some inferior coal is produced, and coal is obtained from abroad, that Newcastle will have trouble enough to hold its own.
2632. Am I to understand that the coal trade would be ruined by the imposition of 1d. a ton? I could not say that, but I do say that the proprietors cannot afford to pay it. We pay already a most exorbitant price for haulage and the shipping of the coal. We pay 9d. at one colliery and 10d. at another for round coal; small coal is subject to 20 per cent. less. We provide our own waggons, and the Government hauls and breaks them, and we have to repair them, and we provide half the railway.
2633. I understood you to say that if some pains were taken with the loading the result would be better. Everybody will agree with that, but who is to meet the extra expense. We wanted to hear your views from the position of a proprietor, whether, supposing a cargo could be made practically safe at an expense of 500 pence for a 2,000-ton cargo, it would not be worth the while of a proprietor, in view of the extra benefits that would accrue, to be prepared to meet that extra expense? The custom has been, for all the years I have known, for the ship to bear the expense of trimming. The Government do the haulage and shipment from the collieries, and we are compelled to use the Government cranes; and I contend, beyond any doubt, that the present price is exorbitant, and will not allow of anything being charged on the coal proprietors. I do not think the cause of the loss of all these ships is due to spontaneous combustion; I think that has been much exaggerated. I think you will find, in all probability, it will arise as much from indifferent or bad trimming. I think what you are aiming at could be met without any very great expense at all by the Government taking more care to have the waggons lowered on to the coamings of the vessels, and then the trimmers to have shoots or any other arrangements they like to adopt for taking away the dead fall of the coal.
2634. Do you sell your coal to a foreign customer carriage paid? We sell it f.o.b.
2635. He has to pay the freight? Yes; and all the other expenses. If we send the vessel away on our own account, then, of course, we pay the freight.
2636. If you put the price up to a foreign customer something under a half-penny a ton to meet the extra expense of loading, is that going to drive the trade away from Newcastle? I would not say that. We would rather have nothing to do with the trimming of the coal.
2637. Nobody could assert that an extra half-penny a ton would drive the trade away from Newcastle? No; it would not. It is my individual opinion that it would be a great improvement if the Government would take over the trimming and provide proper trimmers—men accustomed to the work—and a man to supervise these trimmers. The captain of each vessel would have to control the work in regard to the stability of the ship. The Government foreman or boss trimmer would see, or undertake to see, that each vessel was properly and thoroughly trimmed. I may tell you it is about as hard an employment as a labouring man can adopt, and is more disagreeable than coal-mining. In the summer months it requires a strong man to remain in the iron and steel vessels. Trimmers ought to be well paid, and, of course, justly treated. I think that will give much more security to vessels than what we have had.
2638. Your recommendation is that the Government should go into business as master trimmers? That the Government should simply complete a certain portion of the work.

2639.

- T. Croudace. 2639. Not do it all? They haul and ship the coal for the proprietors, and we pay a very high rate for that. I think that should be extended by the Government putting trimmers into the vessels, and having a foreman trimmer to see that the work is done.
- 16 Oct., 1896. 2640. In other words, they should go into business as stevedores? Yes, practically that is so. I think it would give greater security, and there would be less strikes.
2641. I suppose the way in which strikes would be prevented would be by paying the men better wages? I do not know that, because we had as many strikes under high wages as under low wages in the coal trade.
2642. Do you imagine that if the Government took up the matter of trimming the cost would not be any higher than at present? The more middlemen you have in any business the more the cost, and you would do away with the middleman. Trimming is purely a work of manual labour, and I think trimmers should be a well-paid class of men.
2643. Do you consider the trimming would cost more or less under the system you propose? I certainly should think it would not cost more, and probably it would cost less.
2644. You think that out of what is now the stevedore's profit the inspection could be kept up and the whole machinery of a Government department worked? I do.
2645. Is it a matter of experience that work is done by the Government more cheaply than it is by private individuals;—can you mention any instance where Government work is done more cheaply? No; there is too much red-tapeism about Government work; but here I do not propose to have any red-tapeism in connection with it. I think if you consider the matter it will bear very considerable force. A captain now either calls for tenders or asks an agent what stevedore he would recommend for trimming his vessel. Supposing he calls for tenders, there is competition among the stevedores, and they may take it at too low a price. I have been a large employer of labour for many years now, and I have found that too low a contract is the worst thing you can enter into. The men will scamp the work. I maintain that a fair price ought to be paid for trimming to ensure it being efficient, and it will pay a shipowner to do it. All the Government would do is to simply have the men there to move from one vessel to another, with a foreman trimmer amongst them, who would get 1s. or 2s. a day extra for supervision. The captain would not be freed from his responsibility, but he would still have to control the trimming so far as the stability of the ship was concerned.
2646. What price should the Government do the trimming at? I should think 3d. a ton. Some vessels are much more difficult to load than others, therefore would require more. Some would load 1,000 tons in half the time that another would.
2647. Are the ships now loaded at 3d. a ton? I think many of them.
2648. Are they ever loaded for less than that? They may be.
2649. Supposing the Government established a general rate of 3d., those paying less now would then have to bear an additional expense? Yes; but I believe they would get much more efficient work done.
2650. Then who is to pay this difference? The ship.
2651. Are there large profits made in shipping now? No.
2652. They are very small profits? Yes.
2653. Competition has run the business down so that there is hardly any margin, as in your own business? Yes.
2654. You cannot afford to pay any more, because your profits are so small? Yes.
2655. How then can the shipowner? Because he could be assured of much more efficient trimming.
2656. Would he be able to recoup it by reduced rates of insurance? I think so.
2657. Have you any idea of the rates that are charged on coal to San Francisco? I could not say unless I had the office-books here.
2658. The chief trouble has been caused by the shifting of cargo, in your opinion? Yes.
2659. You believe that has been due to the fact of the coal not being carefully trimmed, possibly through the work being got over as rapidly as possible? I do. It would be unfair to assume that the vessels missing have been burnt. You have a clear instance of some listing over when they came back to port through imperfect trimming.
2660. *Mr. Pittman.*] Can you say how long ago it is since you had a cargo to insure for foreign parts? Our business for foreign parts is done in London.
2661. Was the insurance effected in London? I think it would be effected in London.
2662. Do you find any difficulty in getting insurance here? We very rarely charter ships here. I may say we never do.
2663. Do you know that it is a matter of impossibility to insure coal here at the present time? Some coal I do.
2664. Any coal from Newcastle? I do not know that it applies to any coal.
2665. You stated that the haulage and other charges in connection with the shipment of coal were exorbitant? I did. We have been complaining to the Railway Commissioners for months or years past.
2666. Is that merely an impression, or have you gone into a calculation, basing the charges upon the interest on the capital expended in the work? I have made a calculation of the cost of a locomotive, the keeping her in order, the time of the engineer, fireman, and guard, and that of the pointsman at the junction of our private lines with the Government lines, the weighman and officials. I have taken the actual cost at which the contract is let by the Government to the crane contractor, and as far as possible tried to get what would be a fair proportion to put to terminal charges.
2667. Did you allow anything for the cost of reclamation at the Dyke? The terminal charges include the formation of the Dyke, the erection of the cranes, and the sidings.
2668. What do you suppose the reclamation cost? I do not think I could say offhand.
2669. *President.*] Did you know at the time you made your calculation? I got some rough estimate. I think it was laid before Parliament. I know private firms are doing their shipping at a great deal less cost—the A. A. Company and J. and A. Brown at Mimini.
2670. Is there anything to prevent your using your own shoots? We bought some land for the purpose and the Government would not allow us to have them. We were stopped by an Act.
2671. The Government forced you to use their cranes? Yes; we bought the land specially, and it has been lying idle ever since. It is a narrow strip, 3 or 4 chains wide and about 20 chains long, on Bullock Island.
2672. Your object was to load your own coal? Yes.

2673. Was the object of the Act to compel you to use the Government cranes? That was practically it. The late Mr. Moriarty said it would never do to give up such an important interest as the coal trade; it was highly profitable. We asked for a reduction in Mr. Goodchap's time.
2674. Whatever is done, I presume the expense will ultimately fall upon the customer? Not always. Sometimes you have to bear an expense that the customer does not bear.
2675. The general effect of an increase in expense would be to make the coal dearer to the customer? Not if there is a very strong competition moving.
2676. I understand you are making nothing out of the business now? We are not.
2677. Suppose another 1d. a ton were put on, would the customer bear that or you? I should say, at the present moment, the company would bear it.
2678. You would then be losing more money than you do now? Yes.
2679. Why do you supply coal if you are losing money? Supposing I managed the colliery as an independent man, I would not hesitate to stop selling the coal at an unprofitable price, but it is different where there are more than one or two controlling powers. Once in the trade you cannot well retire from it, but hold on in the hope that it will get better.

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[Witness withdrew.]

Mr. W. G. Dixon sworn and examined:—

2680. What is your name? William Gordon Dixon.
2681. And what is your business? General Manager for the Alliance Marine and General Assurance Company (Limited).
2682. Do you underwrite coal cargoes? I have been doing so.
2683. Do you do so now? No.
2684. When did you give up doing so? Just recently.
2685. How long ago? About two or three months ago.
2686. Before the appointment of this Commission? Yes.
2687. Was it in consequence of the appointment of this Commission? No, it had nothing to do with it.
2688. Do you underwrite ships carrying coal? Not if I can avoid it.
2689. I suppose it was a pretty good business before this trouble occurred, was it not? I cannot speak previous to 1892. I may tell you our loss ratio since 1892 is 170 per cent.
2690. A loss ratio of 170 per cent. would mean that you paid nearly 1½ times your premiums in losses? Yes; if our premiums were £1,500, we would have paid £2,500 or £2,600.
2691. Since 1892 this has occurred? Yes; from 1892 up to four or five months ago.
2692. So you went out of the business simply on account of the losses? I never cared for the business, but insurance offices are in this position;—if you have a client who has a lot of good business, and he brings along a coal-ship, you are bound to take it. I put the rate up, and was getting 4 and 5 per cent. They grumbled at it, and I said, "I should be glad if you will place it elsewhere," and they got it placed in Frisco at a much less rate.
2693. You were charging 4 and 5 per cent. to San Francisco? Yes.
2694. How much does that come to per ton? I have never worked it out.
2695. *Mr. Pittman.*] When you stopped insuring cargoes, did you do so altogether, or were you prepared to insure cargoes from some collieries and not from others in Newcastle? There was one colliery for which I was charging a higher rate than for the others. I charged all Newcastle coal 4 per cent.; southern coal, except the Metropolitan, 3 per cent.; and there was one colliery in Newcastle for which I charged 5 per cent.
2696. *President.*] The Wallsend? Yes.
2697. *Mr. Pittman.*] Are you prepared to insure coal cargoes from some collieries, like the Lambton, for instance? No; I still prefer to be without cargoes altogether.
2698. *President.*] You would not make an exception in favour of Lambton coal? No; there is nothing I know of to lead me to do so. Coal cargoes from an underwriter's point of view are rather inferior to other cargoes, in this way: If the vessel gets into any trouble, and there is a general average and a towage of £2,000, the coal cargo is of such low value that it comes very heavy on the insurance in the proportion we have to pay. The coal cargo may be valued at £2,000 only, and the cargo, the ship, and the freight have to contribute ratably towards the expense. The value of the cargo being so low it makes the policy for £2,000 bear so much more than in the case of a ship with a general cargo worth £100,000. [*Witness handed in a list of coal-laden vessels from this Colony to which casualties had occurred since 1888, prepared in the office of his company.*]
2699. We shall no doubt make recommendations with a view to increasing the security of both the ship and cargo. In the event of our doing so, would you be prepared to make any difference in the rates that you would charge on ships adopting the measures which we laid down, or would you wait to see how they turned out? Are you speaking about the shifting or the heating?
2700. Both of the shifting and the heating of cargoes? Provided I were satisfied that proper steps were taken—that shifting-boards were put up and the cargo properly trimmed—if I had to take coal cargoes in connection with other business, I should be inclined to make a reduction.
2701. You would not take the risks as a general thing? No; because our experience has been so fatal with these coal-ships.
2702. If we had to recommend an expense it would strengthen our position, if we knew that that expense could be recouped by a reduction in insurance rates? I should certainly be inclined to make a reduction on the rates I have mentioned if these proposals were carried out, but the bulk of the cargoes are insured in other parts of the world. Up to 1894 I was of opinion that the shifting of cargo was the prime cause of all the vessels being posted missing, but immediately after that there were posted as missing three vessels which had shifting-boards—the "Cumbrae," the "Florence," and the "Menai," and then came a long list of vessels with cargoes on fire, or which had heated. There have been twelve to date since September, 1895. The "John Ena" was the first; I had her, and I had the "Alexandra" and the "Brablock." In addition to these twelve, four others were posted as missing, the cause of loss being unascertainable. I am now forced to the conclusion that firing has been the primary cause of the vessels being posted as missing, and that the shifting of cargo has been a secondary cause.

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2703.

- Mr. W. G. Dixon. 2703. *Mr. Pittman.*] You do not regard the shifting of cargo as such an important matter? I do consider it a very important matter, but I think, if the facts were known, the bulk of the vessels missing would be found to have been lost by fire.
- 16 Oct., 1896. 2704. As an insurance manager, you are inclined to regard the losses from shifting of cargo as less numerous than those from fire? Yes; I do so from the experience I have had myself; we have known of so many lately being on fire. In the recent case of the "Patrician," it was the want of shifting-boards that caused her loss. She was going to New Zealand, and the inquiry there found that that was the cause. I will show you how bad these ships are for us. The "Alexandra" and "Brablock" were both bound for 'Frisco, and fires were discovered when they were near their destination. They both got into port all right, with a certain amount of coal burnt, but the loss was 61 per cent. on the "Alexandra," and on the "Brablock" it was 25 per cent.
2705. *President.*] Does that mean the loss on the percentage of the whole value? The percentage of loss on the cargo. There were only about 20 tons of coal burnt, the rest was all absorbed in expenses in putting the fire out and scuttling the ship, and pumping the water out of her, and from selling the coal at damage value. With an ordinary cargo it would not have been nearly so heavy.

[Witness withdrew.]

Mr. T. J. Watters sworn and examined:—

- Mr. T. J. Watters. 2706. *President.*] What is your name? Thomas Jolly Watters.
2707. And what is your business? Marine insurance business.
- 16 Oct., 1896. 2708. You are the manager of an insurance company? Acting general managing underwriter.
2709. Of what company? The Sydney Lloyds.
2710. That is an ordinary insurance company? Yes.
2711. It is not like London Lloyds? It is after the same principle. It is an underwriting body with a number of members who sign for each risk they accept, and they share in equal proportions the risk and the profits.
2712. It is different in that respect to an ordinary insurance company in which a corporate body undertakes the underwriting? Yes; the whole of the members join in, one cannot stand out.
2713. They are obliged to underwrite? Yes.
2714. And for the same price? Yes.
2715. With London Lloyds, I think, it is optional? Yes.
2716. You are half-way between a company and London Lloyds? Yes.
2717. Do you do any business in insuring coal cargoes? Not a great deal.
2718. Do you insure coal-ships? Very few of them.
2719. Used you to insure them? No; we never did.
2720. You do not like the business? No; we do not like it.
2721. What is the reason of that? On account of having so many losses in the trade, and through other companies finding the business was not paying them. My late principal was opposed to those risks, and I follow in his footsteps.
2722. For how many years have you held off coal cargoes? We have not underwritten them except in a few instances.
2723. Since when? Since Sydney Lloyds started in 1882.
2724. From the inception of the business you disliked coal risks? Yes.
2725. And you do not take them unless you are obliged to for the sake of other business? We would not take them.
2726. Supposing you were obliged to insure a cargo to San Francisco, what rate would you charge? At the present time we would not charge less than 60s. per cent.
2727. Would you make any difference according to the colliery from which the coal came, or would you charge that for all coal? We would charge that for all. I do not think we would make any difference. That is a matter that would be laid before the Committee for its decision.
2728. In the event of the Commission making some recommendations to obtain greater security for the ships against both the shifting and firing of cargo, and steps being taken to ensure those recommendations being carried out, would you as an insurance manager be prepared to take coal risks at a lower rate, or would you wait to see how the recommendations turned out? We would wait.
2729. It would make no immediate difference to you? No.
2730. *Mr. Pittman.*] Your action in this respect would be largely dependent on the fact that you do not care about this class of business? Yes; that is just it. We would not go on with it unless we knew absolutely that it was paying other companies.
2731. If you were in the habit of taking this class of business, the competition would force you into reducing the rates? Yes, it might do so in that case. In one or two cases we have to take the risks. Some of our shareholders or members of the association at times ship coal. We do their other business, and therefore have to take this. We had one case lately, the "Patrician," that was lost, but we would rather have been without the risk.
2732. She had no shifting-boards; did you not satisfy yourselves that she had shifting-boards;—you have a surveyor? Yes.
2733. I suppose he reported that she had not shifting-boards? Yes; it was a short voyage—only to New Zealand; the season of the year was good and everything was in her favour. In cases like that many vessels go away without shifting-boards.
2734. Have you come into possession of any information in regard to heating of coal cargoes that might be of assistance to the Commission? No; I have not.
2735. With regard to the shifting of cargo, have you had any experience beyond that of the "Patrician"? No; that is the only one.
2736. Was the "Patrician" lost through want of shifting-boards? I do not know. She met with very bad weather.
2737. That was the finding of the New Zealand inquiry? Stress of weather, I think, principally.

[Witness withdrew.]

Mr.

Mr.
W. A. Gibb.
16 Oct., 1896.

Mr. W. A. Gibb sworn and examined:—

2738. *President.*] What is your name? William Alexander Gibb.
 2739. And your business? Insurance manager.
 2740. Have you been in that business long? About twenty-seven years.
 2741. Do you do marine insurance business? Yes.
 2742. Do you underwrite ships carrying coal or their cargoes? Occasionally.
 2743. Do you like the business? No; I do not like the business of a certain class.
 2744. What class do you not like? I do not care for vessels over 1,000 tons.
 2745. You think they run a greater risk? I think so.
 2746. Is that the result of experience in paying losses? Fortunately, I have escaped paying losses, and I think the reason of that is through taking care in choosing my risks. I object to large vessels on account of the loading.
 2747. What is wrong with the loading? They tumble the coal down the batches. I may be wrong in my opinion, but I think the loading of the coal from such a height causes a great deal of dust, and that accumulates in the biggest part of the vessel, and when it is closed up it may generate gas and cause the loss of the vessel. I also take fire risks, and I know it is the dust in a flour mill that we look upon as a great danger. Coal vessels are not loaded close up, and there are usually vacant spaces in her where dust can accumulate in considerable quantities.
 2748. Are you more afraid of the cargo firing or shifting? The shifting of cargo is the cause of a lot of the trouble, I believe. I would not take a vessel unless she had shifting-boards.
 2749. Do you think the trimming is sufficiently well done? I think so. I have inquired into it, and I am satisfied that the trimming is done. It is not in the trimming. I fancy it is in the cargo itself and the way it is put in. If they have not shifting-board, it is a very considerable risk. I find that in the space of seven years fifty-two vessels in the coal trade have had accidents of one sort or another. Twelve of those we know have been on fire.
 2750. During the last seven years? Yes. There are also nineteen of them missing, and eighteen of the nineteen were large vessels, considerably over 1,000 tons.
 2751. Are the large vessels more likely to be affected from the shifting or the heating of the cargo? It is the cargo heating, in my opinion, to which they are more liable. They have more vacant space for this dust to collect. They are likely to have more dust, because the hold of the vessel is so much deeper, and the throwing down of the coal a distance of something like 30 feet causes dust.
 2752. Are the ships deeper now than they were eight or ten years ago;—have the coals further to fall? Oh, yes; of course. A vessel of 1,000 tons has not the depth of hold of one of 1,500 or 2,000 tons.
 2753. *Mr. Pittman.*] Do you know that as an absolute fact? I know that as an absolute fact. I have been long enough in marine insurance to know that a vessel of 1,500 tons has a deeper hold, as a rule. Of course, you find exceptions when a vessel is built with a light draught, but, as a rule, a vessel of 1,500 or 2,000 tons has a deeper hold than a vessel of 1,000 tons.
 2754. It has been said that such is not the case? If I had a Lloyds' register I could point it out to you. I have made inquiries, and find at home where they load coal they use Spence's distributor to avoid the breaking of the coal.
 2755. *President.*] Would it make any difference if the coal were loaded with the use of that or any other reasonably good distributor? I would be inclined—in fact, I would take lines in these large vessels if the coal were put in that way. I believe, myself, that the cause of the loss is more from firing than the cargo shifting.
 2756. *Mr. Pittman.*] Do you make any difference in regard to certain coals at Newcastle? I would treat them all the same. There is a good deal said about one particular mine, which, I think, is rather unfair.
 2757. Do you know of any mine in Newcastle that is so exceptionally good that you would insure the coal from it without hesitation? I should not make any exception for Newcastle coal; the only exception I should make is in favour of the South Coast coal.
 2758. You prefer it to that of Newcastle? Yes.
 2759. *President.*] Supposing the Commission recommended some course of treatment in the loading and general shipment of the coal that would, in their opinion, minimise the dangers to which these cargoes are liable, would you be prepared to reduce your rates if those provisions were carried out, say, under inspection, or would you prefer to wait to see how the matter turned out? We have our opinions, and they might not be at all altered by your recommendations. If I thought, after seeing your recommendations, that they were in the right direction, I would be prepared to take lines, and I would take them at a reduced rate. I might not take as large a line in these big vessels as in the smaller ones, still I would, to the extent of assisting the trade, by giving the thing a trial. If your recommendations were carried out, I certainly would be prepared to do that.
 2760. *Mr. Pittman.*] Would you be prepared to extend your insurance to larger vessels? Yes; I would, if your recommendations were carried out.
 2761. *President.*] And you agreed with them, of course? Exactly so.
 2762. Providing you agreed with them, and you were assured they would be carried out, you would not wait to see the result? No; I would make a start at once, and, if they took the trouble to carry out what was recommended, I would make a concession in the rates, because the rates now are very high for the insured and very low for the insurance company.
 2763. Supposing you had to insure a cargo to San Francisco, what rate would you charge? At present, from Newcastle, we get 80s. That is double what we got before.
 2764. You do bad business even at that? I have not done any bad business. I have had the good fortune never to have paid losses. I have never gone into large vessels. As soon as they were offered and I saw the tonnage, I said, "No; shifting-boards or no shifting-boards." I certainly would go in for any of these large vessels if they carried out the recommendations of the Commission. I qualify that by saying I would like to see the recommendations to know whether I could go the whole way.
 2765. What would a substantial reduction mean in your case? I should certainly go in for a reduction of 1 per cent. Before any trouble occurred we got 40s. from here to America, and they doubled that.
 2766. *Mr. Pittman.*] I suppose the rate would really settle itself by competition, would it not? It would settle itself by competition if the trade was shown whether it was paying or not. I would be prepared, on the recommendations of the Commission being carried out, to make a reduction of 1 per cent. If after four or five years other companies found the business was a good thing, they might force the rate down lower still.

[Witness withdrew.]

Mr.

Mr. C. Danvers sworn and examined:—

- Mr. C. Danvers. 2767. *President.*] What is your name? Charles Danvers.
 2768. And what is your business? Manager of the North Queensland Insurance Company.
 2769. Do you do a marine business? Yes.
 16 Oct., 1896. 2770. Do you underwrite coal ships? We have been doing so for the last ten years.
 2771. Do you do so now? Yes, at a rate.
 2772. What is your rate? It depends on the class of ship. A vessel built in 1868 I would write at 2 or 3 per cent. cheaper than I would a modern tank of about 2,000 or 3,000 tons. The rates range from 3 to 9 per cent.
 2773. Nine per cent., I presume, is absolutely prohibitive? Yes.
 2774. Have you ever had an insurance at 9 per cent.? In two cases I have got 9 per cent.
 2775. What for? One was in the case of a big ship, whose name I cannot remember now, and there was a small line in the case of another large one.
 2776. It was not a big matter? No, it was not. She was a big ship with an enormous cargo.
 2777. Of coal? Yes.
 2778. *Mr. Pittman.*] Did she get into port? I do not think she has arrived yet.
 2779. *President.*] Where was she going to? The west coast of South America.
 2780. Is that considered a better or worse risk than with a ship going to Manilla? I consider it a far worse risk.
 2781. Why? It is a rough voyage; to Manila would be a smooth voyage.
 2782. It is not so hot—do you mean that? I have no objection to the heat at all.
 2783. Are you chiefly afraid of the heating or the shifting? The shifting.
 2784. You do not trouble about the heating very much? The heating never troubles me. I have never believed that missing vessels have fired.
 2785. For a good ship of 2,000 tons going to San Francisco laden with coal, what would you be prepared to charge? Five per cent.
 2786. Supposing the Commission were able to make some recommendations for the better security of the cargo and better provision against fire, and there was a system of inspection to see that those recommendations were carried out by ships loading at the port of Newcastle, would you be prepared then and there to make a reduction in the rates, or would you prefer to wait to see the result of the recommendations? If it was proposed to insure a coal cargo, and the client could produce to me a Government certificate that the coal was loaded and trimmed in a proper manner, and that proper shifting-boards were used, I would take it at half rates.
 2787. That is, you would reduce your rate of 100s. to 50s.? Yes.
 2788. *Mr. Pittman.*] 100s. is high, according to the evidence we have had? I have stuck out for my own rates, and if I could not get them I would allow the business to go. I have been able to get my rates on coal risks.
 2789. *President.*] Is there anything you would like to lay before us? I do not think so. My opinion is that one of the main causes of the loss is from the way in which the coal is put into the ship. The height the coal falls is too great.
 2790. The height affects the heating? We have to take that also into consideration.
 2791. That is not the stowage? The stowage is the chief thing. Some firms in Newcastle, I know, put on men to trim who know nothing about it.
 2792. Did the appointment of the Commission have any influence on you as regards the rates you charge? No; I have charged these rates for the last twelve or eighteen months.
 2793. It made no difference? It made absolutely no difference at all.
 2794. Are you a member of the Underwriters' Association? Yes.
 2795. You have a surveyor at Newcastle? Yes.
 2796. He gives you information about shifting-boards, but nothing else? He simply advises whether shifting-boards are put into the ship or not.
 2797. *Mr. Pittman.*] And generally as to the state of the hull? Whether she is a first or second class risk.
 2798. *President.*] He does not report on the trimming at all? I do not know that he is competent to report on the trimming.
 2799. Would it not pay insurance people to have someone to report on the trimming? The rates all round are too low, and we should have to get an expert to report on the trimming.
 2800. Trimming seems to be a simple matter? No, because vessels are built so differently, and require to be trimmed differently.
 2801. Your object is to have a good risk, and yet you only examine it on one side—why do you not examine it from all sides? I think it is simply because our man is not competent to give a report upon the trimming.
 2802. In your opinion, are big ships worse risks than small ones? Yes; especially the vessels built the last four or five years—big flat-bottomed ships.
 2803. Why? Some of them are so very stiff that they have to carry their coal higher up in the vessel, and not having so deep a keel they are more liable to capsize when the cargo shifts. They have perfectly flat bottoms, while the old-fashioned ships have deep keels, and, therefore, a greater hold on the water.
 [Witness withdrew.]

WEDNESDAY, 21 OCTOBER, 1896.

[The Commission met at 2:30 p.m. at the Chief Secretary's Office, Sydney.]

Present:—

PROFESSOR RICHARD THRELFALL, M.A., PRESIDENT;
 And EDWARD FISHER PITTMAN, Esq., A.R.S.M.

Mr. L. R. Mitchell sworn and examined:—

- L. R. Mitchell. 2804. *President.*] What is your name? Leslie Ronald Mitchell.
 2805. And what is your business? I am the manager of the China Traders Insurance Company.
 21 Oct., 1896. 2806. Do you insure ships? No, not sailing ships; we insure the hulls of steamers.
 2807. Do you insure the cargoes of sailing vessels? Yes.

2808.

L. R.
Mitchell.
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2808. Do you insure coal cargoes? Yes.
2809. At a price? Yes.
2810. Do you make a distinction according to the port to which the vessel is sailing? Not so much now as we used to do when the rates were lower. Previous to the casualties which occurred early this year the rates were lower than now, and with the increased rates we do not mind so much where they go to as we do in regard to the coal they load.
2811. Do you make a distinction according to the coal? Yes, as regards the colliery from which it comes.
2812. What is the lowest insurance rate you charge on any coal? The lowest rate we charge is 3 per cent. on sailing vessels.
2813. For what coal do you charge that? Southern—not Newcastle.
2814. You do not charge as low as 3 per cent. on Newcastle coal at all? No; the rate we would charge on Newcastle coal would be more than that. Three per cent. is the rate for Southern coal only.
2815. What is the rate for Newcastle coal? The current rate here is 4 per cent. for the best Newcastle coal.
2816. Would you make any exception in favour of the Lambton Colliery? Yes, I would.
2817. What rate would you charge on Lambton coal? That is what I call the best coal; the rate would be 4 per cent.
2818. What would you charge on Wallsend coal? I prefer not to write Wallsend coal at all. The ordinary rate is 5 per cent. for that coal.
2819. The many more accidents that have resulted to ships carrying that coal may, probably, be attributable to the larger trade, and not to any difference in the coal itself? If we could get an insurance on the whole of the cargoes it would not be so serious a matter for us.
2820. If they do not lose a greater percentage of cargoes than other collieries you ought not to charge different rates,—is that not so? We look at the fact that the greater number of cargoes that have burnt spontaneously, as we think, have come from the Wallsend Colliery; that being the case, we naturally charge them higher rates than we would those collieries whose coals have been free from spontaneous heating.
2821. Do you attribute the accidents chiefly to firing or to shifting of cargoes? You will understand that we are guided greatly by the London rates, and, for instance, if I can get a premium paid me cheerfully at 4 per cent. I would not do the business for 3 per cent. If they fix a certain rate in London we follow that as far as we possibly can. Of course, you must not take the fact of my charging what I can get as altogether my opinion. I am simply trying to get as much income for my company as possible. If other companies combine and say 5 per cent. is a fair rate for Wallsend coal, and do not take it at less, and 4 per cent. for other Newcastle coals, and 3 per cent. for Southern coals, that may not express my opinion, although I follow others who get those rates. I would be foolish if I did not do so.
2822. Do either you or your principals attribute the losses mainly to heating or to shifting of cargoes? Losses have occurred from both causes; we know that.
2823. Are you, or the people whose views you represent, more afraid of the shifting than the firing? We are more afraid of the shifting than the firing; I admit that.
2824. This Commission may make some recommendations both in regard to providing against the shifting of cargoes and against spontaneous combustion, and in the event of a guarantee being given you that those recommendations were carried out (say) under inspection, would you be prepared to reduce the rates at once, or would you wait to see what resulted? The rates would come down at once, provided the Government were to take that step.
2825. What would you consider a fair reduction—from 4 per cent. to 2½ per cent.? Yes; I consider 2½ per cent. a fair thing. I have written risks to the extent, perhaps, of 100 within the last three years. The rates got for the majority of those risks were considerably lower than the present high rates; they were more like 2 or 2½ per cent., principally to America, where most of the coal is exported. I, perhaps, have been more fortunate than my neighbours. My results show a profit of 66 per cent. on that business within the last three years over an average on 100 ships.
2826. I can take it that you or your company would be inclined to make a reduction in the rates in that event? Quite so.
2827. And it might amount to as much as a reduction to 2 per cent.? Yes.
2828. *Mr. Pittman.*] You said the rate on Southern coal was now 3 per cent.;—what was the normal rate of insurance on Southern coal? As low as 30s. per cent.
2829. Has the rise in the insurance rate on Southern coal simply occurred on account of the firing of Newcastle coal? Absolutely; and also through the fear that people entertained when the explosions occurred with the Metropolitan coal. When I spoke of Southern coal you will clearly understand I did not include Metropolitan coal; that is practically uninsurable at the present time.
2830. So that Southern coals have had to pay a higher rate lately simply from the fact of Newcastle coal firing? Yes. Many companies have had instructions from head office to decline coal risks altogether.
2831. *President.*] How long ago is that? Within the last six months.
2832. Not on account of the appointment of this Commission? Oh, dear, no. I might say I have always made it a *sine qua non* in insuring coal that shifting-boards are placed in vessels of more than 1,000 tons. I had one experience—the “Caradoc.” She had to put back in distress; she met with bad weather, and was leaky. When the captain came into port he said that if it had not been for the shifting-boards he was satisfied the vessel would have been lost, she heeled over so much. The rates that I have given you are the rates I charge. I have had to write risks at lower rates, but that was in consequence of having given a cover before the strike took place in Newcastle. I made a fixed arrangement at certain rates and the assured held me to the terms of my cover. If it had been new business I would have charged the rates I have said.

[Witness withdrew.]

Mr. T. M. Tinley sworn and examined:—

2833. *President.*] What is your name? Thomas Matthew Tinley.
2834. And your business? Manager of the United Insurance Company.
2835. Do you insure coal cargoes? We have done very little with coal cargoes within the last twenty years.

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- T. M. Tinley. 2836. Do you insure hulls? Yes.
 21 Oct., 1896. 2837. Do you insure the hulls of coal-laden ships? We have, occasionally. There are so few in the trade which are owned here.
 2838. So that you really have somewhat little business with coal cargoes? Comparatively little. We gave it up twenty years ago; but that was not due to the same causes as are operating now. We have taken lines occasionally, but very few.
 2839. It is rather out of your general line of business? It has been of late.
 2840. You do not feel inclined to continue it again? I do not mind, if it will pay at a price, and after we gain by the experience of others.
 2841. What price would you charge now if you had to insure a coal cargo? We have taken one or two lines at what is supposed to be the current price—4 per cent.
 2842. Why do you say "supposed to be"? Because they can get it if they ask for it. So few are inclined to take the business.
 2843. You mean there are so few offices prepared to do it at any price? Yes.
 2844. In business, you have, occasionally, to take such risks in connection with other matters, whether you like it or not? Sometimes we have; but it so rarely happens that I can hardly call it a practice or a rule.
 2845. How many hulls do you insure in the course of a year carrying coal? Not more than, perhaps, three or four. They are locally owned, and, strange to say, they are never lost carrying coal.
 2846. Those are only the local boats? Yes.
 2847. Not deep-sea boats? They are owned at this port.
 2848. Where do they carry the coal to? They may go to America or to Mauritius.
 2849. Suppose the Commission made recommendations for the better stowage of coal cargoes, and for providing against spontaneous combustion, and supposing some guarantee were given that those recommendations would be carried out under inspection, would you be prepared to reduce the rates at once, or would you wait to see what happened? I could hardly say. It is just what my Board would determine. It is more than probable that we should be inclined, if we thought there was a greater prospect of cargoes going better, to take lines. We would not take them indiscriminately.
 2850. You discriminate somewhat between the coals now, do you not? We do now, as a rule. I do not mind taking wooden vessels carrying coal; I think they are better for coal carrying than the iron ones.
 2851. Are the locally owned vessels wooden ones? Yes. There are very few in the trade. Nearly all the locally owned vessels have passed away.
 2852. *Mr. Pittman.*] Do you discriminate between the coals from different collieries? We should probably do so only from the experience of others. We should be guided by them.

[Witness withdrew.]

Mr. W. H. Rowsell sworn and examined:—

- W. H. Rowsell.
 21 Oct., 1896. 2853. *President.*] What is your name? William Henry Rowsell.
 2854. And what is your business? I am the manager of the Globe and Mannheim Insurance Companies.
 2855. Do you insure coal cargoes? Not at present.
 2856. Used you to do so? I used to do so very largely. I have not done any extensive business for over ten years.
 2857. What was the reason of your giving it up? One reason was that the principal business was with the East, and export business with the East has diminished very considerably of late years, and the export to 'Frisco and Mauritius is very irregular.
 2858. You say the export is irregular? So far as our business is concerned. I have only had small cargoes.
 2859. Do you insure the hulls of ships? No; I do not take sailing hulls.
 2860. You take the hulls of steamships? Yes.
 2861. Whether they carry coal or not? Yes.
 2862. Do you make an extra charge in the event of their carrying coal? No; we do not ask them on a time policy; and then, of course, the vessel is free to trade and run in any trade. We do not go into the question of cargoes, as a rule.
 2863. How many coal cargoes do you insure in the course of a year? I have only taken one cargo recently, to Mauritius—just a few hundred pounds. I decline them now.
 2864. On what grounds? Both my head offices have instructed me they prefer not to take them, unless in connection with some special business.
 2865. *Mr. Pittman.*] That is the London office? One is the London office; the other is a leading Continental office.
 2866. *President.*] What has been the cause of the increase in the rates—the heating or the shifting of the coal? The losses that have occurred, and the heavy claims in connection with average too.
 2867. Has it been on account of the foundering of ships through the cargoes shifting or through the heating of the coal—have your people formed any opinion on that point? They have not expressed it to me, but I have my own opinion.
 2868. What is that? I think the shifting of cargo has been the cause in some cases, but that the firing has been the more frequent cause.
 2869. Supposing the Commission were to make some recommendation for the better stowing of cargoes, and for the better prevention of spontaneous combustion, and you were to receive some guarantee that these recommendations were to be carried out under inspection of some kind, would you be prepared to at once reduce your rates, or would you wait to see the result? I am simply an agent for the companies, and should have to get instructions from my head offices. At present my instructions are not to take coal cargoes. With the increased rates now charged, I am of opinion we should venture to take small lines. I have been an underwriter for the last twenty-five years in Sydney. Twenty years ago I would take coal cargoes to Hongkong and Shanghai at 30s. per cent., to 'Frisco at the same rate, and to Mauritius at 22s. 6d. Now the rates are more than double that, I do not touch the business at all.
 2870. *Mr. Pittman.*] What do you call the rates now? About 5 per cent. to 'Frisco. I have not had occasion to go into the eastern rates, but I should think about 3 or 4 per cent. 2871.

2871. *President.*] You cannot answer my question as to what you would be prepared to do in the event of the recommendations of the Commission being carried out? I do not think my head offices would immediately resume the business; they would wait to see the result. They might authorise me to take some small lines if they thought your recommendations were such as they approved.

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2872. They would be inclined to wait and see what was the result? Yes; I think so. They are conservative offices, and are not always in the front to take up new business.

2873. Have you any matters which you would like to bring before the notice of the Commission? I wanted to make a suggestion in reference to the loading of cargoes. I think that the skips are not lowered enough into the holds, so far as I have seen. A great deal of dust and small coal are made, and sometimes these skips are loaded after a good deal of rain, and there is water in the skips. At all events, the coal is very wet, and if that is all broken up into small coal and stowed into the hold of a ship, I think it would be worth while making inquiries as to the result—whether heating would not arise, and even combustion. That is one cause that I imagine might originate fire. I have been in Newcastle in exceedingly hot weather, when you could hardly touch the skips because they were so hot; and with small coal heated to such an extent and dropped into the hold, there might be some chemical result from that. I fancy it would be worth inquiring into; but your experience may be able to decide that. Shifting-boards are of service in large ships. In a ship with 'tween decks, if two or three streaks of the 'tween decks were taken up, sufficient to allow the coal from the 'tween decks to work into the lower hold, the vessel would work in so solid that I do not think there would be any shifting of cargo.

2874. Some ships would not stand that, it would make them too stiff? Yes.

[Witness withdrew.]

Mr. A. F. Robinson sworn and examined:—

2875. *President.*] What is your name? Augustus Frederick Robinson.

2876. And what is your business? Merchant and Lloyd's agent for Sydney.

2877. You are agent for London Lloyd's? Yes.

2878. You insure cargoes of all kinds, do you not? We do not do any insurance here at all. We simply act as agents for London Lloyd's in the matter of settlements of claims or surveys, and arrange for the survey of damaged goods.

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2879. Would you advise your principals about the coal cargo business, for instance? I have not advised them specially about it.

2880. Do London Lloyd's insure coal cargoes? Oh, yes.

2881. And also ships carrying coal? Yes.

2882. Do you know what rates they are charging now? I do not know at all; we are not advised of the rates.

2883. So that you are not able to give us any information as to the transactions of Lloyd's? No, I cannot. They do not come before me, except in the case of claims payable here, and that would not be the case in coal cargoes. If they are insured in London, they would be payable in London or at destination, but principally in London. As regards Sydney, we have little or nothing to do with coal ships or their insurance, because anything of that sort would come before the Newcastle agent for Lloyd's.

2884. Who is that? Mr. Stokes.

2885. Have any instructions been sent to you with regard to coal cargoes? No; I have had no instructions.

2886. You are agent, I see, for certain other companies? Yes; in the same way as we are agents for Lloyd's—for the settlement of claims, not for taking risks.

2887. Have you had any experience with regard to coal cargoes in connection with those other companies? The only time I was called in at all was in the case of the "Knight of Saint Michael," which put in here in distress. I was called in by the captain, as Lloyd's agent, to appoint surveyors to have the cargo surveyed, which I had done, in conjunction with his agents.

2888. Are you able to give us any opinion as to the attitude of your insurance companies in regard to coal insurance? No, I could not do that, because they have not written to me in any way about it.

2889. *Mr. Pittman.*] You are not in a position to say whether there is any truth in the statement in yesterday's paper about the insurance companies having decided to decline all risks? No; I have not heard of anything beyond what I saw in the paper yesterday.

[Witness withdrew.]

Mr. C. J. Royle sworn and examined:—

2890. *President.*] What is your name? Charles John Royle.

2891. And what is your business? Insurance agent.

2892. Do you write ships? Yes.

2893. Do you write cargoes? Yes.

2894. Coal cargoes? No; we used to.

2895. When did you give up doing so? Some years ago.

2896. You have not made any difference in your determination in that respect because of the appointment of this Commission? No.

2897. If you had to take a coal risk, what rate would you charge;—I understand, although you may not wish to take them, business occasionally makes it necessary for you to do so? We will take a ship if she only has one-third of the cargo coal as ballast or trimming.

2898. You would not take a whole coal cargo? No.

2899. Supposing it were necessary for you to take a cargo of coal going to San Francisco, what rate would you charge? I would not take it; I would rather lose the business.

2900. And the same as regards the hull? Yes.

2901. Either with a sailing vessel or a steamer? Yes.

2902. Have you had ill-luck with coal cargoes? We did years ago.

2903. So that you have been drawing off this business for some years? Yes. I have underwritten for five Companies—the Standard Insurance, the Marine Insurance of London, Queensland Lloyd's, Southern Lloyd's

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- C. J. Royle. Lloyd's, and Melbourne Lloyd's. I am no longer agent for the Marine Company. Queensland Lloyd's and Southern Lloyd's have been incorporated with other companies; but neither Melbourne Lloyd's nor the Standard of New Zealand, for which I write at the present time, will take these cargoes.
- 21 Oct., 1896. 2904. Is your opinion on this point final;—are your companies guided by you in this matter, or have you instructions not to take them? Both.
2905. Your duty and your inclination go together? Yes, and my profit; I get a commission on profits.
2906. Supposing this Commission were enabled to make recommendations which, in their opinion, would be likely to lead to increased security, both as against shifting of cargo and as against heating, and that some sort of inspection were arranged whereby you could obtain a reasonable guarantee that the recommendations would be carried out,—would you thereupon be inclined to resume this business, or would you wait to see what happened? I should feel inclined to resume the business; I should recommend that the business be resumed.
2907. You would resume the business at a reasonable rate, possibly? I think so.
2908. What would you consider a fair rate—50s. to 60s.? I could not tell you. The rates at present are just anything you like to charge, and no doubt a certain rate would pay.
2909. If you could get enough business? Yes; there is so much insured in London, it is no use taking a single cargo.
2910. Most of the insurance business is done in London in connection with this matter? Yes; because, I believe, it is utterly impossible to write it here.
2911. I suppose, if you would consent to write, you would get business here? I presume so, provided our rates were not higher than London.
2912. *Mr. Pittman.*] At what rate do you take a steamer with one-third cargo of coal? We had an instance the other day. We had a cargo of general goods to the Cape. The tariff rate is 25s., and the insurer said he had 700 tons of coal, which was about one-third of the cargo. We charged 35s., or 10s. extra for the small proportion of coal. We did not really look upon it as an extra risk; but other companies fell in with us, and we took the risk at 35s.
2913. *President.*] What was the size of the ship? About 2,000 tons.
2914. And she took how much coal? Between 600 and 700 tons.
2915. Not enough to constitute a source of danger? No.

[Witness withdrew.]

Mr. E. S. Chapman sworn and examined:—

- E. S. Chapman. 2916. What is your name? Edward Shirley Chapman.
- 21 Oct., 1896. 2917. What is your business? I am an insurance manager.
2918. Do you underwrite ships? Yes.
2919. And cargoes? Yes.
2920. Do you underwrite coal cargoes? Yes, occasionally.
2921. At what prices do you underwrite them? At various prices—from 20s. up to 60s. and 70s.
2922. What cargoes do you underwrite at 20s.? Intercolonial and coastal.
2923. And with regard to deep-sea cargoes? I have been writing cargoes to Singapore. I have not been writing to 'Frisco and South American ports for some years.
2924. Why? Because they resulted in such terrible losses.
2925. You consider that there is less danger in the voyage to Singapore? It has treated me better.
2926. Is that because it is a shorter voyage? It is a short voyage, but not such a good voyage.
2927. In what way? I mean to say that to American ports there is more open sea.
2928. But as far as spontaneous combustion and shifting go? As far as the results to me were, I think Singapore cargoes have been better. That is why I occasionally do them, but I do very little in them at all.
2929. Am I to understand you do not do more than you can avoid? I do not do any if I can avoid it. I do not suppose in the last twelve months I have had two cargoes.
2930. Do your principals accept your advice as to what is to be done in this matter, or do you receive instructions from them? Sometimes we receive instructions and sometimes it is left to us. One company will tell us, "Do not touch coal under any pretence whatever"; another company will leave it absolutely to me. My idea is that the whole trouble is due to bad stowing.
2931. As opposed to heating? Yes.
2932. The Commission have it in mind to possibly make some recommendations regulating the better stowing, and to provide against spontaneous combustion; and it has been suggested that some sort of inspection should be adopted in order that the advice of the Commission should be carried out;—in the event of that being done, would you be prepared to reduce your rates, or would you wait to see what resulted? I think, probably, most of us would make a reduction on those cargoes that were loaded under special inspection.
2933. Subject to our special regulations? I think if the rate to a certain port were 60s. we should rebate 5s. per cent. for those ships loaded under inspection.
2934. Who would get that rebate? The people who ship the coal.
2935. The shipowner or the merchant? The merchant—the buyer of the coal—and to that extent it would benefit the mineowner and the trade. I am on the Committee of the Sydney Underwriters' Association, and I think there is no doubt we would make that recommendation. I can only speak for myself, but I think there is no doubt about it.
2936. You already have an inspector? We have our Marine Surveyor in Newcastle, and he is instructed to see that shifting-boards are put up; but many ships go away without shifting-boards.
2937. In spite of his inspection? Yes. If the coal is insured with me, I could say, "I consider your policy null and void if you go to sea without shifting-boards"; and I could stop it that way, or they could go to some one else. We can only bring moral suasion to act; and if the coal is insured in London or elsewhere, the surveyor can only recommend shifting-boards being put up, and if the captain will not do so, there is an end of it.
2938. Is it not very unusual with large iron ships to put to sea without shifting-boards? It is occasionally done. We get our surveyor's reports every week, and here and there you see that shifting-boards are not put up.
- 2939.

2939. How do you account for shifting-boards ever being omitted; I am not referring to the old style wooden ships, which practically have natural shifting-boards in their stanchions;—is it a matter of expense? I do not think so.

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2940. Or of great trouble? No.

2941. There seems to be an absolute unanimity of opinion as to the necessity of using them, and I cannot understand how it is they are omitted? I think it is occasionally on account of the obstinacy of the captain. Some owners look at every penny, and the captain might say, "I am not instructed to put them up, and I will not go to the expense of £2 or £3 to do so."

2942. Is there anything you would like to bring before the Commission? My opinion is that if an inspector were appointed it would be a great thing indeed.

2943. An inspector for the trimming? Yes, specially for the trimming, and to see that proper shifting-boards are put up. If shifting-boards are put up improperly they are useless.

[Witness withdrew.]

WEDNESDAY, 11 NOVEMBER, 1896.

[The Commission met at 2:30 p.m. at the Chief Secretary's Office, Sydney.]

Present:—

PROFESSOR RICHARD THRELFALL, M.A., PRESIDENT;

And EDWARD FISHER PITTMAN, Esq., A.R.S.M.

Hon. Alex. Brown, M.L.C., sworn and examined:—

2944. *President.*] What is your name? Alexander Brown.

2945. And what is your business? I am Managing Director of Dalgety and Company.

2946. Have you any interest in collieries? I am interested in collieries.

2947. Are you a colliery owner? I am.

2948. Has any coal from any of your collieries heated in transit? No.

2949. What are your collieries? The New Lambton. We also represent the Dudley colliery.

2950. Do you superintend the trimming of coal? No.

2951. Is the South Lambton colliery the same as the New Lambton? The South New Lambton is the same.

2952. Is that your colliery? Yes; it is the new name the Commissioners have given to it.

2953. Do you insure your coal yourselves, or is it insured by the purchaser? It depends upon the transaction; if the coals are purchased at home the purchaser insures, but if the transaction is completed at Newcastle, we would probably be the insurers.

2954. Where does most of your coal go to? It finds its way to foreign ports, some to Java and Honolulu, but the export from the South New Lambton mine has fallen off very considerably.

2955. You do a considerable oversea trade? Yes.

2956. Have you noticed any increase in rates since the appointment of this Royal Commission? There has been an increase in rates of insurance, but I cannot say it is due to the appointment of the Royal Commission.

2957. I may be misinformed, but I think I heard it said that you made a statement in the Legislative Council that the rates of insurance had risen since the appointment of the Commission? I said the appointment of the Commission would probably lead to an increase in the rates of insurance.

2958. I understood you were reported as saying it had already led to an increase? I do not think I said so. All I complained of was that it was giving an unnecessary notoriety to an incident that, in my judgment, was not of grave consequence.

2959. What was not of grave consequence? The firing of coal cargoes.

2960. How many coal cargoes do you suppose have been known to have fired during the last three or four years? It is difficult to say, but taking an average on five years shipping, the result, so far as I have been able to ascertain, was about one-half per cent., and that represented every kind of disaster—the act of God, errors of navigation, firing, and everything else.

2961. We have a list here showing what ships have been lost, and, I think, if you would care to look at it, you will see the matter is one of considerable importance? I understand that recently there have been more cases of firing of coal cargoes than in the past, but taking an experience of over twenty-five years, and an average of losses of all kinds for the last five years, of coal ships to foreign ports, the matter is not of grave consequence compared to the risks that are run.

2962. Perhaps some judgment on that point may be formed by considering the insurance rates? Not necessarily.

2963. Do the insurance companies object to insure coal for any reason other than that it is a bad risk? They are ready to seize any opportunity to put up the rates.

2964. Does not competition tend to keep the rates down? Not necessarily, because there is a union of interests with the underwriters.

2965. I am to understand you consider the rates have been put up unnecessarily? I do; I think the increase in rates by 100 per cent. is absolutely unwarranted.

2966. You have either to pay those rates or you cannot get the coal insured? No doubt.

2967. So that it would be to your benefit if the rates were reduced? Undoubtedly.

2968. Supposing the rates were reduced from 80s. per cent., which is about the rate we understand that is charged now, down to, say, 40s.? That used to be the figure.

2969. And I suppose we may consider the value of a ton of coal when landed at Manila or San Francisco would be about £1? Yes.

2970. And 2 per cent. on that would amount to about 5d.? Yes.

2971. Then there would really be a saving of about 5d. on a ton of coal in insurance? There would be.

2972. It has been demonstrated to us that by making an alteration in the mode of loading the coal, the chance of spontaneous ignition could be very much reduced, and representatives of a number of insurance companies have informed us that in the event of certain recommendations that might be made by us being carried

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carried out, they would be prepared to reduce their insurance rates. Any proposal we might make would undoubtedly increase the expense of loading, and we want to hear from you, from the point of view of an insurer and owner, whether you consider you would be recouped to some extent by a reduction in the insurance rates? I should take it that any expense of that kind would be very hardly borne just now, considering the low price of coal.

2973. Any recommendation we might make would not, I should think, increase the cost of loading more than $\frac{1}{2}$ d. a ton, and I want you to tell me whether I am right in supposing that, in the event of the insurance on a ton of coal being reduced by 5d., and the cost of loading increased by $\frac{1}{2}$ d., there would be a profit of 4 $\frac{1}{2}$ d. a ton? Undoubtedly.

2974. *Mr. Pittman.*] We have evidence of at least twelve vessels having had their cargoes fired within the last twelve months;—do you not think that is an important thing, setting aside the question of the percentage on the total losses? I think it is all theorising in a matter of this kind. My conception of the circumstance is this: That the coals are loaded now in very much larger ships than they used to be, and the accidents have occurred principally to those ships loaded in the summer-time, and the coal so loaded, after being exposed to a great heat, has had much to do in developing this difficulty during the past twelve or eighteen months.

2975. Do you not think that if the losses of ships from the heating of coal cargoes were put before you in actual numbers of, say, twelve in a year, you would not regard it as really a serious matter? It is no doubt a question that wants consideration.

2976. It sounds much more serious when you say that twelve vessels were actually lost than when you say the losses amount to only one-half per cent. of the total number of vessels that sailed? No doubt, but I do not think, when compared to Cardiff coals, the number is so great. I quite agree that the subject is one that demands attention.

2977. *President.*] You use the word "theorising";—in what connection do you do so? In regard to finding out what is the best thing to do in connection with this firing of coal cargoes.

2978. You consider any conclusion we come to will be based on theory? Necessarily.

2979. Are not all conclusions in human life based on theory of some kind? No.

2980. Supposing we find that a cargo is fired from a certain cause, and it is absolutely demonstrated to us what that cause is, you may say it still remains a theory whether that cause will act or not, in the same way as a navigator theorises when taking an observation of the stars? He is not in the same position. Take, for instance, the "Nautical Almanac"; there it is demonstrated beyond doubt, five years hence, as to what will absolutely occur.

2981. There is the theory that things will go on as at present? No.

2982. It is an absolute theory. I say this because you seemed to use the word "theorising" in a disparaging way? No, I did not. I did so rather from the facts adduced by the previous Commission that sat about twenty years ago, where, after careful evidence was taken, the conclusions they came to were all theories.

2983. Have you read the report? Yes.

2984. You remember an important recommendation that coal should not be ventilated? I do.

2985. It was shown that those cargoes which had been ventilated had fired;—what theory was there in that? That was an absolute theory that possibly the firing in coal cargoes might be avoided by not ventilating them. Subsequent conclusions go to show that ventilation is satisfactory.

2986. We have no evidence to show that ventilation is satisfactory under any circumstances, except surface ventilation? Have you the papers in regard to the "Morna," which went to Valparaiso, and whose cargo heated whilst in port. The cargo was ventilated, and I fancy the facts adduced by the master goes to show that the results of his voyage across the Pacific showed the advantage of having ventilating appliances in the hold of a ship.

2987. *Mr. Pittman.*] We have certainly had no evidence to prove that? I will supply you with a copy of the data. The circumstances were these: The ship, when in Newcastle, no doubt had heated coal on board, and the temperature of the hold ran up to 130°, and representations of mine were made to the Wallsend Company to remove the coal, which was done, and fresh coal was substituted. The master said he had ventilating appliances on board at the instance of the owners. He took the daily temperature on the voyage across, and in no case did it exceed between 70° and 80°; it kept very even right through. I understood from my correspondence that the owners, as far as my memory serves me, attributed this fact to the ventilating appliances in the hold of the ship.

2988. *President.*] I think you can take it as established, both before the English Commission and before ourselves, that imperfect ventilation is an evil to be avoided. A certain amount of ventilation above the coal is necessary in order to carry off the gases to avoid explosion, which is a totally different thing to spontaneous heating, and subject to totally different laws. It has been suggested to us that good, perhaps, would result from having some inspection of the trimming at Newcastle. The members of this Commission are very much opposed, personally, to any Government interference of any sort; but the witnesses have been almost unanimous on that point, and we should like to hear what you think of it? I do not think it would be of any advantage whatever; it would be a source of unnecessary expense.

2989. It is one of the points that I think I may say the insurance companies are absolutely unanimous upon, and the adoption of inspection would be one of the causes that would induce them to lower their rates—

2990. *Mr. Pittman.*] To lower their rates without waiting to see the result? What would the inspector's duties be—to see the coal trimmed on every ship, or to see that shifting-boards were put up?

2991. *President.*] To see that the whole stowing was properly done. It has appeared to us, incontestably, that the captains, who ought to see to this, do not do so? Some of them do.

2992. Some do, but many do not? I cannot see that any service of that kind would be satisfactory.

2993. We are loth to make a recommendation of that kind, but when everybody speaks so very distinctly upon the advantages of it, I may say, personally, I have been almost converted;—what is your objection to it? I cannot see that good could possibly come of any inspection of that kind; it is relieving the master of the responsibility that devolves upon him.

2994. *Mr. Pittman.*] But what if the master does not carry out his duties? I suppose it is the same in regard to the navigation of his ship; but what can be done?

2995. It is not quite the same thing;—we have asked the question what can be done if the captain does not

not perform his duties, and the reply has been, "Appoint an inspector to see that it is done"? You can only do it by legislation.

2996. *President.*] We are not quite clear about that? I do not see how you could do it otherwise. It would be difficult for foreign ships.

2997. I think the Navigation Act gives power in the case of British vessels; it gives power to see that ships are not overloaded, and I think the provisions of the Act are sufficiently wide to cover this inspection;—what reason have you, other than the sentimental one, to make against the inspection? I think it would be an unnecessary charge to place upon somebody, whether the Government or otherwise; and then, again, I think you would want more than one inspector.

2998. We should want about three, I think, so far as we can ascertain? I doubt very much whether they could give efficient service in connection with trimming, for instance, as to how a ship sails. The master knows this exactly, and better than an inspector.

2999. *Mr. Pittman.*] He could tell the inspector? Yes.

3000. The inspector's duties would be simply to see that the captain's instructions were carried out? I think it would be absolving the captain of an obligation that devolves upon him.

3001. The inspector would merely be held responsible for the work being done according to the captain's wishes? I can only go back to the original point. I think you are unnecessarily relieving the master of the ship from an obligation that devolves upon him.

3002. How can you say unnecessarily if the evidence shows he does not do his duty in that respect? I confess myself surprised at the evidence.

3003. *President.*] I think there is no doubt about it that in many instances masters do not? My experience is that in 90 per cent. of the cases they are always particularly anxious about the trimming of their ships; some even go down the holds.

3004. You say "even"; they cannot inspect without going down the holds? "Even" is perhaps superfluous; they do go down the holds to see to the trimming.

3005. Such very positive opinions have been expressed, both by the insurance companies and by the master and working trimmers, as to the advantages of inspection, that I cannot see myself that any harm could be done by trying it for a year. We understand it would cost about £350 for each man, or, roughly, about £1,000 a year. I think the Navigation Act already gives the necessary powers, but if not, no doubt the Government will be prepared to give what powers are required? There is no doubt this trimming has been a matter of misfortune in connection with the port generally. The rates now paid by owners are very small to what they were.

3006. *Mr. Pittman.*] The inspection would be a check at once on cheap trimming? Yes. I know we pay very much in excess in one case to what others pay.

3007. *President.*] I take it you have no real objection to inspection other than the objection we have and everyone else has, that the Government should not do what might be considered other people's business? That is my objection.

3008. Still, after all, that is a theoretical objection? Yes.

3009. You have no absolute objection you can advance over and above that? Nothing, except the less we interfere by legislation in connection with the British mercantile marine the better. I think the rate we are going on with this kind of thing tends to drive the trade into foreign hands. Practically, British ships are built, manned, provisioned, and sailed by Act of Parliament.

3010. Has the inspection of the loading marks had a hampering effect on shipping, or the reverse? I do not think it has affected it very much.

3011. Would you propose that inspection against overloading should be abolished? No, I do not think I should.

3012. Do you think the inspection of trimming is likely to create more interference than that? It only adds to it.

3013. I think, as far as we can learn, that the inspection against overloading has been satisfactory; that it has not interfered with the rights and liberties of shipowners? I think they have frequently ignored it.

3014. Have you anything you would like to lay before the Commission? No, I have not.

[Witness withdrew.]

Mr. N. Meadon sworn and examined:—

3015. *President.*] What is your name? Nicholas Meadon.

3016. And what is your business? My rank is Fleet Engineer in the Royal Navy.

3017. How long have you held that rank? Over three years. I have a total service of twenty-eight and a half years in the Navy.

3018. We understand you have had considerable experience of heating of coal in bunkers? I have, of course, naturally had experience of the stowage of coal in bunkers in Her Majesty's ships, and I am familiar with the appliances for ventilation.

3019. Have you ever had any case of heating of coal in bunkers under your notice? I have had a case of explosion of coal gas, but not of heating; that is to say, of excessive heating—dangerous heating.

3020. A rise of temperature is frequent? A rise of temperature is not of necessity dangerous.

3021. Do you think wet coal is more likely to heat than dry coal? I do, undoubtedly. I think moisture is a contributory.

3022. Is that based on your experience, or is it merely an impression? To be strictly accurate, I cannot say it is practically based on actual experience; it is an opinion.

3023. It appears likely that the self-heating of coal is very much facilitated if loaded in a hot state or placed near a hot surface, such as a steam-pipe;—has your experience borne that out? I should think that was beyond doubt.

3024. Have you had an actual experience of loading bunker coal in hot weather? I have loaded it in the tropics—at Singapore—in an air temperature of over 90° in the shade, without ill effects.

3025. You have not noticed it to heat more readily after that? No. My experience is with coal which is ventilated. It is stowed in coal-boxes which are ventilated by two systems of tubes, one of which supplies fresh air and the other to remove the gases or impure air.

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3026. Am I to understand that the tubes are actually led through the mass of coal, or is it simply surface ventilation? In the case of an ordinary coal box, according to the regulations, it is filled up to the lower edge of the beams, and a clear space is left in that way between the surface of the coal and the deck above, and it is intended this shall give a means of admitting the air to the upper portion of the coal boxes. One or more pipes are fitted, and these act as up-takes, and convey the gases or impure air to the funnel casings. The other system is usually connected with the ventilators or to the bulwarks of the ship, where louvres are fitted, and that system brings fresh air into the coal.
3027. On to the coal or into the coal? The orifices are not quite at the top, but some few feet down. There is no distribution attempted.
3028. It is below the surface of the coal? It may be a few feet.
3029. Not more? No; of course it depends upon the height of the box itself; it may be one-third of the distance.
3030. It practically is only surface ventilation? Yes; the down-take ventilation, I believe, is usually taken somewhat lower.
3031. Two or three feet only? A few feet only.
3032. What is the depth of the boxes with a ship such as the "Orlando"? The "Orlando" would be a ship with a protective deck. She would have boxes above that deck and others below, the deck makes a division between the boxes. The depth of the upper boxes may be, perhaps, 6 feet, and the lower ones would, probably, be 15 feet.
3033. So that there is no great depth? No.
3034. How much coal will a box hold? They would vary very considerably. You may have a box holding 100 tons or running down to 30 or 25 tons.
3035. So that one of 100 tons would be rather a large box? It would be a fair sized box. I do not say they would not be even larger.
3036. You do not load the great masses of coal such as are loaded on coal ships? No. We have temperature tubes fitted for the insertion of thermometers, which go down to the bottom of the box, the end being in a deck socket.
3037. What sort of tubes are used? Wrought-iron tubes with an internal diameter of about 3 inches, just big enough to allow the ordinary thermometer to pass down freely without risk of injury. They are about an eighth of an inch thick, galvanized.
3038. Have you had experience of a considerable rise in temperature as tested by thermometers in these tubes? I have, but I have always been able to find a sufficient cause for it in the surroundings of the coal box—the fact of its being close to a boiler.
3039. In using tubes of that size and thickness, there is a danger that although heat may be generated at one particular point of the tube, from the conduction of the tube a larger portion of it may be heated, so that there would be a difficulty in localising the heat; in your experience, do you have any difficulty of that kind? I should not attach very much importance to it because, after all, it would be only a question of so many feet in a vertical direction. What I should consider of importance would be the localisation of heat in a horizontal direction.
3040. How do you do that? By having a certain number of tubes. In the case of a box of 30 tons you would only have one tube in the centre, and the bigger the box the greater the necessity for increasing the number of tubes.
3041. Have you ever tried pouring water into a box of heated coal? No, I never had such a high temperature as that.
3042. Or steam? No; the objection to steam would be it would of necessity raise the temperature of the coal.
3043. The English Commission of twenty years ago expressed an opinion to the effect that steam was apparently, next to water, the most efficient means of putting out fires? In the case of an ordinary cargo, it would displace the air and shut off the supply of oxygen.
3044. Have you had any experience of the heating of coal from Newcastle or heard of dangerous heating either in Her Majesty's ships or otherwise? I have not.

[Witness withdrew.]

Mr. C. T. McGlew sworn and examined:—

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3045. *President.* What is your name? Charles T. McGlew.
3046. And what is your business? Coal merchant, and general merchant, and shipping agent.
3047. Have you anything to do with Newcastle collieries? We are agents for the Northumberland Colliery.
3048. Have you any connection with any of the southern collieries? Not at present. We had with the South Clifton; we gave it up last June.
3049. You were in the position of agent for the proprietors? Yes.
3050. Where is the Northumberland Colliery situated? Fassifern.
3051. Do you do any over-sea shipping, or is it merely local trade? It is mostly local and intercolonial. We have done a little Honolulu trade, but only about one shipment in three months.
3052. I take it you can speak for the proprietors—you are here as agent for the proprietors? Yes.
3053. Have you had any difficulty with any of the coal from your collieries catching fire or heating? Not any.
3054. Have you lost any ships through shifting of cargo? No, we never did, because we attend to the trimming.
3055. Always? Yes, in each instance.
3056. In what way? Through our foreman trimmer. We pay a little extra for the trimming, and he sees that it is done properly.
3057. Do you keep the foreman trimmer permanently engaged? No, he is the man who had our contract.
3058. Who is that? I think a man named Stewart.
3059. You pay him something extra to see that the work is well done? Yes.
3060. But does he not contract to do it? Yes; but we always gave him a gratuity to see that it was properly done.
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3061. It is not a competitive contract? No.
3062. Do you always get satisfactory trimming in that way? Yes.
3063. Do you insure the coal you ship to Honolulu? Yes.
3064. What rates are you paying for insurance now? I do not know now—I think 5 per cent. If we had an inspector to see to the trimming, the insurance people say they would do it at 50s.
3065. When did they tell you that? They have always told us so.
3066. Insurance agents have informed you that if there was an inspector they would reduce the rates? Yes.
3067. As representing the coal proprietors, do you see any objection to a system of inspection? No; it would not come on the coal at all. It would come on the shipowner. He might object, because he would probably say, "My officers are good enough to see the ship is properly trimmed."
3068. The expense of shipping the coal would be increased? But very little.
3069. The shipowners would probably try to get it out of somebody else? If they got less rates of insurance they could afford it.
3070. Do you pay the insurance? Yes; they might say to us, "You are paying less insurance and can give us the coal at a little less price."
3071. So that ultimately you would pay for the inspection? Ultimately we would.
3072. Do you insure the coal only without the freight? No; we insure the freight as well.
3073. The coal and freight together would come to about £1 a ton? Yes.
3074. If you pay a rate of 5 per cent. on that, your insurance comes to 1s. a ton; and if the rate were brought down to 40s. instead of 50s., you would save about 7d.? Yes.
3075. Supposing it cost 1d. a ton more to load under inspection, you would come out of the transaction with a balance of 6d. a ton? Yes; on those figures.
3076. What is wrong with those figures? The insurance offices may say they will do it now, but when it comes to actually dealing with the matter they may alter their minds. It is very well for them to say they will do such and such a thing if we take such and such an action; but if we are made to do it we may be left in the same position as now.
3077. Will not competition have the effect of making them reduce their rates? Not so much with insurance offices. They bind together, and if they take an insurance they always lay it out; they keep very little themselves. If they take a thousand pounds, they would perhaps write £200 themselves and give £800 away, and owing to that system they are able to keep rates at pretty well what they like.
3078. In the long run, surely they must be subject to competition the same as everyone else;—we have had men before us who say they would snatch at the business, but they are afraid of it just now? So they are. I think myself that if a system of inspection were adopted, and a certificate given to the Customs that the vessel was properly trimmed, and that no vessel should clear without that certificate, vessels would not be lost the way they are at present.
3079. You are aware there is not only the question of trimming but of heating, and we may have to make some recommendations to vary the mode of loading at Newcastle;—supposing we were able to make such a recommendation as to increase the price of loading 1d. a ton—you now pay 1½d.—that would be well within the 6d. saved on insurance? Quite so; I should be very pleased if such a thing could be done in our intercolonial business. When they drop the coal down a distance of 30 or 40 feet, it stands to reason it makes a lot of fine dust.
3080. If your intercolonial cargoes do not fire, why should you be glad to have the breakage reduced? I would rather give another 6d. a ton and not have it broken.
3081. Could you get it? I could get it this way—there would not be so much small in it.
3082. Many people tell us the coal is used for steam purposes and they cannot get more for it? In a great many cases you can. There is a great deal of coal sold for yard purposes.
3083. In the intercolonial trade? Yes; in Melbourne and Adelaide many of the intercolonial shipping companies have yards; and I am perfectly sure if they can turn out their coal free from "smalls" it would be worth more money to them.
3084. We have so many witnesses who say it would not? My experience in Sydney is this: I have found the Mountain coal, which had less small coal than Newcastle, was driving us out of the market. We devised a scheme of erecting screens on the wharf in Sydney. We got them erected and took out a patent for them, and we screen the coal because of the excessive quantity of "smalls" caused by the breakage at Newcastle in falling into the vessel's hold. We sell that small coal at 4s. and we pay 7s. a ton for it.
3085. Can you say what percentage of coal is converted into small coal by this process of loading? That all depends upon the class of coal, but I should say about 10 per cent. would cover it.
3086. *Mr. Pittman.*] Could you give us the exact figures from your books? Yes. Your witnesses are right in this way: where coal is not used for yard purposes—say for steamers—it goes into bunkers. At the same time large coal gives better results in bunkers than small.
3087. If you are supplying a ship, can you get a better price for large than for small coal? Yes, of course.
3088. Do you supply ships with coal? We have done so; we are not doing so at present, except at Newcastle. The steamship companies, such as the Adelaide Steamship Company, Cowlshaw Brothers, and the Union Company ask us for prices for screened, unscreened, and small. If unscreened will do them as well as screened, why do they take the screened?
3089. *President.*] They do take the screened? Yes.
3090. I take it that your evidence is to the effect that you see no objection to a process of inspection from your point of view either as a coal merchant or coal owner? Not at all.
3091. And that you consider any small increase in the cost of loading would, probably, be recouped in the event of coal being less broken up? I am sure of it, especially for foreign shipment.
3092. Especially for foreign shipment? I think so; I am not speaking of steamers and bunkers, but that going away in sailing ships.
3093. As to the intercolonial trade, you know of your own knowledge that you would be able to get more money for coal less broken? Yes. Steamship companies send a great deal of their coal to yards. They can only do it in the other colonies on account of it requiring large tonnage to carry the coal. All the steamship companies in Melbourne, Adelaide, and Western Australia have coal yards and sell to private consumers,

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3095. That, of course, would have to be paid for by someone; you do not suppose it should be done by the Government gratuitously? I cannot see why the Government should pay for it; I do not think the Government ought to do so. It is for the benefit of the insurance companies, or, in other words, for the benefit of the ship-owner, because he would pay less premium on the insurance of his vessel.

[Witness withdrew.]

Mr. F. W. Binney, Secretary of the Newcastle Wallsend Coal Company, made the following statement:—

F. W. Binney. 3096. In regard to coal firing my opinion is that coal that is at all subject to firing would always fire; that you would not find that one cargo fired out of 100, and that others escaped. I think that which contributes to the heating, or danger of firing is partly the breakage of the coal in shipping, or through its being shipped in wet weather. I think there has been an impression that the losses have been very much greater in proportion than what they have been. I have had a statement (*Appendix O*) made of the quantities of cargoes shipped from Newcastle beginning in 1887 up to September, 1896. The Wallsend Company have loaded 1,308 ships, with cargoes of 2,555,371 tons. I give the like particulars with regard to other companies. I have had an analysis (*Appendix P*) prepared from the statement of ships to which casualties have occurred, which appeared in the *Insurance Record*, and it appears the total number of mishaps to Wallsend cargoes was 20 vessels, and the number fired out of that number was only three. I have had a statement (*Appendix Q*) prepared of vessels that loaded coal at the same time as the "Knight of Saint Michael." Every cargo of our coal that goes from Newcastle takes coal from every part of the mine. My object in mentioning that is that the statement shows vessels loaded on the same day as the "Knight of St. Michael" was loaded. These vessels had coal taken at identically the same time, and all arrived at their destination safely without any complaint. The coal came from the mine under the same conditions. As to the liability of small coal to firing—28 years ago we used to make "nut" coal—that is, we used to screen the coal over again after it had passed over the screens the first time. The refuse was put into a heap, and that heap fired on the very first wet weather we had after we made the heap. We gave over doing this, because it did not pay at the time. In making our "C" pit railway—the pit is disused now—we made it of refuse coal, 20 years ago, and it has fired so recently as 12 months ago after very wet weather. The small coal hopper at Wallsend has been in use since 1880. The coal has heated at times, but it has never been on fire. Mr. Ross told me he had to empty it, not on account of the heating, but to do some repairs to the uprights which were giving way. The hopper has never been empty but once since it was erected. With regard to insurance, I am not able to give you any information first hand, because the company does not ship, and, therefore, we have no occasion to insure. The buyer pays for the insurance. Even in cases where we draw from the purchaser against bank credits, we are generally notified that the insurances are effected by the bank.

In answer to questions put to Mr. Binney by the Commission in writing, he stated the Wallsend Company would have no objection to the appointment of inspectors to see that the trimming was carried out, but the company had no power, as they sold the coal delivered at the cranes, and after that had no further responsibility. The company did not ship unscreened coal, and he did not know of any case where unscreened coal was shipped, certainly not to foreign parts. He did not think a higher price could be obtained for coal less broken than at present. It reached the consumer quite large enough. The company had never had any request for unscreened coal except for the use of steamers in the intercolonial trade. The coal, he had heard, was much broken in unloading at San Francisco, and when the rough treatment at the port of discharge was considered, any good gained in saving the breakage would be done away with. Some method of distributing the coal when being loaded was desirable, and he thought the only way that could be brought about was by the Railway Commissioners enforcing a regulation for that purpose, but as against that the Commissioners insisted upon a very large quantity of coal being shipped every 24 hours.

[Witness withdrew.]

Mr. J. R. M. Robertson sworn and examined:—

J. R. M. Robertson. 3097. *President.* What is your name? James Robert Miller Robertson.

3098. And what is your business? Mining engineer.

11 Nov., 1896. 3099. Are you interested in any coal properties? Yes.

3100. Do you represent the owners, or are you in the position of inspector or viewer? Both.

3101. For what collieries do you represent the owners? The Waratah, West Wallsend, and Killingworth, in Newcastle; and in the south the Mount Kembla, South Bulli, and Coalcliff, and Bellambi as viewer.

3102. You have some evidence which you think may be of use to the Commission? I have come to give you what evidence I can that may enable you to form some conclusion in the inquiry you are holding.

3103. What evidence is there you wish to bring before us? I think if you let me know what you want, I daresay I could give you some information. I was much irritated at seeing the evidence of Mr. Hyde at Newcastle in connection with one colliery I represent; it was entirely malicious and spiteful, and without foundation or truth.

3104. You refer to the newspaper report? Yes. I preface the statement by saying I do not know whether the report is correct or not.

3105. You wish to contradict some reported statement of Mr. Hyde? It is reported that he had frequently had cause to complain about the pyrites in the West Wallsend coal. In the first place, Mr. Hyde never was at West Wallsend, and had nothing to do with West Wallsend, and knows nothing about it. I question very much if he would know pyrites if he saw it in the street. He never had any cause to make complaint. The paper said he coupled Wallsend, West Wallsend, and Minmi together.

[Question and answer No. 765 read by the Secretary.]

3106.

3106. Is that what you object to? Yes, *in toto*. In fact, no analysis would give you any information as to the amount of pyrites that coal contains. The pyrites is aggregated in the form of nodules.

3107. You mean the analysis would give you the sulphur and iron, but not the pyrites? Certainly; if it were an ultimate analysis. I apprehend that pyrites is not distributed through the coal at all; it is segregated in lenticular nodules. There is very little pyrites in Newcastle coal. The greater portion of the pyrites that I have seen in Newcastle coal does not decompose on exposure to the weather. It contains nothing like the quantity of pyrites, even in the nodular form, that I have been accustomed to in the coals of Britain. I do not consider that Newcastle coal is a coal that is liable to spontaneous combustion.

3108. Is that not rather a question of opinion? I think it is a matter of fact.

3109. We have a record of a number of ships whose cargoes have fired? It does not follow because a ship's cargo fires that it is a coal liable to spontaneous combustion. I say again, and most emphatically, that Newcastle coal is not a coal liable to spontaneous combustion, such as I have known in Britain. I have never yet known of Newcastle coal firing in gobs.

3110. *Mr. Pittman.*] You mean to say on fire, but is it not liable to fire? Any coal will fire if given the opportunities.

3111. If a certain number of ships' cargoes of Newcastle coal have developed spontaneous combustion, how can you say they are not liable to do so? I think it is not peculiarly liable to spontaneous combustion.

3112. Peculiarly? I think it is not coal at all liable to spontaneous combustion. I think the causes of spontaneous combustion, applying to Newcastle coal, are mechanical or remedial causes. I have never yet seen Newcastle coal fire in gobs as I have seen it at home.

3113. Not at the Borehole mine? I have never seen it fire in bords. I have never seen it fire in heaps.

3114. Have you ever heard of it firing in gobs? Never in a mine, except in one case, where it was due to crushing at a fault at the A. A. Company's pit. It was due entirely to mechanical causes. It was at a fault where there had been evidently pressure and the coal crushed in a crevice, and the moment it got access to air it absorbed oxygen and fired, but that was not in a gob.

3115. It is at what is called a gob? It is quite a peculiar circumstance. It is not a gob. It was in a fissure near a fault.

3116. Do not run away with the impression that we do not want to get information, but when a statement is made, we, as ordinarily intelligent men, are not prepared to accept that statement unless it is backed up. I want to get at whether what you say is merely an opinion or not. You said you had not heard of spontaneous combustion in gobs in any case, and then you remember a case where the firing was not due to ordinary spontaneous combustion? I said I never heard of any case of spontaneous combustion in gobs.

3117. With regard to the crushing, for that statement to be of any use, we must know why you say the firing was due to crushing? It was in a crevice near the large fault that crosses the Borehole field, and Mr. Turnbull, the manager, explained that it was in a crevice, and this crevice was filled with dust and small coal, very much like a crevice you occasionally get at the Metropolitan mine from which large quantities of dust are ejected. It was altogether a peculiar case.

3118. We have seen that place, and Mr. Turnbull gave us quite a different account of it? It is a matter that occurred several years before our visit to the colliery.

3119. The same thing is going on at the present moment, and he explained it in a totally different way? I am not the author of the statement. It was not, however, a gob fire.

3120. It is not knowledge of your own? It is not knowledge of my own. Outside of that I do not know of any gob fires in Newcastle. I do not know of any actual field where there are such large quantities of coal stowed away in the gob. In the old country there are very few cases where, if there was the provocation that exists in Newcastle, you would not have gob fires. If it was a coal liable to spontaneous combustion it would fire in the colliery workings. It does not fire in the colliery but it fires in the ship, therefore, I think the causes are probably more due to the treatment the coal gets after it leaves the colliery. Any coal will fire if you give it proper provocation. Southern coal is coal that no one can say is liable to spontaneous combustion, but if you get very large heaps of it, as in the old days when they filled up the gullies with small coal, exposed to the weather, it will fire, beginning near the bottom.*

3121. *President.*] Have you any theory or opinion as to the firing on board ship? I do not think there need be any theory as to the causes of spontaneous combustion—those are well enough known. I blame the treatment that the coal gets after leaving the colliery.

3122. You mean the loading? The treatment in the waggons. There is unnecessarily rough treatment during the traction; the shunting at the dyke and in the loading; also, of course, in the trimming, probably that may be included in the loading.

3123. Do you consider the breakage in transit is important? I do, I think it is very great—unnecessarily so.

3124. In what way? In the conveyance and facilities of loading at Newcastle. We have a wedge-shaped waggon which I load carefully at the colliery, and no unnecessary breakage takes place. It is delivered into the railway people's hands, and it is subjected to an unnecessary amount of violence and rough treatment. The waggons are very roughly shunted, and every shunt of course shakes the coal, and it subsides down in the waggon like a wedge. The way it is loaded is not altogether creditable, in fact, I think it is most discreditable.

3125. The loading at the crane? Yes; I think it is almost rougher than it used to be, and probably there is a reason.

3126. What is the reason? Some seven to nine years ago the contractor for the cranes had about 2½d. a ton for loading; now it has been gradually reduced until it is only 1½d. Wages are not lower, and the consequence is the man has not time to give proper care to the loading. He would lose money if he loaded in the way I think it ought to be loaded.

3127.

* ADDED (on revision):—A circumstance that forcibly appeals to me as evidence that Newcastle coal is not of itself liable or prone to ignite spontaneously is that the same coal must possess the same properties and character under similar circumstances. If it ignites at one time spontaneously, it will always do so under similar conditions. As Newcastle coal is not one that ignites in the gob when the conditions favourable for ignition are present, or a coal which in bulk or under normal conditions heats or ignites when stored in bulk, I maintain that it is not coal that is *per se* liable to ignite spontaneously. I know of coal from seams in Britain which under similar conditions never fails to ignite, and the coal referred to does not contain any iron pyrites. When I see a colliery loading say six hundred ships with the same coal, none of which ignite, I maintain that that coal is not of itself liable to spontaneous combustion, and when I hear that the 601st ship from that colliery ignites, I would be disposed to look for the cause of this outside of the coal itself—to some circumstance or combination of circumstances connected with the hauling or disposal of it after it had left the colliery, and when it was beyond the care or control of the colliery-owners, or probably to some cause inherent in the ship!

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3127. How do you think it ought to be loaded? It cannot always be accomplished, but where ships have proper hatches the waggons ought to be lowered down into the hold, that is if distributors are not used. I think in the matter of loading that distributors would be of great service.
3128. Do you know of any good form of distributor? I have heard of two, but I would not like you to go away with the opinion that I pinned my faith to either; but any distributor must take that form (*pointing to photograph of Harper's patent*) or that of a travelling band. Any form that would distribute the coal evenly over the hold would be of importance. I wish to advocate no one patent. I have heard of two forms of cone distributors that I certainly think would be of great advantage.
3129. Have you seen them at work? No, I have not; I have seen an account of them, but I have not seen them at work.
3130. We do not see how the distributor is going to save the coal from being broken under the hatch? It would prevent a great deal of the destruction of the coal; it would prevent the enormous drop that I have seen from the waggons. I am quite sure it must have dropped 40 feet.
3131. What is wanted is to build up the heap of coal under the main hatch carefully? You have to lower down the waggons to do that.
3132. In some cases the hatch is too small for that, and you must have some other method? In that case you must have a distributor.
3133. But that leaves the space under the hatch unfilled? You can reverse the distributor. Very few of the large ships have small hatches.
3134. We have seen a number where the big waggons could not go down? There are a large number of box waggons. I have 200 of them.
3135. In what colliery is that? The Waratah has about 200 box waggons, and at the other collieries I have another 100, and I am rather partial to them.
3136. Why do you prefer them? They are easier in loading. A smaller quantity falls at a time. I think the coal is discharged in a better condition. The coal will stand rougher usage in the box waggons, because the hopper waggons are wedge-shaped, and when they get a smashing the coal subsides.
3137. Why do the other collieries go in for the hopper waggons;—many witnesses have told us they are discarding their box waggons? In replacing the waggons we get them from home, and they do not know anything about box waggons at home. In taking over the Waratah Colliery we took over the waggons; we did not build the waggons; but I rather like them.
3138. I do not quite gather why you consider other collieries are getting rid of them? Because nearly all the waggons are imported from home.
3139. I suppose they could make one as well as the other? The box waggons are all of wood. They would never think of importing box waggons.
3140. Is there no reason of expense or durability? I have both kinds, and the hopper waggons are certainly not cheaper, and I am quite sure they are not more durable. I prefer the box waggons. All the new collieries have got their waggons imported from home.
3141. The hopper waggons? Yes.
3142. Supposing an extreme case—that the Commission recommended that the hatch should be run up from these box waggons,—would that inflict very great hardship on the collieries? It would, because a number of collieries have not got box waggons. The A. A. Company, Wallsend, and others, never had any box waggons.
3143. Do you suggest that distributors should be used as an alternative? I think that would be a preventive. We cannot shut our eyes to the fact of the very large class of ships now, having enormous coal space. That is an important factor favouring spontaneous combustion. Another thing I have thought of that might assist, and that is to cease loading coal and to cover up the hatches during heavy rain.
3144. Have you any definite fact that you could give us that wet coal is more liable to fire than the same coal dry, but otherwise under the same conditions? The "Hollinwood" that we loaded, was loaded during very heavy rain, and I remonstrated with our men in Newcastle for doing so, and strange to say, the very hatch that loaded during the heavy rain heated.
3145. *Mr. Pittman.*] We have evidence of three or four such cases of ships loaded in wet weather? I can see a chemical reason for it.
3146. *President.*] What is that? The water would supply the oxygen for the carbon that would be evolved from the coal in fine division.
3147. Do you mean to say the water would be decomposed by the carbon? I do.
3148. That is your scientific reason, that water would be actually decomposed by the carbon? I think it is feasible that water might suffer decomposition under certain conditions of heat and pressure and, at all events, it might be the medium of conveying oxygen to the coal and so begin the process of heating.
3149. That carbon would decompose water? Forming water and carbonic acid by heat and pressure.
3150. It is a question of carbon decomposing water not of forming water. I understand you to mean that the presence of water would provide oxygen for combination with the carbon? I have no doubt it would under circumstances of heat and pressure. I have no doubt that a decomposition could take place by supplying oxygen to coal.
3151. That is to say, the carbon would decompose the water? Yes. There would be a process of decomposition and a process of synthesis taking place, and other compounds are formed. I am absolutely certain that with two heaps of coal of the same size and from the same mine—the one wet and the other dry,—the one wet would show a tendency towards heating that the other would not. Water seems to be a potent factor.
3152. That is merely an impression, not borne out by actual observation? Not further than the fact of these several ships in this state heating.
3153. *Mr. Pittman.*] You know from your own experience on commissions, that we must discriminate between evidence based on fact and that on opinion? I can only tell you the fact of the "Hollinwood." The No. 2 hatch loaded during very heavy rain, and she went in a fortnight or three weeks afterwards to Dunedin, and that hatch was reported to have heated. I do not know really whether the coal heated or not. It was simply reported, and I presume we must take that as evidence.
3154. *President.*] I understand you to say that you have an impression, based on chemical knowledge and observation as far as possible, that wet favours heating? Yes. I think a very essential thing is the trimming. For several years past there have been complaints of improper trimming. In other cases the ships have not been sufficiently provided with shifting-boards or side-hatches, where the coal could be perfectly trimmed.
3155. It has been suggested by many witnesses that trimming would be more satisfactorily carried out under some form of inspection;—are you in favour of that? Yes; I think that very likely the trimming would be better done if it were subject to neutral inspection.

3156. That means Government inspection? I think the Government would be the proper parties.

3157. Who would have to pay for it? Certainly not the coal owners. They have nothing to do with the coal after it arrives at the dyke. I should say the shipowners ought to do that. It is their duty to trim, and they pay for the trimming. I have no doubt the owners at home would willingly pay a trifle towards inspection when they knew the trimming would be done properly.

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3158. Do you insure the coal that you sell? Always, if we ship it ourselves.

3159. And you now have to pay very high rates? When I say that, it is only in some circumstances. The great bulk of our coal is sold, and the parties who buy send the ship, and we have nothing to do with the insurance. Probably nineteen out of twenty cargoes would be done in that way. Frequently we get a cable telling us if we can charter a ship and deliver C.I.F. at a certain foreign port, to do so. In that case, if a ship were available within the limits, we would charter, and then we would insure.

3160. So that under some circumstances you have to insure? Occasionally.

3161. If the insurance rates were reduced, you would in that case reap some benefit? Very little.

3162. Somebody would? I do not know. Those that insure certainly would, but it makes very little difference to us, because if the insurance rates are 60s., 40s., 35s., or 30s., we would add it on to the price.

3163. You make the customer pay? Yes. With the great bulk of the trade we know nothing of the insurance. The buyers charter the ship, and we simply charge for the coal, f.o.b., at Newcastle.

3164. In the case of any further expense in the loading, would you put that on to the customer too—supposing it cost another 1d. a ton, say, to be done properly? That should be paid by the Commissioners. They have already reduced it to 1½d., and they gave the coal-owners no credit whatever for it. They charge the same now for hauling and loading that they used to do at the time when it was 2½d. or 2¼d.

3165. They have not reduced their charges? Not one single fraction. It is 10d. a ton within the limits. They have made a few alterations for collieries that have been established subsequently that are notoriously within the limits; but for this limit of 7 miles the same price is charged.

3166. Can you give us any idea as to whether the Railway Commissioners are making a big profit or not from the coal business? I know perfectly well what the coal costs to draw, and, unfortunately, I am one of those that have suffered most by it. I do two-thirds of all the traction in one case, and I did not get one single iota from the Commissioners. They managed to get the owners of the Waratah Colliery, some years ago, to purchase locomotives, and take down their coal to the main line, and formed large sidings there. We continue this, and just pay the same as others in the same radius. We get nothing for the 1½ miles.

3167. Why is that? Simply because they are autocrats.

3168. *Mr. Pittman.*] You are of opinion they are making large profits? I am. I should be glad to take the contract for the traction of Newcastle coal and make large concessions. I know perfectly well what it costs to draw coal and to pay for the expenses of shipping and shunting.

3169. *President.*] There is the first cost of the cranes at the Dyke to be taken into consideration? The Commissioners did not pay for that, the country paid for it. The Harbours and Rivers Department put them up and handed them over to the Commissioners free.

3170. *Mr. Pittman.*] You are of opinion that the charges made by the Commissioners for shipping coal gives them a considerable profit, taking into consideration the expenses they are at and the interest on the capital expended at the Dyke and other places? If you tell me that the Commissioners pay interest on the capital expended you have been misled.

3171. You are of opinion they are making large profits? I am. I know the traction is far too much. I know places where the same work would be done for just about one-half. I am drawing several hundreds of thousands of tons a year in the south, and ship that under 3d. a ton, including all the shunting and shipping. I do not object to the Commissioners making a profit. They are working the railways on commercial lines, but they are charging the same now as they charged for the same radius over twenty-five or thirty years ago, and large reductions have been effected in their outlay during the last five or six years.

3172. *President.*] During that time have the Commissioners put down any extra plant or has any expense been incurred on additional plant? I do not think the Commissioners have put down any extra plant.

3173. Has anybody during the last five or six years? I do not think so. I think you will find from inquiries that all the cranes were put down some four or more years ago. I understand the railway account is not debited with interest on the expense in Newcastle Harbour. I do not object to the Commissioners making money over the coal, but I think the coal-owners who pay rates that ought to give a large profit should have had some concessions made to them when the Commissioners were effecting their savings. If we had reductions equivalent to the savings, then I would at once have said we could afford to pay 1d. a ton extra to ensure thorough stowing and loading.

3174. I do not say that it would be 1d. I suppose you agree that there is undue carelessness in loading and trimming? Certainly.

3175. And that both these can be removed at a certain expense? Yes.

3176. You say the Commissioners should bear the expense of loading. Ought the Government to bear the expense of superintending the trimming? I do not know that I should go so far as to say that. I do not know that I could say the Commissioners should pay the extra expense of trimming. I think the ship-owners should pay for the extra expense of getting their ships well trimmed; but the ship-owners might become perfectly careless and might throw over the whole onus and responsibility in thus having the power taken out of their hands.

3177. I do not think any recommendation made would lead to such a result? I only made the observation on the premises. There is a little matter with regard to the "Ellen A. Read" I should like to mention. She is one of the ships registered as having taken fire. Undoubtedly there was a fire, but I do not think it was at all caused by spontaneous combustion.

3178. What reason have you for that? The coal first of all fired contiguous to a hatch under a ventilator. The crew was in a mutinous state up to the date of sailing. The coal had not heated a few feet or inches below that fire. I inspected it, and I do not think that one of the surveyors will say it was caused by spontaneous combustion. She was a fire, I believe, before she left Newcastle. It was just on the surface. Spontaneous combustion would never occur at the top of the coal; it would be hot below. I inferred it was a case of accidental firing. I do not say how, because it was never investigated. I think, outside the coal altogether, the trouble is pretty much in the traction, shunting, loading, and trimming, probably a little due to the construction of some of the ships. Some are rather weak, and work in a sea-way. In these, I think, the cause of spontaneous combustion may be found. It is in the treatment of the coals after they leave the colliery and out of colliery control.

3179.

- J. R. M. Robertson.
11 Nov., 1896.
3179. *Mr. Pittman.*] Do you know anything of Harper's distributor? Nothing more than from a photograph. I think it could be improved.
3180. You have not seen it at work? No.
3181. We were led to expect you would recommend it to us? Mr. Harper wrote to me and sent a photograph of it. He asked me if I could get any ships to use it; but, as a matter of fact, I have no power to do so. I spoke to two of the captains, but they seemed to be indifferent about it. I should have been very glad to give it a trial, and should be glad to give any likely distributor a trial.
3182. There was no reason for assuming you would recommend it to us? I could not do so. I do not think it would be altogether proper for me to be specially pledged in favour of any distributor. I can see at once it could be improved.
3183. *President.*] You never expressed yourself as being inclined to recommend it? Never at all.
3184. Did you undertake to recommend it to the Commission? I never heard of it until this moment.
3185. We have been very much misinformed? I never heard of it until this moment. I never saw it, and would not recommend anything I had not seen.
3186. It is absolutely untrue that you undertook to recommend this to the Commission in any way? Perfectly untrue. I am glad you mention it, because I could not advocate any particular form of distributor. I would take the best. I am rather inclined to the travelling band for ease and facility. They are very easily moved about; made either of gutta-percha, india-rubber, or other material, and the coal would be carried away at a rapid rate, and there would be no fall. [*Witness mentioned that he had taken the temperature in the hold of a vessel loading at the same time as the "Republic," in February last, and found it to be 120°.*]

[Witness withdrew.]

WEDNESDAY, 18 NOVEMBER, 1896.

[*The Commission met at 2:30 p.m. at the Chief Secretary's Office, Sydney.*]

Present:—

PROFESSOR RICHARD THRELFALL, M.A., PRESIDENT.

And EDWARD FISHER PITTMAN, Esq., A.R.S.M.

Mr. S. E. Laidley sworn and examined:—

- S. E. Laidley.
18 Nov., 1896.
3187. *President.*] What is your name? Shephard Edgcliff Laidley.
3188. And what is your business? General Manager of the Co-operative Colliery.
3189. Have you had any of your coal heat in transit? Yes, at the beginning of the year—for the first time in thirty years.
3190. In what ship was that? The "Republic." She was loaded between the 13th and 17th January, and the 18th was the hottest day known in New South Wales so far as recorded at the Observatory. Our shipping manager wrote down and said that the trimmers on the side facing the sun could not work, the vessel was almost red hot.
3191. Was the temperature of the hold taken? No.
3192. That was the only case of heating? Yes. There is another vessel, the "Cumbrae," which is missing. We know nothing about her. She loaded in February, 1895, and took in here, before going to Newcastle, some 505 tons of shale and 150 tons of tallow.
3193. Can you tell us whether there has been any change in the manner of working in your colliery during the last few years? There has not been, except that the bords are a little different in width.
3194. Will you explain it to us? I am not competent to tell you.
3195. Have the pillars been diminished? They have been strengthened.
3196. *Mr. Pittman.*] The bords have been widened and the pillars strengthened? I could not say, but everything has been done to prevent creeps and dangers of that kind.
3197. *President.*] Have you got into a different kind of coal? No, we have not. We have been working the same coal for thirty years. I have brought here two analyses, made in 1879 and 1891, and they vary but very little.
3198. How were those samples taken? Some of our customers wanted to know what the coal was like.
3199. They were samples taken by the company? Yes. We have a 3-inch splint in our band, and it was taken out of that in the latter case, but in the former one we do not know.
3200. You do not know whether they are particular samples or represent a general average? I could not tell you. Mr. Pittman made a report about our coal, and he spoke very highly of its purity for coke making.
3201. Do you, as a rule, insure the coal? No, the bulk of our coal is sold direct, we have nothing to do with the insurance.
3202. The purchasers insure? Yes.
3203. They give you rather less for the coal than they would if they had not to pay insurance? Not at all.
3204. Supposing they pay now 5 per cent. insurance;—that increases the cost of coal to that extent? Yes.
3205. Supposing they had not to pay 5 per cent., they would be able to afford to give you a little more for the coal? Probably they would. Before this trouble of the heating of coal cargoes, we always had the same price proportionately with the hewing rate.
3206. Supposing the insurance rate were reduced 2½ per cent., there would be a profit of 2½ per cent. saved on the insurance? We would not get a pennyworth more for our coal.
3207. It would be in favour of the trade generally? Yes.
3208. If you did not get it in one way you would in another? It would have the effect of increasing the consumption on better terms.
3209. It is not unlikely we may make some recommendations which, presumably, will have the effect of reducing the rates of insurance, and we wanted to know whether you would participate, either directly or indirectly, in that reduction? No; we would not.
3210. But the trade will participate? I think so.
3211. The coal is very much broken up now in loading? Yes.
3212. Supposing the coal were less broken, would you get a better price for it? Probably we would; we would not have so many complaints.
3213. I am speaking now of the deep-sea trade? Yes; foreign coal. We have had a great many complaints about the smallness of the coal in the cargoes.
3214. Where do those complaints come from? San Francisco.

3215,

3215. It has been reported that they unload badly at San Francisco? Yes; it gets as much rough handling as it does here in the loading. S. E. Laidley.
3216. That is a matter which concerns the purchaser? Yes. 18 Nov., 1896.
3217. The important point is whether you would be likely to get a better price for your coal if rather less broken? I think we would, because the small coal is absolutely useless to the retail coal merchant. Where they get over 20 per cent. of small coal, they complain about it; they expect 20 per cent.
3218. That is an enormous percentage, considering the coal is screened? Yes; even going from Newcastle to Sydney, the percentage is very high.
3219. It is not unlikely we may find it desirable to recommend some system of inspection of the trimming;—is there any objection to that, from your point of view? No; so long as we are not held liable for the payment of the inspector. I think the ship-owner is the man who ought to pay that. The shipping managers are always making complaints about the way the ships are being scamped.
3220. There is no actual objection to inspection, from your point of view as a coal owner? Not at all. We would advocate some independent inspection.
3221. Have you any objection to it being Government inspection? None whatever.
3222. What sort of inspection would you propose yourself? I would propose Government inspection. I think it is a far more satisfactory way to let the Government take these matters up. I think it would be done very much better if they had a hand in it. This coal of ours, I may say, adjoins the Wallsend, and they have had more cargoes fire than any other. We have the identical seam; there is only a fence between us. The only difference is that we work the rise of the coal, and theirs is the dip.
3223. Is your coal similar in analysis to the Wallsend? Yes, exactly. You could not have a coal more similar. We are the only two that compare. The other coals are not like ours at all. We have a small lease of the Wallsend. That is why I cannot understand why they should have such a preponderance of fires in their cargoes compared to ours.
3224. Perhaps the larger output may account for that? We have put out 5,000,000 tons in the last thirty years, and that is the only case that ever happened to us.
3225. Is there any different way of getting the coal? None whatever. The Miners' Association would never allow it—that is, any radical difference.
3226. Is there anything you would like to lay before us? I think the waggons should be lowered. There is breakage when the coal goes into the vessel 25 feet deep. It would break blue metal. I think there is a great necessity for shifting-boards if a vessel is over a certain capacity.
3227. I think that is the universal opinion? I think a great many of the cases put down to spontaneous combustion have been due to shifting of cargoes. I believe in the coal distributor to get rid of the accumulation of small under the hatch.
3228. Have you any objection to loading with the distributor? None whatever.
3229. Have you ever seen one? I have never seen one, but I quite understand it would distribute the coal all through the ship evenly. If there is any leak it is always through the hatchways, and the wet will get on the small coal.
3230. Have you had any experience of the effect of wet on the heating of coal? No; we have never had a fire in our mine in the gob coal or any coal during its existence. There has not been the slightest sign of firing.

[Witness withdrew.]

Mr. B. Chadwick sworn and examined:—

3231. *President.*] What is your name? Benjamin Chadwick. B. Chadwick.
3232. What is your business? I am secretary to the Pacific Co-operative Coal Company. 18 Nov., 1896.
3233. What are your duties in connection with that position? I have the general management of the company.
3234. Do you manage in Sydney? Yes.
3235. Not at the mine? No.
3236. Has any of your coal given trouble by heating? Only in two cargoes, and they are the two largest cargoes we ever shipped.
3237. Will you kindly tell us about them? The "Royal Forth" sailed about the 13th June, 1895, for San Francisco. It was one of the largest cargoes that ever left Newcastle. She had 4,558 tons of coal, and we were informed the cargo was heated on her arrival in San Francisco.
3238. Was there much damage? We do not know. We sold it f.o.b. at Newcastle, and had no further interest in it.
3239. You did not hear any detail? No.
3240. Do you remember what sort of weather it was when she loaded? I made inquiries—it was fine.
3241. Was the cargo ordinary-sized coal or small coal? It was the ordinary best coal.
3242. Had it been obtained in any way differently from your general practice? Not the slightest—in fact, the coal is sometimes on the dyke, and we do not know in what vessel it is going into.
3243. Is there anything more to say about that ship? No; the next case was the "John Ena." She left about the 14th September, 1895, for San Francisco, and she had 4,257 tons. That vessel, I was told, had to jettison 60 tons of the cargo.
3244. Was that coal loaded in fine weather? I could not say. It would not be very warm. I do not know whether it was dry or not.
3245. Do you know of any special reason why that coal should have heated? No; except the size of the vessel. We have loaded that ship since, and she was all right. We loaded it a few months ago.
3246. Is there any other information about that ship? Not that I know of.
3247. Have you had any of your coal give rise to gases which have exploded under any circumstances? It is not a gas coal at all; it is a steam coal.
3248. But it might have given rise to explosive gases all the same? We have never had any trouble in the mine at all.
3249. Do you load your coal into box waggons or into hoppers? Into hopper waggons.
3250. Have you any box waggons at your colliery? Not one; they are all hoppers.
3251. What is the reason for your preference for hopper waggons? I think they go under the screens better. 3252.

- B. Chadwick. 3252. How many waggons do you own? 164.
 3253. What is the value of them? These waggons are ten years old—most of them.
 18 Nov., 1896. 3254. Would it be a very serious drawback to you to go back partially to the box-waggons? It would be a very expensive matter, no doubt.
 3255. If the waggons are ten years old you will have to replace them before long? We repair them when they get old; we put in new sides and bearings.
 3256. But there will come a time when you will require new waggons? In fact, they become new waggons without your noticing it, especially the wooden ones; they are easily repaired.
 3257. All your hoppers are not of iron? I think there are only about sixty of iron; the others have wooden sides.
 3258. Are they made in the Colony or imported? The iron ones are made in Manchester, and some here.
 3259. And the wooden ones? They are made here.
 3260. Is there very much difference in the price of the two kinds of waggons? Not a great amount; the wheels and axles are all imported.
 3261. The boxes can go down the hatches of a ship better than the hoppers? No doubt, and there would not be such a big fall of the coal.
 3262. The advantage of using the hoppers, as compared with the boxes, is not so great as to make it imperative to use hoppers? No.
 3263. It would only make a small difference in the expense? If you were building waggons now, the difference between the cost of the boxes and the hoppers, I do not think, would be very great.
 3264. The carrying capacity is not quite so much in the case of the box-waggons? I do not think so.
 3265. *Mr. Pittman.*] What are about the dimensions of them? They hold 7 tons 15 cwt. to 8 tons.
 3266. You cannot tell me the dimensions in feet? No.
 3267. *President.*] It has been suggested, in regard to the trimming, that some sort of Government inspection might be adopted at Newcastle;—would that effect you, as an owner, in any way? It would increase the cost of the coal, and competition is so keen that 1d. means the loss of an order, especially in the East.
 3268. One penny a ton does? We have two vessels on the way on our own account. The biggest limit was 8s. a ton. If we had offered 8s. 3d. it would have been refused. Every penny is of great moment.
 3269. Do you see to the insurance? When on our own account we do.
 3270. You are paying now about 5 per cent.? The last shipments we made we had insured by the consignees in Hongkong, but we have never paid 5 per cent.
 3271. Have you paid 4 per cent.? I daresay we may have paid 4 per cent.
 3272. I suppose the average price of a ton of coal when it arrives at its destination may be estimated at £1? No.
 3273. How much is it worth when it gets to Hongkong? It costs us 5s. 9d. f.o.b., and the freight is 8s.; that is 13s. 9d., and 6d. will cover exchange and everything else.
 3274. That is 14s. 3d.? Yes.
 3275. The value of a ton of coal at Hongkong? Yes.
 3276. It must be cheaper to send to Hongkong than to San Francisco? Yes; because Hongkong is a free port, and there is a duty of 40 cents. at San Francisco. You cannot get an 8s. ship to San Francisco; it is about 10s. freight.
 3277. You pay, in a case where you effect the insurance, about 4 per cent.? About that; we only insure the coal.
 3278. Somebody insures the freight? That is a matter for the shipowner.
 3279. It is added to the price of the coal, and it is a matter of indifference to us whether you pay for it or the buyers;—so that there would be about 7d. a ton for insurance? Yes.
 3280. Supposing the insurance was dropped to 40s. per cent., that would mean a saving in insurance of half 7d.? Yes.
 3281. About 3½d., say? Yes.
 3282. Supposing the cost of the loading was increased 1d. a ton, there would be a profit on the total transaction of about 2½d.? Yes; there would be a profit there.
 3283. As the trade is in such a condition that every penny makes a difference, that saving would be a great advantage to you? If you could guarantee that the insurance rates would go down. There would be a certain extra cost, but a doubt about the insurance.
 3284. Several insurance representatives say they are anxious for the business if it proves good? There are many who will not take a coal ship at all.
 3285. Many of them have undertaken to reduce the insurance from about 5 per cent. to about 50s., in the event of our recommendations being adopted;—in that case, who would be hurt, supposing it cost an extra penny? We would gain; nobody would be hurt.
 3286. Supposing it were done, have you any other objection to inspection? No; but none of us like too many Government men about the place; they always interfere one way or another.
 3287. Those are exactly our sentiments; at the same time we have had a great deal of evidence to show the importance of having some kind of inspection, and we want to hear what the colliery-owners have to say about it? There is no particular objection because these men are very troublesome at times.
 3288. Have you anything you wish to lay before us? Simply this, that it was an extraordinary thing that the two largest ships we ever loaded were the only ones that heated. We have loaded ships of all sizes, and they never were on fire, with those two exceptions.

[Witness withdrew.]

Mr. J. S. Hutchinson sworn and examined:—

- J. S. Hutchinson. 3289. *President.*] What is your name? James Steel Hutchinson.
 3290. What is your business? I am Secretary to the Hetton Coal Company.
 18 Nov., 1896. 3291. Your work in connection with that company is in Sydney? Yes.
 3292. Not at the mine? No.
 3293. Who is your mine manager? Alexander Mathieson. Our shipping manager is Thomas Brown.
 3294. Do you do a large over-sea trade? Just lately we have done a fair quantity—this last twelve months about 20,000 tons. 3295.

3295. Have you had any trouble with your coal heating in any way? Not that I am aware of—not that we have been made acquainted with. J. S. Hutchinson.
3296. Have any ships loaded with your coal been lost from any cause? One returned to Sydney after being three days out—the “Tamerlane;” and the “Patrician” was a total wreck going over to New Zealand. 18 Nov., 1896.
3297. What happened to the “Tamerlane”? It was owing to rough weather.
3298. Did the cargo shift? I believe it did.
3299. Do you know whether she had shifting-boards? I do not know if she had; I would not be certain on that point.
3300. And the “Patrician”? She had no shifting-boards, as far as I know.
3301. Have you had any heating of the coal at your mine, or any gob fires? Not that I know of.
3302. Is your practice of getting coal the same as it has been in past years, or has there been any change? It is just the same.
3303. We should like to hear whether there is any objection from your point of view to a system of inspection of the trimming of coal? As far as we are concerned we have no objection. All we do is to put the coal on board, and the ship pays for the trimming.
3304. So that from your point of view, there is no objection to trimming? No.
3305. Where is your trade chiefly to? Intercolonial ports; and we have sent a good quantity to Valparaiso and San Francisco.
3306. What do you reckon to be the value of a ton of coal after it gets to San Francisco, including freight and insurance? Freights vary sometimes, it might be, 15s. a ton, and sometimes 11s. We ship it at Newcastle at a price. We get the orders, and the ships are chartered in England.
3307. What is the average price of coal in Newcastle for over-sea purposes? 7s.
3308. So that about £1 a ton would be a fair average value for it at San Francisco? Yes; I believe that would be about the value of it.
3309. Do you ever pay insurance yourself? On intercolonial cargoes.
3310. What rates do you pay to intercolonial ports? I cannot say from memory, but I fancy about 20s. per cent. to New Zealand. It depends upon the port in New Zealand it goes to.
3311. You never insure to San Francisco yourselves? No; the charterers effect their own insurances, so far as our colliery is concerned.
3312. Have you your own loading appliances, or do you load from the cranes? We load from the cranes.
3313. You are aware the coal gets very much broken up by this mode of shipment adopted at Newcastle? Yes.
3314. We would like to hear from you whether, in the event of the coal not being so much broken, you would get a better price for it? I do not know. You see, we sell it as screened coal, and we charge the one price for it—7s.
3315. You send a certain amount of coal to Melbourne? Yes.
3316. Do you sell it to coal merchants there? We sell it principally to Cowlshaw Brothers here, and they arrange to take it over.
3317. I suppose they have a yard there? No; they supply Howard Smith and Company, Huddart Parker and Company, and the Adelaide Company.
3318. They do not sell coal to private consumers at all? I do not think so.
3319. We have evidence to the effect that a number of the large purchasers of coal sell a certain proportion for domestic purposes, which coal has to be screened;—the original purchaser pays some 7s. a ton for it all round, and perhaps only realises 3s. or 4s. on a portion of it; so that the coal would be more valuable if it were less broken up, and the influence of competition would be to enable them to pay you better prices, would it not? I do not know whether we would get a better price. I admit that they would reap a benefit if it were not broken up.
3320. How the benefit would be distributed is merely a matter of time? There would be a benefit, I admit that.
3321. What kind of waggon have you? Steel hopper waggons.
3322. Have you any box-waggons? No.
3323. Have you any objection to the use of box-waggons? We have no objection, but we think the steel ones would last longer.
3324. They cost somewhat more? Yes.
3325. You think it is rather more economical on the whole to use steel-waggons than box waggons? I am not competent to say that, but from my knowledge I would think it was.
3326. As the secretary, you would know the business reasons why the steel waggons were purchased? It is principally left to the colliery manager. What he advises, the Board of Directors consider, and they generally act upon what he says, if they, in their own minds, think he is right.
3327. Have you ever had box-waggons? No.
3328. So that you have no idea as to what is the expense of shipping by box-waggons as compared with the hopper? No.
3329. Have you anything you would like to lay before us? No, unless it is with regard to the appointment of an inspector to see that the coal is properly trimmed. I do not think that would do any harm to the port.
3330. You are in favour of it? Yes.
3331. Is that a personal feeling, or do you speak for the owners? It is my own feeling.
3332. Do you know any reason why it would injure the owners? I do not think it would. I think it would benefit them.
3333. Would you be prepared to pay a share of the expense? That is another matter altogether.
3334. *Mr. Pittman.* You do not think one inspector would be enough for the port of Newcastle? You see a number of vessels are loading there at the same time. I think if the waggons were lowered down almost to the floor of the ship there would be much less coal broken, and much less dust than there is when the coal is dropped down 30 feet.
3335. It would cost something more to do that? I do not think it would. The cranes are there, and are hauled up to the level of the deck; but I do not know whether they could lower them down to the bottom of the hold.

[Witness withdrew.]

Mr.

Mr. W. A. Firth sworn and examined:—

- W. A. Firth. 3336. *President.*] What is your name? William Arthur Firth.
 18 Nov., 1896. 3337. What is your business? I am the Manager of the Southern Coal-owners' Agency—that is, the Associated Collieries of the Southern District.
 3338. What is the nature of your duties? I am the commercial salesman for the whole of the collieries.
 3339. Have you had any trouble through any of the coal heating from any of your collieries;—has the cargo of any ship been reported to you as having heated? No.
 3340. Most of your business is done with intercolonial ports? Most of the trade in the south is for steamers' bunkers. We, however, export to China, Shanghai, Singapore, and America, but nothing like what we used to do. When I was Secretary to the Mount Kembla Company (in the old days) we used to have an export trade of 60,000 to 70,000 tons a year in sailing ships alone. We never had any experience of coal-heating at all.
 3341. What has caused the trade to fall off? Strikes; that is my opinion about it.
 3342. Your loading facilities are not good for sailing ships? We never load sailing ships down south. We have to bring the coal to Sydney by colliers and load them here.
 3343. That is an expensive business? It is the thing that is killing us at the low prices. We have to maintain these steam colliers.
 3344. Have you had any trouble down south through the ships being improperly trimmed at the jetties? We have never had any trouble at all in regard to the trimming.
 3345. Do you load many large ships as compared with Newcastle? In loading from the jetties direct lately we have sent away about 20,000 tons to Bombay in big steamers.
 3346. How many tons do these steamers take? The "Sonueberg" took over 4,000 tons, the "Echuca" 2,800, the "Gulf of Anecd" over 3,000. The "Port Phillip" has been there twice for 2,600 each time, and the "Port Adelaide" over 3,000.
 3347. There has never been any accident from insufficient trimming? Never in the slightest.
 3348. There has been no case of a vessel shifting her cargo? Not reported to us.
 3349. Are there master trimmers who contract for the work? I fancy it is done on the co-operative principle, but I could not say for certain. One man arranges it, but I think they all go shares in the business.
 3350. There are no boss trimmers? I do not think so. One man tenders for the work, but, as far as I know, they are all on equal shares. I have never gone into the matter.
 3351. What price do they get for trimming, as a rule? I have had to pay as much as 4½d. a ton.
 3352. For steamers? Yes.
 3353. Is more paid for steamers than for sailing ships? I should say less, but that is the price we have paid down there. For the last cargo we sent away we paid that price. It goes from 3½d. to 4½d.
 3354. Are you aware that at Newcastle they trim for 2l. sometimes? Port Kembla is an out-of-the-way place. The men have to come from Wollongong and the surrounding district, and have to come round the beach about 4 miles. I suppose we could get it done cheaper if we were in close connection with the town.
 3355. The coal must be very much broken up by dropping the great height from the spouts into the hold of the ship? We load by means of shoots, and the big coal flies away in the wings of the collier as it is shipped, leaving the smaller coal in the centre of the hatch. I do not think we could get a much better way of loading than we have at the present time.
 3356. Could you get a better price for the coal if less broken? The coal trade is very funny at the present time, it appearing to me to be a matter of price not quality.
 3357. You send some coal to Melbourne, for instance? A lot of Mount Kembla coal goes to Melbourne.
 3358. Is it used exclusively for ships, or for domestic purposes, or is it too dirty for domestic purposes? There is a great mistake in thinking southern coal not suitable for house purposes. I use it in my own house, and people that I have given it to, when the domestic servants get used to the coal, prefer it to Newcastle coal. It is a cleaner coal than Newcastle coal for household purposes, if they know how to work it.
 3359. It is not much used for domestic purposes? It is not; 90 per cent., I suppose, of the whole of the coal is used for steam purposes.
 3360. Some is used for domestic purposes? Perhaps about 10 per cent. We send a lot of coal to the retail yards on the railway, and it must be used for household purposes.
 3361. But only to about the extent of 10 per cent.? I do not think it is more—if it is that.
 3362. I suppose the domestic consumer will have his coal fairly whole? Yes.
 3363. So that the coal-merchants have to screen it before they sell it? I suppose they have to. A lot of customers simply take a truck at a time as it comes away from the mine. Pretty well all the coal that goes to Melbourne is used for the railway or for bunkering steamers.

[Witness withdrew.]

Mr. T. Kerr sworn and examined:—

- T. Kerr. 3364. *President.*] What is your name? Thomas Kerr.
 18 Nov., 1896. 3365. And what is your business? Secretary to the Metropolitan Coal Company at the present time.
 3366. You ship your coal to Sydney chiefly, do you not? We do.
 3367. And what is it used for when it gets to Sydney? I have nothing to do with the selling part of the business; that has been transferred to the southern agency; my work is simply the secretarial work.
 3368. You do not know who buys it? No; the Southern Agency pay us a certain price for our coal, and they attend to the selling themselves. All I have to do is to see to the matter of the charge between the mine and the agency.
 3369. *Mr. Pittman.*] Is that Mr. Firth's company? Yes. Most of the southern collieries are amalgamated.
 3370. *President.*] You have no experience of the management of the mine? None whatever.
 3371. Or shipping experience? Not at all.
 3372. You represent the proprietors to some extent? I am in the employ of Messrs. McArthur & Co. We act as a sort of managing agents. We represent the London office in Sydney. 3973.

3373. Is there anyone in Messrs. McArthur & Company's who more directly represents the owners than you do? The manager at the mine would be the man to give information in regard to the coal. It is only within the last two or three weeks that I have taken over the work. T. Kerr.
18 Nov., 1896.

[Witness withdrew.]

FRIDAY, 20 NOVEMBER, 1896.

[The Commission met at 2:30 p.m. at the Custom House, Newcastle.]

Present:—

PROFESSOR RICHARD THRELFALL, M.A., PRESIDENT;
And EDWARD FISHER PITTMAN, Esq., A.R.S.M.

Mr. J. Brown, sworn and examined:—

3374. *President.*] What is your name? John Brown. Mr. J. Brown.
20 Nov., 1896.
3375. And what is your business? Merchant.
3376. Are you a colliery proprietor? Yes.
3377. Of what colliery? Brown's Duckenfield Colliery.
3378. Have you any other colliery? No.
3379. I understand you wish to give us some evidence. Mr. Brown? I do not know that I want to give you any evidence in particular. I may say I have read a good deal of the evidence that has been given before this Commission, and many statements have been made, and I certainly should have been disappointed if I had not been called.
3380. Do you insure your coal yourself? No.
3381. Do you do a considerable over-sea business? Yes.
3382. Where does your coal go to? To all parts of the world.
3383. You never do any insurance yourself? We insure at home, but also in the colony.
3384. When you sell coal, do you always sell it f.o.b. at Newcastle? We sell it c. f. and i.
3385. That is when you insure? Yes.
3386. You insure wherever you can get the best terms? Yes.
3387. What rates are you paying now? It varies. I think we pay the lowest of any colliery in the colony at the present time.
3388. Do you send coal to San Francisco? Yes.
3389. What rates do you pay then? I hardly think that is a fair question to ask me, as I do not see what it has to do with the losses of coal cargoes.
3390. You must leave us to decide that, I think;—do you object to answer that question? I shall decline to answer the question, as it is a matter that concerns our business.
3391. I do not think it is any use our asking you anything else;—if you do not care to answer our questions it is no use asking you about things we do not want to know? I think that is an unfair question to ask me, because it is a matter of business. I do not think it is a matter affecting this Commission.
3392. I think you must permit us to judge of that;—if you object to answer, there the matter ends, and we have nothing more to ask you? I always understood if a person came to give evidence he had a right to object to give answers to questions.
3393. And you have objected. As you will not answer our question it is no use our proceeding further.

[Witness withdrew.]

Mr. J. Reed sworn and examined:—

3394. What is your name? John Reed. Mr. J. Reed.
20 Nov., 1896.
3395. And your business? Screen overscer of the Wallsend Colliery.
3396. You have a considerable quantity of coal stored in a hopper? Yes; we have at different periods.
3397. You have two hoppers? Yes.
3398. How much do the hoppers hold when full? 3,000 tons—the large one.
3399. What kind of coal do you store in the hopper? What we call small coal.
3400. That is coal that has passed through the screens? Yes.
3401. And that coal is always sold to gas companies, or for similar purposes? Yes.
3402. Does the coal ever heat in that hopper? Yes.
3403. Has it ever got dangerously hot? Not to my knowledge; not what we would call dangerously hot.
3404. Nowhere near firing? I do not know exactly how many degrees it would have to run up to to catch fire.
3405. Did it ever get so hot that you could not bear your hand on an iron bar that had been put down? You could catch hold of it, but not for any considerable time. It was what you would call very hot.
3406. Not so that it actually frizzled your skin? No.
3407. Have you noticed any connection between the heating of the coal and the state of the weather? I have noticed that after rain, and then several hot days, it had a tendency to become warmer.
3408. Had it a tendency to become warmer after rain, even if the days were not hot? I think so, if it stayed long enough.
3409. How long after rain do you consider would be requisite before the moisture would take effect? I think you would notice the difference in a week, in the whole body of it.
3410. It is important to know whether wet alone will cause the coal to heat, or whether wet and hot weather are required;—have you noticed that rain by itself has a tendency to cause coal to get hot? Speaking from experience, I think with that quantity of coal standing—small coal—you could see the effect of heat in the winter-time after rain.
3411. The effect of rain in producing heat? Yes.
3412. If you had hot weather at the same time as rain you would naturally expect the effect to be greater? I think it would get hot quicker in the summer-time.
3413. You have yourself, from your experience, formed an opinion that wet does tend to heat coal? Yes.

- Mr. J. Reed. 3414. You have a very strong opinion to that effect? Yes; in fact, nearly all the lads reared about the colliery seem to have the same opinion—those that have had anything to do with small coal.
- 20 Nov., 1896. 3415. How deep is the coal in the hopper when the hopper is full? The deepest coal would be about 30 feet.
3416. What is the depth of the shallowest part? Eleven to 12 feet.
3417. Does the coal get hot in the shallow end as well as in the deep end? Not nearly so hot in proportion.
3418. Whereabouts does the heating generally occur? In the deepest part, a reasonable distance away from the end. I have noticed that a few feet from the planking all round does not get hot. I should think that would be the effect of the air, and the same from the floor. You cannot get any hot coal until you get a little way in the bulk of it, when it comes through, or if you try it with an iron bar, it is not hot at the bottom.
3419. What is the shallowest coal that has ever got hot? The shallowest coal that I ever noticed was the very day you were there.
3420. Where we were standing? Yes; that was nearly on the surface.
3421. What do you consider the shallowest heap that would be likely to heat? I have never given any consideration to that point—I have not taken any notice.
3422. You have noticed coal 12 feet thick warm, but not hot? Not to say hot in comparison with the high portion further back in the hopper.
3423. I suppose where it is 20 feet thick it becomes fairly hot? Yes; a certain distance up from the floor.
3424. With regard to the hot and wet coal we felt the day we were at the colliery, do you think that coal was hot before it was put into the hopper? No.
3425. It was cool coal? Yes.
3426. It came straight from the mine? Yes. I would take it that was the result of heat from below for that to be hot there so near the surface.
3427. So that the coal that was wettest, and was also the hottest, might have been simply wet from the steam having been distilled up from below? Yes.
3428. It had come from the coal below and been condensed on the surface? Yes; it is quite possible.

[Witness withdrew.]

Mr. W. B. Sharp sworn and examined:—

- Mr. 3429. *President.*] What is your name? William Bethell Sharp.
- W. B. Sharp. 3430. And what is your business? General merchant and shipping agent.
- 20 Nov., 1896. 3431. Have you anything to do with collieries? I am shipping manager for the Pacific Coal Company.
3432. Are you connected with any other collieries? No.
3433. Do you insure the cargoes of coal from the Pacific Colliery? No; that is all done in Sydney. I have just been appointed shipping manager—this week.
3434. You represented some company before? Yes, Dalgety & Company, Limited. I started their business here.
3435. You have been accustomed to shipping cargoes? Yes; for the last twelve or fifteen years.
3436. Where does the coal mostly go to? San Francisco, Manila, the west coast of America, Colombo, &c.
3437. What kind of insurance rates used you to pay for ships going to San Francisco? Thirty-five shillings to 40s. per cent.
3438. What rates have you to pay now? I believe they are as high as £5 or £7 per cent. In fact, I saw a policy the other day on a ship to Honolulu. They had to pay £7 to the London underwriters, and the same risk was taken by continental companies at 40s. The most extraordinary thing is that if a certain coal was shipped there was a reduction of 20 per cent.
3439. Which coal was that? Duckenfield.
3440. They undertook to insure Duckenfield coal at lower rates? They undertook to make a reduction of 20 per cent. on Duckenfield coal.
3441. Insurance is a very considerable item on the cost of cargoes? Yes; it is a ridiculous charge. There is no more risk now than there ever was.
3442. The underwriters think there is a risk? The underwriters are a good deal like other people—like a flock of sheep. It will go down to its level before long.
3443. You think that if nothing is done rates will come down? I think so; but I have been very strongly of opinion all the time we ought to have some supervision of the trimming.
3444. I suppose the average value of a cargo of coal to San Francisco is over £1, including all charges? Landed there it would be about 20s. or 21s.
3445. Five per cent. insurance on that would be about 1s.? You do not insure the whole risk. You do not insure the freight.
3446. Somebody must? Yes; it is insured on the round. The owner would insure his ship for the twelve months at so much per cent., and she could trade where she liked; and he would insure the freight likewise.
3447. Would he not have to say where he was going to sail? He probably would have to give an indication.
3448. Where would that insurance probably be effected? In London.
3449. I understand the London underwriters are looking very shyly at coal risks? They are at the present time.
3450. And if they knew the ship was going to take this coal the owner probably would have to pay a proportionately higher rate? It is quite probable he would have to.
3451. Perhaps we may say about 1s. a ton would be the cost of insurance, taking everything into consideration, on a cargo of coal? I do not think it would be a fair thing to take the freight in.
3452. What would you think a fair thing? The value of the coal—7s.
3453. It would be 5 per cent. on 7s.—about 4d. as the cost of insurance? Yes.
3454. So that in any case 4d. goes for the insurance of coal? Yes.
3455. Many witnesses have been of opinion that some form of supervision is desirable in the matter of trimming;—have you any opinion on that point? I think there ought to be Government supervision of trimming here.

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3456. Why should Government money be spent on supervising the trimming;—why should not some part of the trade bear it? The Government get enough out of it; they get royalties on most of the coal; they get other advantages; they get dues for shipping and loading the coal.
3457. But they spend money on the harbour? That is a reproductive work; it pays them for all they spend on it handsomely.
3458. Supposing it did not pay them, would you recommend that they should still pay for the inspection? Certainly; it would be better than forest-thinning, or sand shifting.
3459. I do not ask your opinion as to the Government policy, but as to whether it is desirable that the Government should pay for the inspection? I think it is desirable.
3460. I presume you would not consider it fair that the coal-owners, or the shippers, or the purchasers, should be asked to contribute? I think the Government get quite enough out of them. They not only get charges for shipping and loading the coal, but they get the cost of traction through the Railway Commissioners.
3461. Do you consider the Railway Commissioners work at a profit? Certainly.
3462. Have you any means of estimating that? Take their last quarter's report (during the strike), and you will see the excuse given for the falling-off was on account of the Newcastle trade.
3463. You think a comparison might be made in that respect by comparing the last quarter's with the previous quarter's report? Yes.
3464. That is, you could make an estimate of the profit derived by the Railway Commissioners from the coal trade by comparing the last report with others? Yes; you could do so.
3465. *Mr. Pittman.*] Have you any idea what the profit is that the Commissioners make? I should estimate it at about 4d. a ton.
3466. They make a clear profit of 4d. on every ton shipped? Yes.
3467. *President.*] What do they charge? From 6d. up to 1s. 4d., which, I think, is the highest they charge. It is a mileage scale.
3468. *Mr. Pittman.*] Have you any direct means of arriving at that, or is it merely an opinion you have formed? It has been worked out; it can be calculated from the railway returns.
3469. *President.*] Have you calculated it? No.
3470. Do you know anybody who has? Yes.
3471. How do you arrive at 4d.;—is that an opinion, or the result of calculation? It is the result of seeing what the Railway Commissioners charge for engines.
3472. It is the result of calculation? Yes; I think *Mr. Keightley*, of the Newcastle Coal Company, has made a calculation.
3473. That is *Mr. Keightley's* estimate? Yes. It is easy enough calculated. An engine takes so many trucks, and there is a regulation charge for that engine; what they charge over and above that for traction of the coal is profit.
3474. The traction must be taken into consideration? Make a fair allowance for that.
3475. *Mr. Pittman.*] And interest and depreciation? That would not be very much.
3476. On what? While the train was running.
3477. *President.*] There was a large expenditure at the Dyke, on which interest has to be paid? They got all those works for nothing; the Railway Commissioners never paid for them.
3478. Somebody paid for them? The Harbours and Rivers Department.
3479. They are handed over to the Commissioners to work on business lines? Yes.
3480. The fact is, the country has spent so much money, and the Commissioners are entrusted with the works in the public interest? That land is valuable land, and it could be sold for ten times more than what it cost to be made, and the Railway Commissioners have got the land as a gift.
3481. The Railway Commissioners hold that land as public property for a certain purpose? I fancy they have never paid any interest at all on it.
3482. I am surprised, *Mr. Sharp*, that people should have the audacity to suggest that because the Railway Commissioners were not charged for the capital cost of those works, therefore the works should not be expected to pay interest? The Railway Commissioners are making a very good interest. You can take the export of coal at 2,000,000 tons and reckon what the traction is; it is only a matter of calculation.
3483. *Mr. Pittman.*] That is the gross profit, not the net profit? You have got the other particulars in the Blue Book—what it costs for working, and all that—and you will find it comes out as near as possible at 4d.
3484. *President.*] I quite understand that if the Government can be got to pay for the inspection everybody would be only too willing to allow them to do so? The Government pay for inspection for overloading of ships, why not for loading. I think the Government should supervise the trimming; it would be much more satisfactory to everybody, especially for saving lives at sea, and to see that the product was sent away in proper order. There is no doubt about it, in my opinion, that there is a good deal of laxity in the trimming, on account of the cheap rates that are paid. They do not put the men on until they have run up hundreds of tons of coal, and then there are large spaces very often left under the stringers.
3485. *Mr. Pittman.*] What do you think a fair rate for trimming? About 3d. It all depends upon the ship. Some ships have 'tween decks laid, and you could not get a ship like that done without putting in 4½d. or 5d. to make a proper job of it. With the modern ships that are all open you can put 900 or 1,000 tons of coal in without stopping—without putting a man on.
3486. Would you have inspection combined with licensing of stevedores? Yes.
3487. That would reduce competition? No; there would be about twelve or fourteen trimmers. In any case the inspector could regulate it so that every man had a fair share of the work.
3488. You do not think it is the duty of the Government to see that each man gets a fair share of the work? I think it is the duty of the Government to try to make everybody as comfortable possible.
3489. You would not advocate the Government paying for inspection to see that each man got a fair share of the work? I think the Government should inspect simply for the benefit of the whole of the sailing population visiting here; for the good of the port and the product of the country. If the trimmers were licensed I suppose they would pay something for the license. They would have to pass certain examinations.

- Mr. W. B. Sharp. 3490. *President.*] Is there anything else you would like to lay before us? No. I think most of the ships have been lost by bad trimming not by spontaneous combustion. They are very careless in sending a vessel away from here.
- 20 Nov., 1896. 3491. That is a mere impression? Yes; it is impossible to say why the ships are missing.
- [Witness withdrew.]

Captain T. Williams sworn and examined:—

- Captain T. Williams. 3492. *President.*] What is your name? Williams.
- 20 Nov., 1896. 3493. And your christian name? Thomas.
3494. You are the master of the "Cambrian Chieftain"? Yes; on the present voyage.
3495. Were you the master of that ship in 1894? No, sir.
3496. What ship were you master of? The "Cambrian Queen."
3497. Have you had a case of shifting of cargo? The "Cambrian Chieftain" shifted her cargo last voyage; I was not master then.
3498. Were you on board? No.
3499. Have you ever been in charge of a vessel on which the cargo shifted? Yes.
3500. What ship was that? The "Cambrian Queen" shifted a cargo taken from here.
3501. A coal cargo? Coal and coke.
3502. Where did she shift the cargo? Off New Zealand.
3503. Had you shifting-boards up? Yes.
3504. It shifted in spite of the boards? Not very severely.
3505. Did it shift sufficiently for you to put into port? No.
3506. Where were you going to? Mollendo, on the coast of Peru.
3507. You were able to get through all right? Yes.
3508. Was the cargo badly trimmed? It was not exactly badly trimmed. I think it could have been better done.
3509. Did you superintend the trimming yourself? Yes; as much as I could.
3510. Were you down below when it was done? Several times; not always.
3511. Had you any of your officers down below? Yes; the mate.
3512. What sort of ship was it? 1,200 tons.
3513. An iron or steel ship? Iron.
3514. Had she open tween decks? Partly; mostly covered.
3515. Where did you have shifting-boards? Some 4 feet above the keelson, right up to the bottom of the deck.
3516. All the way fore and aft? From abaft the foremast to the mizenmast.
3517. What part of the cargo was it that shifted? It is hard to say.
3518. Did you retrim it? We trimmed the coke and coal. The cargo generally shifts bodily, and then you have to retrim where you can.
3519. In what direction did it shift? It shifted to starboard.
3520. Was it during a gale of wind? In a very heavy storm; but afterwards the weather moderated, and we retrimmed the cargo.
3521. Was it over to starboard the whole length of the ship, or only at one part of it? It all more or less shifted; it was higher up on one side than the other.
3522. It was higher up on the starboard side both forward and aft? There was no coal in the fore hatch. She was full from abaft the foremast to the fore part of the mizenmast, and it sloped down each end. In a case like that you do not look as a rule to see where it shifted, but you try to trim it back again as soon as possible.
3523. Have you had any experience of coal-heating on board ship? Never.
3524. And that was your only experience of coal-shifting? Yes.
3525. It was during bad weather? Yes, very exceptional bad weather.
3526. In your opinion, which is the most dangerous circumstance causing the coal to shift—is it the pitching of the ship or the rolling? It is the heavy lurching; but the shifting can be avoided to a great extent by better trimming of the coal, and using shifting-boards.
3527. You believe in shifting-boards? Yes; but all vessels have not got them.
3528. If you had not had shifting-boards you would have been in a worse plight? We should have been on our beam ends possibly.
3529. You think shifting-boards do constitute a good cure? Not always, sir; sometimes your shifting-boards give way.

[Witness withdrew.]

FRIDAY, 11 DECEMBER, 1896.

[The Commission met at 2:30 p.m., at the Chief Secretary's Office, Sydney.]

Present:—

PROFESSOR RICHARD THRELFALL, M.A., PRESIDENT;

And EDWARD FISHER PITTMAN, Esq., A.R.S.M.

Mr. H. McLachlan, Secretary for Railways, sworn, and examined:—

[Mr. McLachlan handed in a statement (*Appendix B*), at the same time making several explanatory remarks in regard thereto.]

- Mr. H. McLachlan. 3530. *President.*] Do you know whether it is a fact or not that some of the cranes at Newcastle are so short in the jib that the hoppers cannot be lowered into the holds of the ships? Not of my own knowledge.
- 11 Dec., 1896. 3531. Have you heard that it is so? I think there are one or two that may be short; but Mr. Thow or Mr. Firth could give you that information. Mr. Russell, I think, said he could lower the hoppers if the hatches of the vessels would admit of it.

3532. Mr. Russell is no longer the contractor for the cranes? He is until the end of the year, when the crane employees are likely to have the work.

3533. *Mr. Pittman.*] Does that mean the stvedores or the trimmers? No; what are called the crane-boys.

3534. Not the trimmers? I think they are associated; it is called the Crane Employees' Association.

3535. *President (referring to statement handed in)*] Do you, as a matter of fact, provide twenty-two engines? No, we do not; but still they are available. The engines are used for other business; but if you were working that traffic and no other you would have to have that maximum number of engines. If the coal trade only requires six engines on any day, use could be made of the engines for other business. Very few engines are used purely for any particular business.

3536. *Mr. Pittman.*] You have not ever employed twenty-two? Nineteen is the maximum; but a certain proportion must be allowed for engines laid up for repairs.

3537. *President.*] You have reckoned the expenses of twenty-two? Yes, so far as the capital is concerned. In the loco. charges are included the wages of engine-drivers, guards, men in charge, cleaners, and stores.

3538. For the twenty-two engines, or for the number of engines actually employed? They are the actual daily out-of-pocket expenses in working the coal traffic.

3539. Does it include interest on the cost of twenty-two engines? That is included.

3540. The whole of the interest? Yes.

3541. That seems to be rather loading the amount if the twenty-two engines are not always employed? You would have to have that number if you were working the business. Supposing you took half of that—eleven, say, at £3,000—£33,000,—it would only amount to £1,200 or £1,300 a year, which is not a big item.

3542. With regard to the proportionate cost of the main line, does that mean the proportionate cost of a single line? It means the cost of equal to a single line.

3543. You added the line for the coal business? Yes.

3544. I understand you have the two lines? There is a double line in the coal district.

3545. And you have charged interest on the cost of one of those two lines? Yes.

3546. Have you charged any interest on the cost of the other line? No.

3547. Do these items, put down as interest, include depreciation? No, simply interest; the statement does not provide for renewals or depreciation.

3548. What interest is charged—that at which the money was raised? No, it is taken at 4 per cent.; probably some of the earlier money would have cost more than that.

3549. You averaged it at 4 per cent.? Yes.

3550. I may take it from you that the Railway Commissioners are not in a position to make any reduction in the rates charged for the haulage and shipment of coal? They think not; they think the charges are reasonable, considering the services rendered.

3551. The question of rough treatment has been mentioned by several witnesses;—what sort of state is your permanent way in there? In an excellent state.

3552. The rough treatment is not then the fault of the road? I think they complain that the engine-drivers shake the trucks unduly, and that Russell really handled them roughly. The matter has been looked into more than once. The trucks themselves in many cases are weak and defective. The road is excellent, and we are assured that proper care is taken in driving. There are men to watch it, and they take every care.

3553. Is there any objection, from the point of view of the Commissioners, to tarpaulins being put over the coal, supposing it were found requisite to keep the coal dry? The cost of the tarpaulins would be an item, and then there would be the matter of delay and labour. I am afraid it would be rather an expensive item to attempt to cover the trucks. It has never been looked into, so far as I am aware.

3554. So that you can only give us your impression on that point? Yes; nowhere is coal covered with tarpaulins.

3555. This is rather an exceptional port;—the combined heat and wet are circumstances which do not occur in England? It is a point that has not been looked at.

3556. The colliery owners would have to provide the tarpaulins? Yes; that would be part of the equipment of the trucks. There would be a good deal of labour in it too—roping and covering up the trucks.

3557. The tarpaulins would be small, and not like those for covering wool? You would have to have them carefully fixed to give a certain pitch.

3558. *Mr. Pittman.*] The loads would be all about the same height—it will not be like a mixed-goods train? The Victorian people used to have a ridge on their trucks; but I do not think it was altogether satisfactory—that is for loading produce. They had a girder or small ridge running a certain distance above the trucks.

3559. *President.*] It would make no difference to you whether the collieries have hopper-waggons or box-waggons? I would not like to say. I have not been practically engaged in loading and unloading; it is largely a matter of the unloading. So far as the hauling is concerned it would not make much difference.

[Witness withdrew.]

Mr. C. W. Darley sworn, and examined:—

3560. *President.*] What is your name? Cecil West Darley.

3561. And what is your office? Engineer-in-Chief for Public Works.

3562. You were associated, I believe, with the Harbours and Rivers Department at one time? I was the Engineer-in-Chief of the Harbours and Rivers before that office was abolished.

3563. Did you not erect at Newcastle the cranes for the loading of coal? Yes; I was sixteen years in Newcastle in charge of the erection of all but the last four cranes.

3564. The last four you did not erect? No.

3565. What is the average lifting power of the cranes, Mr. Darley? There are two cranes that will lift 25 tons; but they also have the 9-ton ram. There are six of the 9 and 15; and four of the 9-ton, without the compound ram.

3566.

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Mr.
C. W. Darley.
11 Dec., 1896.

Mr.
C. W. Darley.
11 Dec., 1896.

3566. We understand the length of the jib of the cranes is not the same in each case? They all vary, and some of the cranes are further back from the face of the wharf than others.

3567. Would it be very difficult to lengthen the jibs of the cranes? No.

3568. Some of the cranes are said not to allow of the hoppers being lowered down to the bottom of the holds of the ships? There are five of the cranes which will reach the centre of any ship going to the port. Those known as the No. 6 and No. 11—the two 25-tons, and the four 9-ton power.

3569. But the six 9 and 15 tons? They will not.

3570. Can you give us any idea what it would cost to alter those six cranes so that they would be able to lower the hoppers down the holds? It would have to be done with care, because they would be no longer 15-ton cranes, with the expanded jib; but seeing that the loading is all done with the 9-ton lift it would be quite safe for ordinary working to extend the jibs.

3571. How much do the hoppers hold—about 10 tons? The whole box and all very rarely exceed 9 tons. There are a few hoppers now belonging to the Railway Commissioners which, I believe, carry 10 tons, but they are not often unloaded in Newcastle. I have never known the 9-ton cranes to refuse any hopper in Newcastle. There would be no risk in extending the jib; the foundations would be strong enough with the increased reach for 9 tons.

3572. It would not be a very expensive matter? I do not think it would. It would only need about 7 feet on end of each jib.

3573. Then really the only cost would be that piece of blacksmithing? £50 a crane ought to do it.

3574. It would not take very long to alter them? No; there are a large number of ships going to the port so constructed that the hoppers will not go down the hatches.

3575. Those ships that have the hatches large enough will reap the benefit? You have to take into consideration how it is going to increase the cost; it will very nearly double the cost of shipping the coal.

3576. The loading is only about one penny and a sixteenth, or one penny and an eighth? That would be very nearly doubled, for this reason, if you double the distance you move the waggons, you double the quantity of water, and thus double the cost of pumping, because it would be moved through far more than double the space at present necessary.

3577. The incidental expense is a very large item, and that would not be doubled? There is the extra time in lowering down and hoisting up.

3578. The contractor has been for some time in the habit of lowering the waggons down for anyone who wished it without extra charge, and several witnesses have told us they do not think it possible the extra expense would come to more than $\frac{1}{2}$ d. a ton. However, it would not be necessary to lower the whole of the coal down, but only until the heap is built up? You cannot wind up so quickly; you must steady coming up in case the waggon catches in the hatches.

3579. The time is not spent now in the crane going up and down, but in getting the waggons along the sidings, and very often in waiting for the trimmers to clear the coal away, so that there would really be practically no delay? It would only be in the first portion of the coal; once you have a cone of coal in the way of the hatch the necessity would cease.

3580. Have you taken any interest in the subject matter of the inquiry of this Commission, as to the prevention of spontaneous combustion of coal cargoes? No, I have not.

3581. You have not formed any idea as to what would be the best way of loading coal so as to minimise the danger of heating? I have not. I may say I have had a good deal to do with coal loading in South Wales, at Swansea. I was engaged there for some two years in connection with the railway works. They have Armstrong's hydraulic appliances there, and they ship a great deal of patent coal, compressed blocks, which used to be made there, and they all had to be lowered down to the bottom of the ships very carefully. The hydraulic arrangements there are quite different. They have very large gantries, and the waggons come underneath at a high level, and are picked up and dropped forward. They have high sheerlegs which pick up the waggons—all square boxes. As soon as the waggons are picked up the sheerlegs go forward and plumb the hold, and the boxes go right down, and the load is landed on the bottom.

3582. Do you know what is the object inducing all the collieries to use hoppers in place of boxes? Because they could not make the boxes the size of the hoppers. In the old days the cranes were smaller, and it took two lifts to discharge the waggons. The boxes I speak of at Swansea are much larger, because they are on the broad gauge. They are nearly as large as our hoppers. They are straight-side boxes, and are easy to put down the hold of a ship. They could not tip in the patent coal, which is shipped to the West Indies for the Naval station. The seam coal is brittle, and they were careful not to break it. It was with the object of preventing the breakage of the coal, not with any idea of gas.

3583. *Mr. Pittman.*] They have superseded those loading arrangements at Cardiff by the Barry Docks; they have the hydraulic lift, and they load the first portion of the coal with small boxes? Yes; there are one or two of those lifts, but they are not generally adopted. They are adopted in Cardiff, but not many of them.

3584. *President.*] Did any cases of heating of coal cargoes of Cardiff coal occur while you were there? I do not recollect any. My experience of Newcastle is that I cannot call to mind any case of explosion or heating being reported before about ten years ago. I do not recollect any cases being reported. It is only, comparatively, of late years that we have heard of this.

3585. Have you any opinion as to whether the wetting of coal is a circumstance likely to assist the spontaneous heating of coal;—have you any facts? I have no facts. I should think all the cranes that require altering could be altered for £300 or £400. There are three 15-ton steam cranes at the lower end of the Dyke; they are the old cranes formerly on the Newcastle wharf.

3586. I suppose they are only used when the hydraulic cranes are fully employed? Yes; some of the smaller ships are put under them.

3587. They are used entirely for the smaller vessels? Yes.

WEDNESDAY, 23 DECEMBER, 1896.

[The Commission met at the Chief Secretary's Office, Sydney, at 2:30 p.m.]

Present:—

PROFESSOR RICHARD THERELFALL, M.A., PRESIDENT;

And EDWARD FISHER PITTMAN, Esq., A.R.S.M.

Mr. W. Thow sworn and examined:—

3588. *President.*] What is your name? William Thow.

3589. And what is your office? Chief Mechanical Engineer for Railways.

3590. We understand you have recently paid a visit to Newcastle in connection with an inquiry into the means of loading coal on board ship;—I suppose you will agree with us that the present system leads to very considerable breakage of the coal? Yes, through falling down small hatches; but it does not necessarily do so through the middle hatch if it is big enough to take the hopper waggon bodies, and most of them are.

3591. We believe, however, that some of the cranes have jibs too short to enable the waggons to be lowered down the hatches;—is that the case? I think most of them will, through large hatches, let the waggons down to the bottom of the boat, or to within a few feet of it.

3592. You did not pay special attention to the length of jib of the cranes? No; but I made inquiry about it, and I understood there was no difficulty through the centre hatch in big vessels, and that the cranes would drop the body of the hopper nearly to the bottom of the boat if there was length enough of chain to do it.

3593. We have a report from Mr. Darley which says that there are only five cranes which have jibs longer than 19 feet 9 inches, and that we are told is the length required? I think, perhaps, he may be speaking without recent information. We lengthened two of the jibs quite recently, and there is no difficulty in lengthening some of the others; but, I think, at least seven or eight of the jibs have been lengthened. I think, but I am not very clear, that it was Nos. 9 and 10 that we lengthened quite recently.

3594. *Mr. Pittman.*] Mr. Darley knew that some had been lengthened? Some we lengthened some years ago, and we lengthened two about six months ago.3595. *President.*] Is there any difficulty in lengthening them? I do not think there is very much.

3596. What would it cost to lengthen a jib—would £50 cover it? I should think £50 a jib, but I am rather inclined to think it is the chain that is the difficulty. On some of the cranes there is not sufficient length of chain to allow the hoppers to go right down to the bottom. Where the large vessels are loaded I believe there is no difficulty about it.

3597. On some of the cranes the chains are long enough? Yes.

3598. And by arranging matters the large vessels could be brought under those cranes? That is what I understood they do.

3599. *President.*] Is there any difficulty in lengthening the chain? There might be; the cranes will only take up a certain amount of chain. The stroke of the ram, for instance, has to be met.

3600. Would it mean lengthening the stroke of the ram to lengthen the chain? I am afraid it would, in some cases.

3601. That, I presume, would be a serious matter? Yes.

3602. You have no idea what it would cost? I am afraid it would mean a new crane.

3603. Did you come to any conclusion yourself as to the best means of diminishing the breakage of the coal under the hatchway? The only way I saw was to load the forward and after hatches by smaller boxes—boxes that would go through the hatches and deposit a cone.

3604. Would that be feasible with the present crane arrangements? I think so, as far as the cranes are concerned; but it might be a difficulty with the colliery arrangements.

3605. The system you propose is that the collieries should send out their coal in box waggons? Yes; in boxes small enough to go through the hatches. Probably the boxes would not hold more than 4½ tons each, because they would be limited for height by the position of the screens at the collieries.

3606. Of course, you are aware there is very great objection to that on the part of the collieries? I should think there would be. It would mean a great deal of additional work to them.

3607. And a great deal of additional expense in rolling stock? Yes, they would have to provide that; and then it would also mean extra work in sorting out those waggons and getting them to the ship before any other waggons were sent down. It would impose a difficulty upon the working of the trade.

3608. Is there any alternative you can see? I do not think so.

3609. Is it, for instance, possible to erect some high level tips, from the spouts of which the coal might be dropped into small boxes, as is done at Cardiff? It might be; but that would mean a very heavy expense to re-arrange the yard.

3610. It is possible to re-arrange it? I do not think that it would be impossible.

3611. You cannot give any idea of the probable cost? No.

3612. Would it be tens of thousands? It would be a very heavy matter to re-arrange the yard.

3613. Would it be a matter of £100,000? It would mean going right back towards Hamilton some distance to get sufficient grade to do that.

3614. It would not, I suppose, be a matter of £100,000? It would depend entirely upon the application of that principle. If it were to be applied to all the present loading places where the cranes are, I am afraid it would run into a very large sum. It is very difficult indeed to say how it would work out. It might be applied to one or two cranes, but that would scarcely meet the difficulty.

3615. Have you given any attention to the loading of coal by means of distributors placed through the hatchways? I saw a suggested appliance at Newcastle, but I do not think they have sufficient slope with it to be of any service.

3616. It would prevent the formation of one great heap of "smalls" under the hatchway? It might do that. It did not look to me when I saw it to be a practical thing.

3617. That was your opinion—that it is not a practical thing? I do not think it is a practical thing. It means a great loss of time. One has to be careful, in adopting any plan for this purpose, to avoid lengthening the time of loading of the vessels; it is desirable rather to shorten than to lengthen the time.

3618.

Mr.
W. Thow.
23 Dec., 1896.

Mr.
W. Thow.
23 Dec., 1896.

3618. Almost whatever means are recommended means the expenditure of money, and it is really a choice of evils;—have you formed any idea yourself as to what is the best method, setting aside your position as Chief Mechanical Engineer for Railways? The only means that I can fancy, which would be a natural one, is to take steps to form a cone of coal underneath the hatchway so as to drop the other coal upon it. Of course, in the large vessels, under the larger cranes, there is no difficulty in doing that in the centre hatchway, and once that is formed I cannot see that anything more is required.

3619. We are all agreed on that point; but how are we going to arrange to form that cone under the smaller hatchways? The only way would be to drop smaller boxes through the smaller hatchways.

3620. We have practically elicited from the colliery owners that that is impracticable, and you have yourself said it would dislocate the whole trade? I am afraid it would.

3621. Do you see any chance of making some loading appliance to meet the case? I have not given much thought to that, because I have regarded it as a matter that would not be used by either ship owners or the coal people. It means a lot of money to put such an appliance into a boat and to take it out again; it has to be built up in fact.

3622. I take it, you are in very much the same position as the Commission, viz., we see many ways in which the thing might be done, but at an enormous sacrifice, and we are unable to decide which is the best;—is that your position too? That is exactly the view I take. I suppose the question is not in doubt as to the advisability, on firing grounds, for having some means of depositing the coal without breakage.

3623. I think there is no question about that? In England, of course, they have means for depositing it as far as possible without breakage, but that is for a different reason; it is simply not to destroy the commercial value of the coal. It is not on account, I think, of cargoes firing that that is done.

3624. I daresay it is on both grounds? I have only seen it urged on account of the disadvantage of breaking the coal.

3625. *Mr. Pittman.*] The English Commissioners' Report showed the coal people that a cause of spontaneous combustion was the smashing of the coal;—that was twenty-one years ago; and no doubt they have had that in view when building new shipping arrangements? Yes.

3626. *President.*] Is there anything you would like to lay before us? No; I have no practical suggestion to make.

[Witness withdrew.]

Mr. T. R. Firth sworn and examined:—

Mr.
T. R. Firth.
23 Dec., 1896.

3627. *President.*] What is your name? Thomas Rhodes Firth.

3628. And what office do you hold? Engineer-in-Chief for Existing Lines.

3629. I understand you visited Newcastle recently with a view to see if anything could be done to improve the manner of loading ships with coal? Yes.

3630. How long were you there? I was with Mr. Thow, and we were on one vessel one hour and a half watching the loading.

3631. You were only a day in Newcastle altogether? Yes.

3632. I presume you saw the difficulty of preventing the breaking up of the coal when put on board a ship? Yes.

3633. Did you come to any conclusion as to the best way to remedy that? The only really practical way I can see would be by enlarging the hatchways; and yet that is almost impossible, as the vessels arriving are of so many different sizes.

3634. We have ascertained beyond question, I think, that that is impracticable; setting that aside, have you any alternative method to suggest? There is the alternative means of bringing the coal in small boxes, or something of that kind, on trucks.

3635. That would be a matter affecting the colliery owners? Exactly.

3636. The colliery owners would have to provide the boxes? Yes.

3637. We have reason to believe that many of the colliery owners are not in a financial position to do that? Very probably. Again, it would cause considerable delay as well in loading the vessels.

3638. So that there is an objection beyond that of the cost? Yes.

3639. In fact, it would involve each colliery, when obtaining an order, sending out so many boxes of coal and so many hoppers of coal, which would undoubtedly be very inconvenient? Yes; they would then have to marshal them in the yards just as wanted, and the waggons would have to be shunted out of the road to make room for the boxes.

3640. That would give rise to considerable trouble in managing the yard? Yes.

3641. And would lead to a considerable increase in expense? Yes, and in time.

3642. In this matter the expense depends on the time taken, does it not? When I say expense and time, I mean it would be more expense in loading the coal in that form and likewise would take a longer time to do so.

3643. That method, therefore, may be set aside;—is there any other system you can think of? No satisfactory system.

3644. Did you contemplate the possibility of erecting a high-level system of tips from which the coal could be passed down by spouts into small boxes continuously run up and down by means of a crane? I know such a system could be adopted, but I did not think of it in regard to Newcastle, because it would involve an enormous outlay.

3645. Why would it involve such a large outlay? It would have to be the whole length of the dyke, and there would have to be considerable width to lay the tracks to get up there.

3646. These works would only be used to run up—to use the technical phrase—the smaller hatches; and perhaps in a ship carrying 3,000 tons of coal, 800 tons would be the most carried in this manner;—are you taking that into consideration? To provide for that by means of staging would block up the whole of the wharves to such an extent that you might as well use it for the whole of the loading. I do not see how you could put up the staging. The roads are so close and the sidings so numerous that you could scarcely erect a staging unless it were a complete one. It would be of very little use to run up a staging for the purpose of loading 600, 700, or 800 tons of coal; you might as well make it for all.

3647. As soon as the hatch was run up they would simply shoot the coal on top? Just so; instead of turning the trucks round with the crane, run the whole down the shoot.

Mr.
T. R. Firth.
23 Dec., 1896.

3648. Can you give us any idea as to what such a reconstruction of the loading appliances would cost? No; I could not. It would run into a great many thousands.

3649. Do you suppose it would run into £50,000? I think it would.

3650. Into £100,000? Perhaps not; but the thing at present is so vague. It is a question of putting the staging the full width of the wharf. Perhaps, after some consideration, my ideas might be considerably modified. I have not really studied that matter.

3651. Could an estimate be obtained from your Department as to what a reconstruction of the kind would cost? I think so; we could get out an estimate. I was going to mention that Mr. Thow and I were told that one of the companies used shoots, and these shoots are not satisfactory. They break up the coal very considerably.

3652. They have the shoots only, without the travelling boxes; the coal simply runs out and falls into the hold much as from the waggons; we are speaking now of a system which does not exist at Newcastle, but which does exist at Cardiff for instance, and I dare say at other places, and it is of importance to know what the cost of erecting such a loading system would be? We could get out an estimate. I really do not see that something might not be done to fill the boxes and tip them from the wharf.

3653. That is what we want to do; we wish to have some arrangement whereby not necessarily more than a small fraction of the whole cargo of coal could be lowered by small boxes; in the main hatches of large ships the hoppers would pass down were the cranes suitable, therefore the percentage of coal required to be lowered by means of these boxes is really very small? There is the question whether the boxes would go down. The stays come right across the hatches fore and aft, and that is one reason why the trucks cannot be lowered exactly over these hatches.

3654. It is not owing to the fact of the jibs not being long enough? No; that is not the reason.

3655. It is so with some of the cranes? Perhaps with some of the cranes. In the ship we were on, the "Talus," there was a stay coming from the mast right over the hatchway. In such a case I do not know whether it would be possible to get the boxes down.

3656. It has been shown that many of the cranes require altering, because the jibs are not long enough to lower the hoppers into the holds? The jibs could be lengthened.

3657. The jib could be lengthened, and the chain; but how about the ram? I think you could lengthen the chain without altering the ram.

3658. That depends on whether the ram works its full stroke; if it works its full stroke it is impossible, though you could put in another sheave and reduce its lifting power? Yes.

3659. That might be done in some instances, but not in others; with the 9-ton cranes there is not much margin? No.

3660. Can you give us any idea what it would cost to get the information together which we want? I should say, perhaps, £100; that would be the outside. It seems to me it would be an awkward job to get the best scheme. No doubt a scheme could be got out in a short time; but I am supposing we could get out a good scheme.

3661. It would be no use unless it were a good scheme? It would not do to make a scheme and be dissatisfied with it.

3662. It would not cost more than £100? I certainly would not spend more. I put that as the outside limit. It would be more likely from £30 to £50.

3663. Is there anything you would like to lay before the Commission? No, I do not think there is. I really felt in a difficulty when I saw the matter, and I cannot satisfy myself as to what is the best way to get over it.

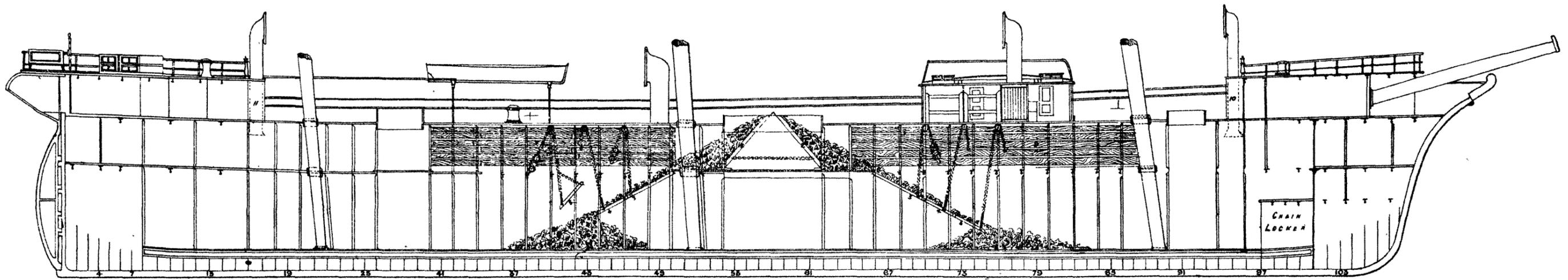
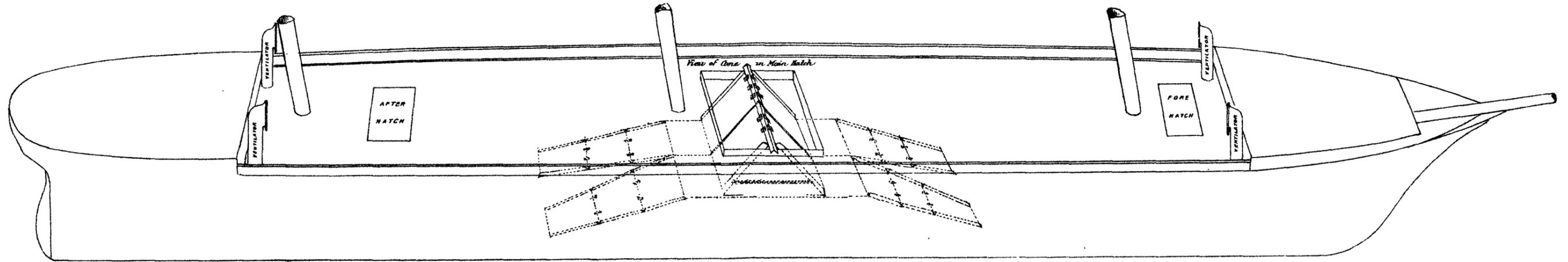
3664. It is a very difficult matter, both from an engineering and an executive point of view, I may say? It is very difficult. I came away very dissatisfied and have been dissatisfied ever since.

3665. Are you dissatisfied with the present system? I can see there is a fault in that. It is very clear the coal is smashed up in the loading; there is not the slightest doubt about that; and under the present arrangements that cannot be avoided.

[Witness withdrew.]

[One plan.]

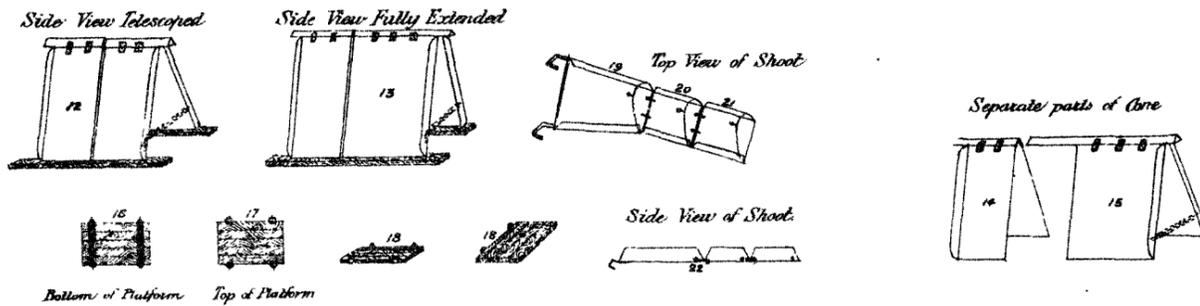
DECK VIEW.



SPENCER'S PATENT.

SPENCER'S IMPROVED SYSTEM of LOADING COAL CARGOES at Cranes and Tips, preventing Breakage of Coals while Loading, and shifting of Cargo at Sea: also preventing Fire from Spontaneous Combustion.

316 PAISLEY ROAD, GLASGOW.



FARRISON, PRINTER, GLASGOW.

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE, SYDNEY, NEW SOUTH WALES.

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

LICENSING LAWS.

(PETITION FROM CERTAIN RESIDENTS IN THE DISTRICT OF PETERSHAM IN FAVOUR OF PRESENT RESTRICTIONS UNDER.)

Received by the Legislative Assembly, 6 May, 1897.

To the Honorable Sir Joseph Palmer Abbott, Speaker, and the Members of the Legislative Assembly of New South Wales, in Parliament assembled.

WE, the undersigned Residents of the District of Petersham, humbly desire to bring before your notice:—

- (1) That, according to our knowledge and experience, intemperance is a great and growing evil.
- (2) That increased facilities for obtaining alcoholic beverages tend to increase drunkenness.
- (3) That the true observance of the Sabbath, which forbids unnecessary trading on that day, is essential to national prosperity and greatness.

Therefore your Petitioners wish to place before the Members of the Legislative Assembly their desire in reference to the following clauses, and pray that the law may be so altered:—

- (1) Hours of closing.—That the present hours be not extended.
- (2) Sunday closing.—That no traffic other than that already provided for be allowed on Sundays.
- (3) Duty on Spirits.—That the present duty be not reduced.
- (4) Refreshment to Travellers.—That the restrictions now in force be retained.

And your Petitioners, as in duty bound, will ever pray.

[Here follow 155 signatures.]

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

LICENSING LAWS.

(PETITION FROM CERTAIN RESIDENTS OF NEW SOUTH WALES, MEMBERS OF THE WOMEN'S CHRISTIAN TEMPERANCE UNION, AGAINST ANY ALTERATION OF EXISTING.)

Received by the Legislative Assembly, 1 June, 1897.

To the Honorable the Speaker and Members of the Legislative Assembly of New South Wales, in Parliament assembled.

The humble Petition of the undersigned Residents of New South Wales over the age of twenty-one,—
SHOWETH :—

That your Petitioners are of opinion that the present measure of Sunday Closing has been very beneficial in the reduction of the number of arrests for intemperance, and should be made more effective by the inclusion of the provisions recommended by the New South Wales Drink Commission of 1886-1887; and humbly pray your Honorable House not to consent to any alteration of the law to provide for the opening of public-houses at certain hours on the Sunday, believing that such provision would tend to increase the intemperance at present altogether too prevalent in our Colony.

And your Petitioners, as in duty bound, will ever pray.

[Here follow 245 signatures.]

1897.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

LICENSING LAWS.

(PETITION FROM CERTAIN RESIDENTS OF NEW SOUTH WALES, AGAINST ANY ALTERATION OF EXISTING.)

Received by the Legislative Assembly, 8 June, 1897.

To the Honorable the Speaker and Members of the Legislative Assembly of New South Wales,
in Parliament assembled.

The humble Petition of the undersigned Residents of New South Wales, over the age of twenty-one,—

SHOWETH:—

That your Petitioners are of opinion that the present measure of Sunday Closing has been very beneficial in the reduction of the number of arrests for intemperance, and should be made more effective by the inclusion of the provisions recommended by the New South Wales Drink Commission of 1886–1887, and humbly pray your Honorable House not to consent to any alteration of the law to provide for the opening of Public-houses at certain hours on the Sunday, believing that such provision would tend to increase the intemperance at present altogether too prevalent in our Colony.

And your Petitioners, as in duty bound, will ever pray.

[*Here follow 94 signatures.*]

Similar Petitions were received,—

On 9th June, 1897, from certain Residents of New South Wales; 431 signatures.

“ “ from certain Residents of Mudgee; 37 signatures.

On 10th June, 1897, from certain Residents of Grafton; 240 signatures.

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

LICENSING LAWS.

(PETITION FROM CERTAIN RESIDENTS OF NEW SOUTH WALES AGAINST ANY ALTERATION
OF EXISTING.)

Received by the Legislative Assembly, 6 July, 1897.

To the Honorable the Speaker and Members of the Legislative Assembly of New South Wales, in
Parliament assembled.

The humble Petition of the undersigned Residents of New South Wales over the age of twenty-one,—
SHOWETH :—

That your Petitioners are of opinion that the present measure of Sunday Closing has been very beneficial in the reduction of the number of arrests for intemperance, and should be made more effective by the inclusion of the provisions recommended by the New South Wales Drink Commission of 1886-1887; and humbly pray your Honorable House not to consent to any alteration of the law to provide for the opening of public-houses at certain hours on the Sunday, believing that such provision would tend to increase the intemperance at present altogether too prevalent in our Colony.

And your Petitioners, as in duty bound, will ever pray.

[Here follow 545 signatures.]

A similar Petition was received,—

On 6th July, 1897, from certain Residents of New South Wales; 144 signatures

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

LICENSING LAWS.

(PETITION FROM CERTAIN RESIDENTS OF NEW SOUTH WALES AGAINST ANY ALTERATION OF EXISTING.)

Received by the Legislative Assembly, 14 October, 1897.

To the Honorable the Speaker and Members of the Legislative Assembly of New South Wales, in Parliament assembled.

The humble Petition of the undersigned Residents of New South Wales over the age of twenty-one,—

SHOWETH :—

That your Petitioners are of opinion that the present measure of Sunday-closing has been very beneficial in the reduction of the number of arrests for intemperance, and should be made more effective by the inclusion of the provisions recommended by the New South Wales Drink Commission of 1886–1887, and humbly pray your Honorable House not to consent to any alteration of the law to provide for the opening of public-houses at certain hours on the Sunday, believing that such provision would tend to increase the intemperance at present altogether too prevalent in our Colony.

And your Petitioners, as in duty bound, will ever pray.

[*Here follow 45 signatures.*]

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

LIQUOR TRAFFIC.

(PETITION FROM CERTAIN INHABITANTS OF PENRITH, IN FAVOUR OF FULL LOCAL OPTION WITHOUT COMPENSATION.)

Received by the Legislative Assembly, 29 July, 1897.

To the Honorable the Legislative Assembly of New South Wales, in Parliament assembled.

The Petition of the undersigned Inhabitants of Penrith, New South Wales, humbly sheweth,—

That in view of the manifold evils through intoxicating drink, which not only include drunkenness, but much poverty, immorality, lunacy, and crime, your Petitioners humbly pray for the early passing of a Bill that will concede to the electors themselves, in every electorate, full local option without compensation.

And your Petitioners, as in duty bound, will ever pray.

[Here follow 47 signatures.]

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

LIQUOR TRAFFIC.

(PETITION FROM CERTAIN INHABITANTS OF PENRITH, IN FAVOUR OF FULL LOCAL OPTION
WITHOUT COMPENSATION.)

Received by the Legislative Assembly, 10 August, 1897.

To the Honorable the Legislative Assembly of New South Wales, in Parliament assembled.

The Petition of the undersigned Inhabitants of Penrith, New South Wales,—

HUMBLY SHOWETH:—

That in view of the manifold evils through intoxicating drink, which not only include drunkenness, but much poverty, immorality, lunacy, and crime, your Petitioners humbly pray for the early passing of a Bill that will concede to the electors themselves, in every electorate, full local option without compensation.

And your Petitioners, as in duty bound, will ever pray.

[Here follow 47 signatures.]

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

LIQUOR TRAFFIC LOCAL OPTION BILL.

(PETITION FROM THE REV. F. B. BOYCE, CHAIRMAN OF A PUBLIC MEETING HELD IN THE CENTENARY HALL, SYDNEY, IN FAVOUR OF.)

Received by the Legislative Assembly, 19 August, 1897.

To the Honorable the Legislative Assembly of New South Wales in Parliament assembled.

The Petition of the undersigned,—

HUMBLY SHOWETH:—

That the Petitioner was the Chairman, on the 12th August, 1897, at a public meeting held in the Centenary Hall, Sydney, at which the following resolution was unanimously carried:—

“That this public meeting of citizens approves of the Local Option Bill which the Honorable Joseph Cook, M.L.A., has tabled in the Legislative Assembly, and respectfully prays that your Honorable House will be pleased to pass the same into law as speedily as possible.

“And that the Chairman sign this Petition on and in behalf of citizens' meeting.”

The Petitioner therefore humbly prays that your Honorable House will be pleased to receive this Petition.

And your Petitioner, as in duty bound, will ever pray.

F. B. BOYCE,
Chairman.

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

LOCAL OPTION.

(RESULT OF VOTE TAKEN IN METROPOLITAN SUBURBAN MUNICIPALITIES IN FEBRUARY, 1897.)

Printed under No. 8 Report from Printing Committee, 17 June, 1897.

The Acting District Inspector to The Superintendent of Police.

Sir,

Central Police Office, Sydney, 21 May, 1897.

I do myself the honor to forward herewith a Comparative Return showing the result of the Local Option Vote taken in the Suburban Municipalities within the Metropolitan District during the aldermanic elections in February last.

When the vote was taken in February, 1894, there were on the municipal lists 62,009 voters; this year there were 67,676—showing an increase during the last three years of 5,667. Only 9,595 voted under Division "A," and 9,115 under Division "B," which result shows about 14 per cent., being a decrease of about 7 per cent. There are thirty-one municipalities which are divided into 108 wards, and six municipalities undivided. Out of 114 elections, the Local Option Vote was carried—19 in the affirmative and 95 in the negative in Division "A," and in Division "B" it was carried in 32 in the affirmative and 82 in the negative. There are at present 429 hotels in the City of Sydney, 13 in places not yet incorporated, and 348 in the suburbs, showing an increase of 2 in the suburbs since the vote of 1894.

I have, &c.,

H. J. HUGHES, Sub-Inspector,
Acting District Inspector, Metropolitan District.

Forwarded to the Inspector-General of Police.—G. READ, Supt., 22/5/97. Forwarded to the Under Secretary, Department of Justice.—EDM. FOSBERY, I.-G.P., 22/5/97. Submitted. A copy of this report, with the Return, might (as usual) be laid on the Table of the Legislative Assembly.—G.M. Approved.—A.J.G., 29/5/97.

COMPARATIVE Return of Result of Local Option Vote in the Metropolitan Suburban Municipalities, taken in February, 1897.

Municipalities.	No. of Voters on Municipal List.	Division "A"— New Licenses.			Division "B"— Removals.			Result—"A"		Result—"B"		Gazette Notification.	
		Yes.	No.	Total	Yes.	No.	Total	Affirma- tive.	Nega- tive.	Affirma- tive.	Nega- tive.	No.	Date.
ALEXANDRIA—													
East Ward	253	6	7	13	2	7	9	1	.....	.....	1	230	1897. 23 March.
West Ward	632	4	14	18	7	12	19	.....	1	.....	1	"	"
South Ward	282	35	12	47	30	11	41	1	.....	1	.....	"	"
Beaconsfield Ward	210	26	63	89	26	60	86	.....	1	.....	1	"	"
ANNANDALE	1,195	41	130	171	53	113	171	.....	1	.....	1	123	1895. 10 February
ASHFIELD—													
North Ward	917	9	53	62	14	49	63	.....	1	.....	1	155	23 February.
South Ward	1,389	69	147	216	68	144	212	.....	1	.....	1	"	"
East Ward	1,266	104	237	341	151	226	337	.....	1	.....	1	"	"
BALMAIN—													
South-east Ward	893	70	163	233	83	135	223	.....	1	.....	1	132	16 February.
South-west Ward	2,926	230	323	553	235	250	484	.....	1	1	.....	"	"
North-east Ward	764	84	97	181	62	74	136	1	.....	1	.....	"	"
North Ward	2,085	140	223	363	180	181	364	.....	1	1	.....	"	"
BOTANY—													
Cook Ward	300	4	3	7	3	4	7	1	.....	.....	1	205	23 March.
Bank's Ward	305	13	17	30	10	24	34	1	.....	.....	1	"	"
Booralac Ward	144	12	22	34	16	21	37	.....	1	.....	1	"	"
BOTANY, NORTH—													
North Ward	444	65	84	149	73	77	150	.....	1	1	.....	132&121	1897. 16 & 17 Feb.
Central Ward	358	.....	2	2	2	.....	2	.....	1	1	.....	"	"
South Ward	334	2	2	4	2	2	4	1	.....	1	.....	"	"
BLURWOOD—													
North Ward	448	14	44	58	20	30	50	.....	1	.....	1	180	2 March.
South Ward	367	17	43	60	22	40	62	.....	1	.....	1	"	"
East Ward	388	4	23	27	4	23	27	.....	1	.....	1	"	"
CAMPBERRIDGE—													
Belmore Ward	294	8	4	12	9	3	12	1	.....	1	.....	132	16 February.
Cook Ward	688	25	50	75	32	43	75	.....	1	.....	1	"	"
Kingston Ward	653	60	74	134	64	70	134	.....	1	1	.....	"	"
CANTERBURY—													
North Ward	700	35	79	114	45	67	112	.....	1	.....	1	132	16 February.
East Ward	492	39	67	106	44	61	105	.....	1	.....	1	"	"
West Ward	593	7	10	17	8	9	17	.....	1	1	.....	"	"
CONCORD	770	3	7	10	3	7	10	.....	1	.....	1	132	16 February.
DARLINGTON	416	2	30	32	2	30	32	.....	1	.....	1	105	10 February.
DRUMMOYNE—													
Drummoyne Ward	160	3	2	5	3	2	5	1	.....	1	.....	322	23 April.
Bourke Ward	254	20	49	69	26	43	69	.....	1	1	.....	"	"
Birkenhead Ward	363	3	8	11	9	2	11	1	.....	1	.....	"	"
ENFIELD—													
Central Ward	353	13	41	54	20	35	55	.....	1	.....	1	132	16 February.
West Ward	251	4	5	9	4	4	7	.....	1	1	.....	"	"
East Ward	331	3	2	5	3	2	5	1	.....	1	.....	"	"
ERSKINEVILLE—													
North Ward	254	36	52	88	43	45	88	.....	1	1	.....	132	16 February.
Middle Ward	209	20	37	57	27	35	62	.....	1	.....	1	"	"
South Ward	169	2	5	7	2	5	7	.....	1	.....	1	"	"
FIVE DOCK	348	10	10	20	13	16	29	.....	1	.....	1	155	23 February.
GLEBE—													
Outer Glebe Ward	349	.....	9	9	1	8	9	.....	1	.....	1	130	2 March.
Bishopthorpe Ward	642	65	120	185	81	104	185	.....	1	.....	1	"	"
Forest Lodge Ward	411	37	37	74	61	63	124	.....	1	1	.....	"	"
Inner Glebe Ward	348	3	12	15	5	10	15	.....	1	.....	1	"	"
HURSTVILLE—													
Hurstville Ward	1,154	47	135	182	72	110	182	.....	1	.....	1	132	16 February.
Bexley Ward	1,133	5	135	140	7	10	17	.....	1	.....	1	"	"
Penkhurst Ward	616	25	28	53	40	39	79	1	.....	1	.....	"	"
KOGARAH—													
East Ward	902	.....	7	7	.....	7	7	.....	1	.....	1	155	23 February.
Middle Ward	690	14	20	34	16	23	39	.....	1	.....	1	"	"
West Ward	366	1	14	15	4	10	14	.....	1	.....	1	"	"
LANE COVE	469	7	11	18	9	10	19	.....	1	1	.....	121	17 February.
LEICHHARDT—													
Norton Ward	326	4	5	9	4	5	9	.....	1	1	.....	132	16 February.
Wentworth Ward	1,143	119	300	419	156	163	319	.....	1	1	.....	"	"
Kendall Ward	669	18	12	30	11	12	23	1	.....	1	.....	"	"
Cook Ward	622	58	135	193	69	110	179	.....	1	.....	1	"	"
MANLY—													
Steyne Ward	547	40	91	131	39	85	124	.....	1	.....	1	155	23 February.
Fairlight Ward	338	19	63	82	36	49	81	.....	1	.....	1	"	"
Wentworth Ward	304	23	97	120	34	86	120	.....	1	.....	1	"	"
MARRICKVILLE—													
East Ward	803	67	132	199	75	122	200	.....	1	.....	1	132	16 February.
West Ward	505	7	12	19	9	9	18	.....	1	1	.....	"	"
North Ward	739	71	107	238	96	144	230	.....	1	.....	1	"	"
South Ward	759	78	139	217	93	178	271	.....	1	.....	1	"	"
MOSMAN—													
North Ward	413	50	112	162	32	87	119	.....	1	.....	1	132	16 February.
West Ward	262	24	59	83	32	53	85	.....	1	.....	1	"	"
East Ward	434	.....	2	2	.....	2	2	.....	1	.....	1	"	"
NEWTOWN—													
Camden Ward	1,101	32	76	108	34	71	105	.....	1	.....	1	132	16 February.
O'Connell Ward	1,206	2	23	25	5	20	25	.....	1	.....	1	"	"
Emmore Ward	1,431	1	20	21	5	16	21	.....	1	.....	1	"	"
Kingston Ward	393	52	91	143	60	82	142	.....	1	.....	1	"	"

Municipalities.	No of Voters on Municipal List.	Division "A"— New Licenses.			Division "B"— Removals.			Result—"A"		Result—"B"		Gazette Notification.		
		Yes.	No.	Total.	Yes.	No.	Total.	Affirma- tive.	Nega- tive.	Affirma- tive.	Nega- tive.	No.	Date.	
													1897.	
NORTH SYDNEY—														
Victoria Ward	1,032	17	43	60	26	37	63	..	1	..	1	132	16 February.	
Kirribilli Ward	1,075	15	15	30	19	10	29	1	..	1	..	"	"	
Belmore Ward	1,141	120	162	272	105	151	256	..	1	..	1	"	"	
Tunks Ward	433	7	21	28	11	16	27	..	1	..	1	"	"	
Warringa Ward	646	12	21	33	12	22	34	..	1	..	1	"	"	
PADDINGTON—														
Upper Ward	418	32	34	66	25	42	67	1	..	..	1	251	30 March.
Lower Ward	301	49	66	115	55	61	116	..	1	..	1	"	"	
Glennmore Ward	427	44	75	119	46	72	118	..	1	..	1	"	"	
Middle Ward	360	24	41	65	24	41	65	..	1	..	1	"	"	
PETERSHAM—														
Annandale Ward	728	9	23	32	13	19	32	..	1	..	1	132	16 February.	
Sydenham Ward	210	3	9	12	5	7	12	..	1	..	1	"	"	
South Kingston Ward	255	23	92	115	40	75	115	..	1	..	1	"	"	
Lewisham Ward	556	95	180	275	107	166	273	..	1	..	1	"	"	
RANDWICK—														
Coogee Ward	441	17	18	35	13	20	33	1	..	..	1	132	16 February.
Middle Ward	464	4	6	10	5	5	10	..	1	..	1	"	"	
West Ward	446	9	22	31	13	18	31	..	1	..	1	"	"	
South Ward	597	23	39	62	24	39	63	..	1	..	1	"	"	
REDFERN—														
Redfern Ward	284	1	2	3	..	3	3	..	1	..	1	132	16 February.	
Golden Grove Ward	479	3	9	12	5	7	12	..	1	..	1	"	"	
Surry Hills Ward	478	10	10	20	14	6	20	1	..	1	..	"	"	
Belmore Ward	333	34	74	108	42	66	108	..	1	..	1	"	"	
ROCKDALE—														
Arncliffe Ward	1,167	3	5	8	4	4	8	..	1	1	..	155	23 February.	
Scarborough Ward	732	9	18	27	9	18	27	..	1	..	1	"	"	
Rockdale Ward	305	4	19	23	4	19	23	..	1	..	1	"	"	
St. PETER'S—														
St. Peter's Ward	118	16	35	51	16	32	48	..	1	..	1	132	16 February.	
Cook's River Ward	412	21	56	107	28	66	94	..	1	..	1	"	"	
Brompton Ward	448	57	117	174	79	89	168	..	1	1	..	"	"	
STRATHFIELD—														
Strathfield Ward	427	11	7	18	9	7	16	1	..	1	..	170	1895. 11 March.	
Honebush Ward	347	1	4	5	1	4	5	..	1	..	1	"	"	
Flemington Ward	139	..	4	4	..	4	4	..	1	..	1	"	"	
VAUCLUSE														
	212	22	67	89	39	48	87	..	1	..	1	121	1897. 17 February.	
WATERLOO—														
North Ward	382	14	23	37	12	23	35	..	1	..	1	155	23 February.	
South Ward	342	28	52	80	32	45	77	..	1	..	1	"	"	
West Ward	302	19	42	61	22	31	53	..	1	..	1	"	"	
East Ward	212	19	39	57	21	32	53	..	1	..	1	"	"	
WAVERLEY—														
Lawson Ward	371	43	115	158	41	113	159	..	1	..	1	155	23 February.	
Waverley Ward	346	51	175	226	63	151	219	..	1	..	1	"	"	
Bondi Ward	627	11	21	32	13	20	33	..	1	..	1	"	"	
Nelson Ward	593	7	32	39	6	34	40	..	1	..	1	"	"	
WILLOUGHBY—														
Chatsworth Ward	555	48	122	170	67	103	170	..	1	..	1	155	23 February.	
Middle Harbour Ward	411	25	42	67	24	30	56	..	1	1	..	"	"	
Naremburn Ward	373	3	8	11	3	8	11	..	1	..	1	"	"	
WOOLLAHRA—														
Piper Ward	1,087	1	3	4	2	2	4	..	1	1	..	132	16 February.	
Edgecliff Ward	860	7	7	14	7	7	14	1	..	1	..	"	"	
Double Bay Ward	333	18	48	66	28	38	66	..	1	..	1	"	"	
Bellevue Ward	109	1	..	1	..	1	1	1	..	..	1	"	"
Total	67,676	3,137	6,478	9,595	3,630	5,485	9,115	19	95	32	82			

H. J. HUGHES, Sub-Inspector,
Acting District Inspector, Metropolitan District.

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

ABORIGINES.

(REPORT OF BOARD FOR 1896.)

Printed under No. 2 Report from Printing Committee, 6 May, 1897.

The Aborigines Protection Board to The Principal Under Secretary.

Board for Protection of Aborigines, 105, Phillip-street,
Sydney, 31 March, 1897.

Sir,

In accordance with the established practice, we have the honor to submit, for the Chief Secretary's information, the following Report respecting the work undertaken by us during the year 1896, together with information as to the number, location, and present condition of the aborigines throughout the Colony, and the means adopted by us for their relief, so far as the funds placed at our disposal would admit.

We regret to have to record the death, on the 20th August last, of Mr. Albert Maxwell Hutchinson, who, during the nine years he held a seat on the Board, took a deep interest in furthering every object which had in view the improvement of the condition of the aborigines.

The statistics of the aboriginal population of the Colony (*see Appendix A*), compiled from information collected by the Police on the 15th October last, show a total of 3,503 full-bloods and 3,481 half-castes—6,984 in all.

These figures exhibit, as compared with the previous year, a decrease of 157 full-bloods, but an increase of 95 half-castes—a net decrease of 62.

The deaths amongst the full-bloods exceeded the births by 61, the numbers being 140 and 79 respectively. Though the deaths were only 1 less than in 1895, there were 31 less births. The natural increase amongst the half-castes was 92, births (153) showing a decrease of 5, and deaths (61) an increase of 7, as compared with 1895. These figures would, however, account for an increase of 31 in the total population, instead of a decrease of 62 as shown. The difference can only be accounted for by the difficulty of making a correct census in the remote districts, owing to the wandering habits of the aborigines, and by the border tribes crossing into South Australia and Queensland.

The total number of full-bloods is now but 22 more than that of the half-castes.

A total sum of £17,311 17s. 10d. was expended by the Government on behalf of the aborigines during the year (*see Appendix C*). This includes an expenditure of £12,961 13s. 11d. by the Board, £860 3s. 7d. by the Chief Medical Officer, £1,028 17s. 6d. by the Minister of Public Instruction, £2,394 5s. 10d. by the Controller-General of Stores, and £66 17s. by the Chief Secretary.

The Board continue to adhere to the rule laid down by them when first appointed for the distribution of the funds placed at their disposal, by restricting, as far as possible, the issue of supplies of food and clothing to those who, from age, sickness, or other infirmity, are unable to support themselves or their children, and to those attending school whose parents are unable to provide them with food and suitable clothing.

In all cases brought under notice, the actual condition and circumstances of the aborigines are fully ascertained, the cases of individual aborigines being investigated and dealt with the same as those of numbers congregating in camps. The young and able-bodied are made to support themselves and their families if work is at all procurable. The police render every assistance, and have succeeded in securing employment for a large number.

A statement in detail is given of the expenditure by the Board (*see Appendix D*). A sum of £9,581 3s. 9d. was expended during the year in the purchase of supplies of food, clothing, medical comforts, boats and gear, fishing tackle, fencing wire, farming implements, seed, material for the erection

67—A

and

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and improvement of dwellings, &c.; £616 5s. 11d. for the fares of aborigines travelling on the railway lines; and £2,764 4s. 3d. in liquidating claims incurred specially in connection with the Cumeroogunga (Murray), Warangesda (Murrumbidgee), and Brewarrina (Barwon) Aboriginal Stations.

On the last day of the year, 2,134 aborigines were being supported by the Board. Of this number 1,062 were children, and of the remainder 1 was over the age of 100 years, 2 were over 90, 10 over 80, 81 over 70, 278 over 60, 213 over 50, and 487 between the ages of 20 and 50. Of the total, 573 were classed as too old and feeble to earn a living for themselves, 11 blind, 36 sick or recently sick, and 34 crippled; 113 (54 men, 26 women, and 33 children) were being temporarily assisted whilst fencing and preparing Government reserves for cultivation, 204 were women with young children to support and whose husbands were seeking work, and 101 were men and women out of employment and for whom no work was at the time procurable. Of the children, some were young orphans, others were those of sick or destitute aborigines, whilst a large number were receiving rations as an inducement to attend school.

In addition to the above, 244 aborigines were being supported on the Cumeroogunga, Warangesda, and Brewarrina Aboriginal Stations.

During the year seven additional reserves, as under, aggregating an area of 794 acres, have been set apart for the use of aborigines:—

Sackville Reach (Hawkesbury River)	...	...	...	...	150 acres.
" "	...	...	...	...	30 "
Runnymede (Casino District)	...	...	...	...	100 "
Bushfield (Bundarra District)	...	...	...	...	280 "
Uralla ... ..	...	...	...	...	100 "
Willanthry (Hillston District)	...	...	...	...	100 "
Minnamurra River (Kiama District)	...	...	...	...	34 "

A small reserve at Singleton, upon which a comfortable dwelling was erected by the Board for an aboriginal widow and her children, has been increased in extent from 1 to 3½ acres.

The reserves of 164 acres at Wilberforce and 230 acres at Singleton, which are no longer required, have been revoked. The area of the reserve at Iluka has also been reduced from 100 to 58 acres.

Every inducement is held out by the Board to the aborigines to occupy and cultivate the land. They are supplied with seed, farming implements, building material, fencing-wire, &c., when the Board are satisfied that good use will be made of the same, and rations are issued to them whilst they are engaged in clearing, fencing, hut-building, &c., and until their crops have been harvested. The following extracts, from reports received are given as a few instances of the progress made by the aborigines:—

"The four reserves in the Gladstone district are now all securely fenced, cleared, and under cultivation. The aborigines now reap good crops, and are in a fair way of living.

"At Nymboida, good three-roomed dwellings have been erected. A portion of the land has been fenced, cleared, and placed under cultivation; the remainder has been ringbarked with a view to putting a larger area under crop next season.

"The aborigines at Walcha Road placed 20 acres under wheat, oats, and potatoes last season. They have also greatly improved their reserve by fencing, ringbarking, &c.

"One of the reserves in the Kempsey district has been enclosed with a good two-railed fence, and subdivided into three paddocks. Twelve acres are under maize.

"On the reserve at Sherwood, about 25 acres have been cleared of scrub and heavy timber. The aborigines are about to enclose the land with a substantial fence.

"On the reserve at Euroka Creek good progress continues to be made. One aboriginal has, in addition to a comfortable dwelling, erected a good straddle barn with bark roof. He keeps a lot of poultry, has 9 acres under maize, potatoes, and vegetables, and has enclosed 25 acres with a good dog-leg and superior pole fence. Another has erected a log pig-stye, stockyard, and calf-pen, has a number of fruit-trees growing, and 8 acres fenced and under maize and potatoes. Another has erected a skillion slab hut with bark roof, and has 7 acres fenced and under maize.

"The aborigines at Currowan grow maize and potatoes on their reserve, and keep a cow and fowls.

"The reserve at Minnamurra was only set apart towards the end of the year. The aborigines have already erected three dwellings, have cleared and burnt off a portion of the land, and have dug up and planted garden plots.

"The aborigines at Bushfield have erected dwellings for themselves, have fenced in vegetable gardens, and intend cultivating other portions of the land."

On the 31st December last there were 110 reserves for aborigines in different parts of the Colony, with a total area of 25,388 acres.

Thirty-four

Thirty-four boats in all are now in use by the aborigines at Lawrence, Wardell, Macksville, Gladstone, Kempsey, Taree, Forster, Port Stephens, La Perouse, Sackville Reach, Illawarra Lake, Minnamurra River, Greenwell Point, Ulladulla, Jervis Bay, Wallaga Lake, Moruya, and Twofold Bay. They are used for fishing purposes, conveying stores to and from their island reserves, and ferrying their children to school. Fairly good care is taken of them.

Satisfactory progress continues to be made at the schools established specially for the instruction of aboriginal children at Barrington, Brewarrina, Brungle, Cumeroogunga, Forster, Grafton, Mulyan (Cowra), Rollands Plains, Warangesda, and Wauchope. The teachers are appointed by the Department of Public Instruction, and periodical visits are paid to the schools by Inspectors from that Department.

The number of children now receiving instruction throughout the Colony is 690—364 at Public Schools and the schools mentioned above, and 26 privately—a total increase of 58 on the previous year. The Board continue to offer every inducement for the attendance of these children at school, and are pleased with the result, both as regards the increase in the number of scholars and the progress made by them.

The Board note with regret that a large proportion of the deaths has arisen from the effects of intemperance, and much difficulty is experienced in preventing illadvised persons from supplying the aborigines with intoxicants. The police have been successful during the year in obtaining convictions against a number of persons in the Metropolitan District for breaches of the law in this direction, and also in the following country districts:—Broadwater, South Grafton, Moruya, Berry, Mungindi, Walgett, Hillston, Menindie, Balranald, Wilcannia, Tumut, and Corowa. It is difficult to obtain convictions in these cases, as the aborigines themselves will but rarely divulge the source from which they obtain the liquor.

The amount of the donations to the Aborigines Protection Association during the twelve months reached a total of £95 11s. 3d. only, the lowest received during any period since the formation of that body.

On the 9th July last the Board represented to the Chief Secretary that it was most desirable that some amendment should be made in the regulation by which the management of the aboriginal stations at Cumeroogunga, Warangesda, and Brewarrina was placed under the control of the Association.

It was then pointed out that the duties connected with the management were practically under the oversight of Local Committees, constituted for the purpose by the Board; that the gentlemen composing such Local Committees had repeatedly represented that their action was impeded rather than assisted by the Association, and had expressed their intention from time to time of relinquishing their offices unless they were relieved from any interference except by the Government Board.

The fact of the Association having almost ceased to collect funds from the public to further its objects, and the expenditure for the maintenance of the stations having therefore to be borne by the Government, was also alluded to, and it was strongly urged that the whole business arrangements and management should be vested in the Board, assisted by Local Committees, the Association being, however, rendered every assistance practicable in their endeavours to ameliorate the condition of the aborigines by religious teaching, similar encouragement and facilities being afforded the local clergy.

On the 15th January last the Council of the Association informed the Chief Secretary that they declined to be held responsible for future secular control of the three stations, and the Board now await the Minister's decision in the matter.

Requisitions for provisions and other necessaries are in the meantime being attended to by the Board.

Appended hereto will be found reports furnished by the Local Boards in connection with the Brewarrina, Brungle, Cumeroogunga, Grafton, and Warangesda Aboriginal Stations, as to the progress made at those settlements during the year, and the present condition of the inmates.

To the Local Boards and the police generally we are indebted for much valuable assistance in our efforts to improve the condition of the aborigines, and we take this opportunity of placing on record our appreciation of such services.

We have, &c.,

EDMUND FOSBERY, Chairman.

PHILIP GIDLEY KING,

W. H. SUTTOR,

J. R. HILL,

J. M. CHANTER,

R. H. D. WHITE,

} Members.

APPENDICES.

APPENDICES.

APPENDIX A.
CENSUS RETURNS, 1896.

Locality.	Full-bloods.							Half-castes.							Total.	Grand Total.			
	Men.			Women.				Children.	Total.	Men.			Women.						
	Between 20 & 40 years.	Between 40 & 60 years.	Over 60 years.	Between 20 & 40 years.	Between 40 & 60 years.	Over 60 years.	Between 20 & 40 years.			Between 40 & 60 years.	Over 60 years.	Between 20 & 40 years.	Between 40 & 60 years.	Over 60 years.			Children.		
Animbo	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Arakoon	6	5	1	7	8	1	...	28	2	4	...	2	1	...	...	9	18	46
Araluen	...	...	...	...	1	1	...	2	...	...	...	...	...	...	...	...	...	2
Armidale	7	...	...	3	...	...	...	18	6	...	...	4	...	...	20	...	30	48
Ashford	7	...	3	2	1	1	...	19	3	1	...	1	2	...	17	...	24	43	
Ballina	4	3	2	2	...	2	...	15	1	1	...	1	...	...	2	...	4	19
Balranald	3	4	1	6	...	1	...	22	1	...	...	...	...	...	...	...	2	24
Baradine	...	...	...	...	...	...	...	...	3	4	...	4	...	...	17	...	28	28
Barraba	...	...	...	...	...	...	...	...	3	...	...	3	1	...	18	...	25	25
Barrington and Enngonia	13	7	...	12	3	1	...	50	5	...	...	5	...	...	8	...	18	68
Bathurst	1	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	1	2
Bellingen	4	1	3	3	4	1	...	21	1	...	...	1	...	...	3	...	5	26
Bingara	...	2	...	...	...	...	...	3	...	2	...	...	...	...	...	...	...	10
Blackville	1	1	...	1	...	...	...	3	...	...	...	2	...	...	3	...	7	10
Boggabilla	14	1	...	11	3	...	...	39	4	2	...	3	...	...	7	...	16	55
Boggabri	1	...	...	...	...	...	...	2	10	...	...	6	...	...	5	...	21	23
Booligal	...	...	...	...	2	...	...	2	...	...	...	...	...	...	...	...	...	2
Bourke and Byerock	3	3	3	4	2	6	...	12	33	4	1	...	3	2	...	16	...	59	
Brewarrina	21	6	3	17	4	7	...	25	33	3	2	...	12	1	...	26	...	127	
Broadwater	1	1	1	3	1	...	...	3	10	...	...	1	...	...	3	...	4	14
Broke	1	1	1	...	...	1	...	3	2	1	...	2	...	...	5	...	10	13
Broken Hill	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
Brungle	6	4	4	7	2	1	...	13	37	7	5	...	9	4	...	32	...	94	
Brunswick River Heads	3	1	...	3	...	...	...	2	9	...	...	...	...	...	...	...	...	9
Brushgrove	2	1	1	2	1	...	...	1	8	...	...	1	...	...	1	...	2	10
Buckley's Crossing	...	1	...	1	...	...	...	4	6	2	...	...	...	...	...	...	2	8
Bundarra	2	3	3	2	1	1	...	14	26	2	1	...	4	1	...	9	...	43	
Bungwall Flat	...	...	...	...	...	...	...	...	2	2	...	2	1	...	...	...	7	7
Burren	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
Byron Bay	1	...	1	...	1	...	...	3	...	...	...	...	...	...	1	...	1	4
Camden	...	...	...	...	...	...	...	...	4	...	...	3	2	1	6	...	16	16
Cannonbar	2	2	4	3	2	3	...	8	24	3	...	4	...	...	9	...	16	40
Canowindra	1	...	...	...	...	...	...	1	1	1	...	...	...	...	...	...	1	2
Carroll	...	2	...	...	...	...	...	...	2	6	...	4	...	...	12	...	22	24
Casino	23	20	10	28	23	5	...	54	163	6	2	...	8	...	22	...	38	201	
Cassilis	1	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	1	2
Cobar	10	13	5	11	8	6	...	12	65	1	2	...	1	...	3	...	7	73	
Cobargo	6	8	5	3	4	3	...	...	29	17	8	4	26	8	3	42	108	137
Condobolin	8	4	1	1	1	...	...	6	21	4	3	...	6	1	10	...	24	45
Coolamon	1	...	...	...	...	...	...	2	3	...	...	1	...	...	...	...	1	4
Cooma	1	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	2
Coonabarabran	...	1	...	...	...	...	...	...	1	7	3	1	5	3	1	23	43	44
Coonamble	10	7	3	5	3	3	...	25	56	3	1	...	2	...	7	...	13	69	
Copeland	4	...	1	2	...	...	...	8	15	1	2	...	1	...	12	...	16	31
Copmanhurst	3	11	1	3	4	...	...	13	35	2	...	4	2	...	10	...	18	53
Coraki	3	6	1	7	5	...	...	14	36	3	2	...	2	1	17	...	25	61
Corowa	...	4	...	...	2	...	...	2	8	...	...	...	...	...	2	...	2	10
Cowra	5	...	...	1	1	1	...	4	12	3	1	...	2	1	20	...	27	39
Cudgen	1	1	1	1	...	...	...	1	5	1	...	2	...	...	6	...	9	14
Dalmorton	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	1
Dandaloo	3	1	...	3	2	...	...	8	17	5	1	...	5	...	17	...	28	45
Darlington Point (including Warangesda)	8	5	3	6	5	1	...	10	38	6	1	2	12	6	42	...	69	107	
Delegate	4	5	1	4	...	...	...	5	19	...	...	1	...	...	4	...	5	24
Deniliquin	3	5	...	2	1	...	...	5	16	2	...	...	...	...	...	...	2	18
Double Bay	2	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	2
Drake	10	12	9	13	10	...	...	11	65	3	2	1	1	2	1	26	...	101
Dubbo	3	1	1	1	...	...	...	7	13	3	4	...	3	1	14	...	25	38
Dungog	...	...	...	...	...	...	...	...	...	1	...	...	...	...	5	...	6	6
Eden	3	2	...	4	1	...	...	10	20	...	1	...	1	...	5	...	7	27
Emu Flat	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
Euabalong	9	2	1	3	3	...	...	15	33	6	1	...	3	2	1	19	...	32
Engowra	2	1	...	...	...	...	...	...	3	6	2	...	5	1	17	...	31	74
Eulowrie	...	...	...	...	...	...	...	...	5	...	...	...	...	...	1	...	8	8
Forbes	7	1	4	1	1	...	...	2	16	7	1	...	6	3	35	...	52	68
Forster	4	1	1	1	3	...	...	6	16	5	4	...	8	2	30	...	49	65
Garah	5	3	3	6	4	4	...	22	47	5	5	1	4	6	1	36	...	58	105
Gilgunnia	...	1	...	1	...	2	4	4	4
Gladstone	2	1	3	4	1	23	26
Glen Innes	...	1	...	1	...	...	...	...	2	1	1	...	1	...	7	...	10	12
Goodooga, Angledool, and Tatalla	15	18	12	16	18	21	...	32	132	5	...	10	1	...	19	...	35	167	
Goulburn	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	5	5
Grafton	9	3	2	5	4	2	...	22	47	5	...	5	1	...	17	...	28	75	

APPENDIX A—continued.

Locality.	Full-bloods.							Half-castes.							Grand Total.		
	Men.			Women.			Children.	Total.	Men.			Women.				Children.	Total.
	Between 20 & 40 years.	Between 40 & 60 years.	Over 60 years.	Between 20 & 40 years.	Between 40 & 60 years.	Over 60 years.			Between 20 & 40 years.	Between 40 & 60 years.	Over 60 years.	Between 20 & 40 years.	Between 40 & 60 years.	Over 60 years.			
Grafton, South	4	4	1	4	4	...	14	31	1	1	...	2	...	4	8	39	
Grenfell	...	1	...	...	...	...	...	1	...	1	...	...	...	1	3	4
Grong Grong	...	...	...	...	...	...	...	...	6	1	...	2	1	9	19	19
Gulgambone	2	2	1	1	2	...	15	23	2	2	...	2	3	17	26	40	
Gunnedah	1	3	1	1	2	...	4	12	...	...	...	2	1	2	5	17
Hargreaves	...	...	...	...	...	...	...	...	...	...	...	1	...	6	7	7
Harwood	4	2	2	2	2	2	5	19	...	...	...	2	...	2	2	21
Hay	3	...	...	...	...	...	1	4	...	1	...	...	...	5	6	10
Hill End	...	...	...	...	...	...	...	...	1	...	...	1	...	...	2	2
Hillgrove	2	...	...	1	...	1	...	4	...	1	...	...	1	...	2	6
Hillston	5	1	2	3	7	2	17	37	1	1	...	...	...	2	4	41
Inverell	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
Ivanhoe	1	3	2	1	3	3	8	21	...	...	...	...	...	...	...	21
Kerramingby	4	3	4	1	4	5	6	27	9	1	...	6	1	28	45	72	
Kiama	1	...	...	1	...	...	...	2	11	2	1	10	...	21	45	47
Kookahookra	7	4	6	4	1	1	13	36	3	...	...	1	...	3	7	43
Lake Cudgellico	1	2	1	...	2	...	3	9	2	1	...	1	...	5	9	18	
La Perouse	3	3	4	2	1	...	2	15	12	2	1	9	6	22	52	67	
Lawrence	6	9	1	4	8	...	6	34	1	...	1	...	...	3	5	39
Leadville	1	1	1	...	...	...	...	2	...	...	...	...	...	...	...	2
Lismore	11	8	7	3	2	4	10	45	5	2	...	2	...	9	18	63	
Liverpool	...	...	...	...	...	...	...	...	...	...	...	...	...	3	3	3
Louth	15	6	4	8	3	3	11	50	2	2	...	4	...	9	17	67	
Macksville	10	6	14	10	6	7	23	76	7	...	7	4	1	30	49	125	
Maclean	...	...	...	...	...	...	...	...	1	...	...	...	...	1	2	2
Macleay River	20	9	5	19	13	10	37	113	16	8	2	16	6	47	98	211	
Maitland, East	...	...	...	...	...	...	...	...	...	...	...	1	...	1	2	2
Manilla	...	...	...	...	...	...	...	...	4	1	...	3	1	26	36	36
Marrickville	...	...	...	...	...	...	2	2	...	...	...	...	...	...	...	2
Marsdens	...	...	...	...	...	...	...	...	2	...	...	...	...	...	2	2
Megalong	...	...	...	1	...	...	...	1	8	1	1	1	2	8	21	22
Menindie	10	...	...	7	1	...	11	29	1	...	...	...	...	2	3	32
Meroe	9	2	3	3	2	3	4	26	4	...	...	1	...	...	5	31
Merriwa	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
Milparinka	24	13	...	8	12	...	23	80	3	...	...	2	...	14	19	99
Milton	2	1	...	1	...	3	2	9	6	2	1	9	3	31	54	63	
Moama (including Cumerogunga)	10	3	2	6	5	1	8	35	34	8	...	27	4	107	180	215	
Mogil Mogil and Collarendabri	10	12	4	8	10	2	15	61	4	...	...	3	1	6	13	74
Molong	...	...	...	...	...	...	...	...	1	...	...	3	1	3	8	8
Mongarlowe	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	1
Moonbi	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	1
Moree	8	3	1	7	3	...	8	30	8	1	...	10	1	30	50	80	
Morpeth	2	...	...	...	...	...	...	2	...	...	...	...	...	...	...	2
Moruya	...	4	2	1	3	...	8	18	5	...	...	3	1	17	26	44
Mossgiel	20	9	4	19	6	4	18	80	4	...	...	2	...	10	16	96
Moulamein	4	11	2	3	1	2	...	23	10	7	...	3	4	25	49	72	
Mundooran	1	1	...	...	...	...	...	2	...	...	...	...	...	...	...	2
Mungindi	9	4	3	1	10	4	8	39	4	2	...	2	2	15	25	61	
Murrurundi	1	...	...	...	...	...	...	3	...	...	...	1	1	1	3	6
Murwillumbah	10	4	...	4	2	...	5	25	1	...	...	2	2	9	12	37
Narooma	...	...	...	1	...	...	...	1	2	2	...	2	2	9	17	18
Narrabri	2	4	1	1	1	...	3	12	2	1	...	4	...	6	13	25	
Narrandera	1	...	...	1	1	...	1	4	2	1	...	3	2	10	18	22
Nelligen	...	...	...	...	...	...	...	...	1	...	1	1	...	6	9	9
Nimitybelle	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	1
Nowra	2	6	1	1	5	1	5	21	14	3	2	14	4	54	92	113	
Nundle	...	...	...	...	...	...	...	...	1	...	...	2	1	9	13	13
Nymagee	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1
Nymboida	6	1	5	6	1	...	12	31	5	...	...	1	1	2	9	40
Nyngan	3	2	...	2	2	1	...	10	2	1	...	1	1	...	5	15	
Obley	2	7	...	1	1	...	1	12	2	4	...	5	2	15	28	40	
Orange	4	1	...	2	...	...	1	8	...	...	...	...	...	...	...	8
Oxley	...	3	2	...	...	...	...	5	1	...	...	1	...	8	10	15
Pailamallawa	...	...	...	1	...	...	...	1	1	1	...	1	...	3	6	7
Palmer's Island	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
Parkes	...	4	...	1	2	...	9	16	4	2	...	5	1	16	28	44	
Peak Hill	12	3	3	3	1	...	14	36	...	...	...	3	...	2	5	41
Penrith	1	...	...	...	1	...	3	5	...	...	...	...	...	...	...	5
Pieton	1	...	1	...	2	1	5	11	...	...	...	5	2	21	40	46
Pilliga	9	8	2	5	4	1	5	34	10	2	...	7	1	13	33	67	
Pooncarie	14	8	3	7	5	2	38	77	1	...	...	1	...	5	7	84
Port Macquarie	4	6	2	3	4	1	11	31	13	3	1	8	4	29	59	90	
Quambone	5	7	2	3	7	3	16	43	...	...	...	1	...	1	2	45
Queanbeyan	...	...	...	1	...	...	...	1	2	1	...	4	...	13	20	21
Rylstone	1	...	...	...	2	...	...	3	4	...	1	5	1	18	29	32
Sans Souci	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	1
Scone	3	3	...	...	...	...	...	6	...	3	...	...	...	3	9	9
Singleton	3	3	1	6	4	...	8	25	2	1	...	6	...	20	30	55	
Stuart Town	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	1
Swansen	...	...	...	...	...	...	...	1	1	1	1	1	...	2	7	7
Tambar Springs	...	...	...	...	...	...	...	1	1	1	1	...	...	1	1	1
Tamworth	1	...	...	...	...	...	...	1	1	1	...	...	...	...	2	3
Taree	4	2	1	1	3	1	2	14	5	...	1	5	3	19	33	47	

APPENDIX A—continued.

Locality.	Full-bloods.							Half-castes.							Grand Total.				
	Men.			Women.				Children.	Total.	Men.			Women.				Children.	Total.	
	Between 20 & 40 years.	Between 40 & 60 years.	Over 60 years.	Between 20 & 40 years.	Between 40 & 60 years.	Over 60 years.	Between 20 & 40 years.			Between 40 & 60 years.	Over 60 years.	Between 20 & 40 years.	Between 40 & 60 years.	Over 60 years.					
Tareena	5	2	...	3	1	...	3	14	1	...	...	1	...	...	1	3	17
Tea Gardens	1	2	...	...	...	...	1	4	2	1	...	6	1	...	12	22	26
Tenterfield	1	...	...	...	1	...	...	2	...	...	...	...	...	...	...	...	2
Tibooburra	30	7	1	25	...	...	21	84	...	...	...	3	...	...	15	18	102
Tingha	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	1
Tinonee	3	...	...	...	...	...	2	5	1	...	...	2	...	...	6	9	14
Torrowangee	8	6	1	11	7	3	9	45	5	...	...	2	...	...	1	8	53
Trangie	12	3	1	6	...	...	14	36	4	...	...	2	...	...	2	8	44
Trunkay	...	...	...	...	...	...	...	...	3	...	...	3	...	...	6	12	12
Tuena	1	...	...	...	...	...	...	1	...	...	...	1	...	...	1	1	2
Tumbulgum	2	...	2	2	...	...	3	9	...	...	...	...	...	...	1	1	10
Tumbarumba	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	2	2
Ulmarra	1	1	...	...	1	...	...	3	2	...	1	...	...	3	6	9	
Uralla	1	1	2	...	1	1	2	7	3	2	...	4	2	...	22	33	40		
Urana	1	...	...	...	1	...	1	3	...	...	...	...	...	1	1	1	4
Walbundri	...	...	...	1	...	...	1	2	...	...	...	...	...	...	...	...	2
Walcha	8	6	...	8	2	...	22	46	10	4	...	10	4	...	38	66	112		
Walgett, Grawin, and Carinda	16	15	1	19	8	3	22	84	9	5	...	13	1	...	58	86	170		
Wanaaring and Yantabulla	20	7	5	11	6	3	9	61	1	...	...	...	...	6	7	68	68
Wardell	7	1	1	3	2	1	4	19	3	1	...	4	...	...	18	26	45
Warialla	2	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	2
Warren	4	1	...	1	1	...	2	9	...	...	...	1	...	4	5	14	14
Wee Wee	4	2	2	5	1	...	12	26	3	...	...	1	1	...	8	13	39
Welaregang	1	...	...	...	...	...	1	2	...	...	...	...	...	...	...	...	2
Wellington	4	3	...	2	...	...	8	17	6	5	...	9	2	...	29	51	68
Wentworth	...	3	...	...	...	...	...	3	...	...	...	...	...	...	...	...	3
Werris Creek	...	...	...	1	1	...	...	2	6	4	1	8	4	...	28	51	53
White Cliffs	6	1	...	3	...	...	1	11	...	...	...	...	...	1	1	1	12
Wilcannia	5	2	4	6	...	...	1	18	3	...	...	2	...	2	7	25	25
Wilson's Downfall	1	5	2	1	4	...	6	19	1	...	...	1	...	4	6	25	25
Windsor	1	1	1	1	1	...	2	6	15	8	1	13	5	...	53	95	101		
Wingham	3	1	1	3	1	...	6	15	4	1	...	3	1	...	17	26	41		
Wollar	3	3	...	...	2	...	3	8	2	...	...	...	...	14	17	25	25
Wollongong	1	1	...	1	...	...	1	4	5	3	...	5	2	...	6	21	25
Woodburn	1	1	...	...	...	...	...	2	...	...	...	...	...	...	...	...	2
Woodenbong	6	4	3	2	3	2	7	27	3	...	...	3	1	...	4	11	38
Woogoolga	6	6	1	8	4	...	9	34	4	1	...	4	...	10	19	53	53		
Yamba	1	1	...	1	...	...	2	5	...	...	...	...	...	...	...	...	5
Yass	2	...	...	1	...	...	4	7	10	8	1	11	6	...	64	100	107
Yetman	2	2	1	1	3	9	9	9	
Young	1	1	1	1	
Total	737	480	225	520	347	161	1,033	3,503	362	200	26	331	177	21	1,964	3,481	6,984		

APPENDIX B.

CENSUS RETURNS, 1896.

Comparison with year 1895.

	Full-bloods.				Half-castes.				Grand Total.
	Adults.		Children.	Total.	Adults.		Children.	Total.	
	Males.	Females.			Males.	Females.			
By return, 1895	1,486	1,052	1,122	3,660	765	706	1,915	3,386	7,046
Do 1896	1,442	1,028	1,033	3,503	788	729	1,964	3,481	6,984
Decrease	44	24	89	157	...	...	...	...	62
Increase	...	...	...	...	23	23	49	95	...

BIRTHS and DEATHS, 1896.

Full-bloods.		Half-castes.	
Births reported	79	Births reported	153
Deaths reported	140	Deaths reported	61
Decrease by Deaths over Births	61	Increase by Births over Deaths	92

APPENDIX C.

EXPENDITURE by the Government on behalf of the Aborigines, 1896.

Department.	Particulars.	Amount expended.							
		£	s.	d.	£	s.	d.		
Aborigines Protection Board	Rations, clothing, boats and gear, farming implements, seed, erection of dwellings, fencing-wire, fishing tackle, medical comforts, &c. (for aborigines generally).....	8,040	9	4					
	Expenses in connection with the Home for Aborigines, Grafton—Salary of Manager, wages of aborigines, rations, clothing, medical comforts, building material, stock, tools, and sundries	581	14	5					
	Conveyance of aborigines on the railway lines of the Colony	616	5	11					
	Salary of Secretary to Board (six months)	50	0	0					
	Claims incurred in connection with the Camerooogunga, Warangesda, and Brewarrina Aboriginal Stations—Salaries, rations, clothing, medicine, building material, fencing, stock, seed, freight, labour, &c.	2,764	4	3					
						12,961	13	11	
Chief Secretary.....	Burial expenses—aborigines						66	17	0
Chief Medical Officer	Medical attendance and medicine						860	3	7
Government Stores	Blankets, clothing, stationery, &c.						2,394	5	10
Public Instruction	Repairs to buildings, salaries of teachers, school-books, fuel and cleaning						1,028	17	6
	Total.....						£17,311	17	10

APPENDIX D.

EXPENDITURE by the Board on Aborigines generally, 1896.

Locality.	Average monthly number receiving aid.		Period.	Nature of Supply or Service.	Amount expended during the year.		
	Adults.	Children.					
Angledool	18	18	12 months..	Rations	£ 114	s. 1	d. 0
Armidale	4		1 week ..	"	0	7	1
Ballina	2		12 months ..	"	7	16	4
Balranald	14	2	12 "	Rations, clothing, fencing-wire, and cooking utensils	74	14	3
Barrington	3	13	12 "	Rations and clothing	76	16	7
Bellingen and Fernmount.	20	3	12 "	"	43	1	4
Boggabilla	8	7	12 "	"	74	10	1
Bonshaw	3	2	12 "	Rations	29	15	7
Bourville	23		12 "	Rations, clothing, medical comforts, and fishing tackle.	86	8	10
Breeza	3	5	12 "	Rations	23	2	2
Broadwater	1		12 "	"	6	0	3
Brunge	55	38	12 "	Rations, medical comforts, building material, farming implements, fencing-wire, tools, harness, allowances to Superintendent and teacher.	632	12	4
Brushgrove	1		6 "	Rations	2	8	8
Bunnalbo	1		12 "	"	8	3	8
Bungawalbyn	3		12 "	"	17	1	4
Burragorang	8	21	12 "	Rations, seed, and fencing-wire.....	87	19	11
Burrier	1		12 "	Rations	9	12	7
Bushfield	6	10	12 "	Rations and clothing	53	9	2
Byron Bay	1		12 "	Rations	5	7	3
Cabbage-tree Island ..	6	6	12 "	"	27	11	9
Calimo	6	5	6 "	"	15	11	3
Camira	4		12 "	"	18	7	8
Carinda	5	4	3 "	"	8	3	7
Casino	1		5 weeks ..	"	0	10	11
Cobar	1	2	9 months..	"	6	12	3
Colane	12	8	12 "	"	81	13	2
Collarendabri	7	2	12 "	"	44	10	8
Conargo				Fencing-wire	8	0	0
Condobolin	1		4 months..	Rations	1	6	5
Conoble	4	2	12 "	Rations and clothing	37	11	6
Coolangatta	3	21	12 "	"	62	13	2
Coonamble	5	4	12 "	Rations	50	10	1
Copmanhurst	2		12 "	"	11	10	10
Coraki	1		12 "	"	4	5	0
Coramba	7	2	12 "	Rations and clothing	33	12	6
Covra	8	17	12 "	Rations, medical comforts, fencing-wire, clothing, and teacher's allowance.	103	12	7
Crooked and Minnamurra River.	10	15	12 "	Rations, clothing, seed, building material, and tools	74	17	5
Crudine	2	5	12 "	Rations	23	12	0

APPENDIX D—continued.

Locality.	Average monthly number receiving aid.		Period.	Nature of Supply or Service.	Amount expended during the year.
	Adults.	Children.			
Cudgen	1	.....	12 months	Rations	£ s. d. 5 5 11
Cuttabri	13	6	12 "	Rations and clothing	170 9 6
Dandaloo	3	5	12 "	Rations	9 2 5
Delegate	14	4	12 "	"	68 4 6
Dubbo	7	7	12 "	"	42 11 8
Dungalear	8	17	12 "	"	105 7 3
Drake	4	.....	12 "	"	12 13 3
Dyraaba	4	.....	12 "	"	28 11 11
Eden	5	7	12 "	Rations, clothing, paint, and oars for boats	33 18 1
Euabalong	16	15	12 "	Rations	92 17 5
Eugowra	5	12	12 "	"	49 7 6
Forbes	22	13	12 "	Rations and clothing	132 11 10
Forster	11	21	12 "	Rations, clothing, medical comforts, and repairs to boat	95 1 3
Gilgunnia	2	.....	12 "	Rations and clothing	19 7 7
Glen Innes	2	6	12 "	Rations	22 11 2
Glenorchy	5	4	12 "	"	45 4 7
Goodooga	13	3	12 "	Rations and clothing	88 17 11
Goonal	3	.....	12 "	"	15 19 4
Grafton	56	28	12 "	Rations, clothing, stock, building material, tools, manager's salary, aborigines' wages	581 14 5
Grafton South, Orara, and Glenugie	7	.....	12 "	Rations and medical comforts	29 11 5
Greenwell Point	5	7	12 "	Rations	48 19 8
Gulgambone	7	14	12 "	"	100 13 3
Gunnedah	4	.....	12 "	Rations and clothing	26 10 1
Harwood	2	.....	12 "	Rations	5 7 1
Hillston	11	16	12 "	Rations and clothing	57 15 9
Hunter Waterhole	11	14	12 "	Rations	86 11 8
Illawarra Lake	5	7	12 "	Rations, clothing, boat-gear, and fishing tackle	37 3 0
Ingalba	10	16	12 "	Rations, clothing, and repairs to plough	60 8 11
Jervis Bay	3	9	12 "	Rations	34 8 11
Kajuligah	2	.....	12 "	"	13 14 0
Keewong	4	.....	12 "	Rations and clothing	31 3 10
Kunopia	18	26	12 "	Rations	332 9 2
Kyogle	3	.....	12 "	"	18 19 9
La Perouse	12	11	12 "	Rations, building material, boat-gear, laying on water	153 19 0
Lawrence	3	.....	12 "	Rations	15 19 7
Lionsville	2	.....	12 "	"	13 0 6
Lismore	3	1	12 "	"	17 3 1
Louth	4	2	8 "	"	17 1 11
Macleay River	82	68	12 "	Rations, clothing, medical comforts, tools, building material, seed, and fencing-wire	470 9 7
Macksville and Nambucca Heads	42	13	12 "	Rations, clothing, medical comforts, boat, and tools	153 3 0
Mallara	2	5	12 "	Rations and clothing	27 15 0
Marfield	3	4	12 "	Rations	30 8 3
Maryland	2	.....	12 "	"	12 8 3
Megalong	6	5	12 "	Rations, clothing, and medical comforts	48 0 7
Merri Merrigal	2	2	3 "	Rations	2 16 0
Millera	1	.....	12 "	"	6 2 4
Milparinka	24	.....	12 "	Clothing	18 0 0
Mogil Mogil	7	10	12 "	Rations and clothing	90 5 0
Moolah	3	1	12 "	"	14 7 9
Moree	6	9	12 "	Rations	51 12 10
Mungindi	12	13	12 "	Rations and clothing	130 2 5
Murrumbong	6	6	12 "	"	69 15 5
Murwillumbah	5	1	12 "	Rations	20 15 7
Narrabri	3	4	12 "	Rations, clothing, and medical comforts	39 11 6
Narrandera and Grong-Grong	5	6	12 "	Rations and seed wheat	27 5 8
Nelligen	1	6	12 "	Rations and clothing	20 3 6
Nymboida	6	2	12 "	Rations and tools	36 6 3
Nyngan	4	.....	12 "	Rations	13 10 4
Oban	19	12	12 "	"	132 1 1
Obley .....	.....	5	2 weeks	Rations and clothing	3 18 10
Parkes	5	8	12 months	"	45 14 7
Peak Hill	19	14	12 "	Clothing	14 13 1
Penrith	1	.....	12 "	Rations and rent of cottage	13 3 7
Piangobla	5	3	2 "	Rations	2 9 1
Pilliga	15	9	12 "	"	79 10 8
Poolamacca	14	.....	12 "	Rations and clothing	66 13 7
Port Macquarie	16	22	12 "	Rations, clothing, medical comforts, and tools	115 13 10
Port Stephens	7	8	12 "	Rations, clothing, building material, fishing net, repairs to boats, boat gear, seed, and tools	91 0 1
Pretty Gully	2	1	12 "	Rations	13 18 6
Quambone	15	12	12 "	Rations and clothing	104 2 8
Queanbeyan	3	7	12 "	Rations, clothing, farming implements, and seed	57 10 2
Rivertree	2	.....	12 "	Rations	13 6 8
Runnymede .....	.....	.....	12 "	Tools	3 15 4
Rylstone	1	9	12 "	Rations	26 10 4
Singleton	34	31	12 "	Rations, clothing, medical comforts, fencing material, tools, farmhouse, and sundries	283 6 1
Stuart Town	1	.....	12 "	Rations	7 19 2
Sturt's Meadow	4	.....	9 "	"	17 16 6

APPENDIX D—continued.

Locality.	Average monthly number receiving aid.		Period.	Nature of Supply or Service.	Amount expended during the year.
	Adults.	Children.			
Swansea	1	.....	12 months ..	Rations and clothing	£ s. d. 12 16 1
Tabulam	6	.....	9 ..	Rations	15 18 11
Taree	14	18	12 ..	Rations, clothing, medical comforts, and sundries..	103 19 0
Tatalla	18	13	12 ..	Rations and clothing	178 7 7
Terembone	17	11	12 ..	Rations	187 17 10
Terry-hic-hie	22	19	12 ..	Rations, clothing, and building material.....	257 16 0
Tooloon	4	6	12 ..	Rations	56 8 5
Trangie	19	9	12 ..	"	90 16 2
Tumbulgum	1	1	12 ..	"	5 10 3
Turlingah	16	11	12 ..	Rations and clothing	85 17 3
Ulladulla	8	15	12 ..	Rations, clothing, and medical comforts.....	79 13 1
Unungar	3	1	12 ..	Rations	34 2 6
Uralla	5	14	12 ..	"	45 2 11
Walcha	3	.....	12 ..	Rations, fencing-wire, and seed.....	18 8 7
Walcha Road	5	14	4 ..	Rations and clothing	24 19 2
Walgett	7	12	12 ..	Rations	56 16 2
Wallaga Lake	84	29	12 ..	Rations, clothing, tools, boat-gear, seed, repairs to boat, repairs to schoolroom, allowance to Superintendent.	405 1 2
Wanaaring.....	4	.....	12 ..	Rations	18 10 0
Wee Waa	1	.....	12 ..	"	7 10 4
Weilmoringle	1	.....	12 ..	"	10 9 5
Wointeriga	2	.....	12 ..	Rations and clothing	16 15 10
Wellington.....	14	20	12 ..	Rations, clothing, fencing-wire, and building material.	191 14 2
Wilcannia	1	2	12 ..	Rations	9 5 6
Windsor	46	67	12 ..	Rations and building material	178 3 4
Wingham	6	12	12 ..	Rations and tools	30 3 5
Wollar	7	6	12 ..	Rations and clothing	50 8 7
Wollomombi	2	.....	12 ..	Rations	13 11 7
Woogoolga.....	2	.....	3 ..	do	0 15 0
Wyangarie.....	3	2	12 ..	do	29 14 11
Wyrallah	9	.....	12 ..	do	53 0 6
Yass	23	49	12 ..	Rations, clothing, seed, and tools	173 15 1
Young	2	.....	2 weeks ..	Rations	0 12 6
Yugilbar	1	.....	6 months ..	do	3 4 11
Incidental expenses .....	.....	.....	12 ..	.....	13 16 3
Railway fares (aborigines).	.....	.....	12 ..	.....	616 5 11
Salary of Secretary .....	.....	.....	6 ..	.....	50 0 0
Total .....	.....	.....	.....	.....	10,197 9 8

APPENDIX E.

AMOUNTS paid for Medical Attendance, 1896.

Locality.	Amount.	Locality.	Amount.
Armidale	£ s. d. 3 10 0	Brought forward.....	£ s. d. 492 18 9
Ballina	1 2 6	Macksville	1 19 1
Barrington	50 0 0	Megalong	6 5 0
Bellingen	1 5 0	Mungindi	3 6 0
Bodalla	5 10 0	Narrabri	12 12 0
Bourke	0 10 0	Nyngan	2 0 0
Bowraville	6 11 3	Parke	3 0 0
Broadwater	2 0 0	Penrith	0 10 0
Bungle	63 15 6	Port Macquarie.....	8 1 0
Burraborang	2 0 0	Queanbeyan	12 3 0
Casino	31 2 6	Rollands Plains.....	7 12 0
Cabbage-tree Island	7 12 6	Singleton	40 0 0
Cobar	0 10 0	Taree	40 0 0
Coolangatta	11 16 0	Turlingah	6 2 0
Cowra	25 10 0	Ulladulla	41 5 0
Cameroogunga	56 6 0	Uralla	37 5 0
Forster	8 4 0	Walcha	4 10 0
Coulburn	5 10 0	Walgett	0 10 0
Grafton	60 0 0	Wallaga Lake	19 14 9
Gunnedah	0 10 0	Wellington.....	33 8 0
Hillgrove	5 5 0	Wilcannia	3 0 0
Hillston	2 8 6	Wingham	25 0 0
Kiama	40 0 0	Yass	52 19 0
La Perouse	50 0 0	Young	0 10 0
Lismore	2 0 0	Torrawangee	5 13 0
Macleay River.....	50 0 0		
Carried forward	£492 18 9	Total	£860 3 7

APPENDIX F.

LIST of Articles supplied Aborigines from the Government Stores, 1896.

Locality.	No. receiving aid.		Nature of aid.	Locality	No. receiving aid.		Nature of aid.
	Adults.	Children.			Adults.	Children.	
Ashford	7	4	Clothing.	Kookabookra	18	8	Clothing.
Ballina	5	.....	"	Lawrence	11	.....	"
Broadwater	2	.....	"	Lismore	11	.....	"
Brungle .....	.....	.....	Medicine.	Murwillumbah	6	2	"
Bundarra	5	10	Clothing.	Nymboida	6	6	"
Byron Bay	1	.....	"	Sydney .....	.....	.....	Stationery.
Casno	10	3	"	Penterfield	2	.....	Clothing.
Chatsworth	1	.....	"	Pumbulgum	2	3	"
Copmanhurst	12	5	"	Uralla	4	.....	"
Coraki	4	.....	"	Walcha	12	22	"
Cudgen	1	.....	"	Wardell	5	2	"
Drake	22	1	"	Wilson's Downfall	9	4	"
Hen Innes	2	6	"	Woodenbong	8	2	"
Grafton	24	17	"	Woongoolga	5	2	"
Grafton, South	15	.....	"	Throughout the	.....	.....	Blankets.
Harwood	6	.....	"	Colony.	.....	.....
Hillgrove	2	.....	"			

N.B.—The cost of these articles and their transit (£2,394 5s. 10d.) was defrayed from the Vote for Government Stores.

APPENDIX G.

STATEMENT of Expenditure on account of Aborigines during the year 1896 by the Department of Public Instruction.

Name of School.	Salaries.			Books and apparatus.			Forage, travelling expenses, fuel, and cleaning.			Buildings, repairs, rent, furniture.			Total.			
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	
Barrington	44	15	0	1	6	7	5	5	0	.....	.....	.....	51	6	7
Brewarrina	89	10	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	89	10	0
Brungle	64	0	0	1	17	9	2	12	0	.....	.....	.....	68	9	9
Cumeroogunga	244	5	0	5	11	0	9	6	10	.....	.....	.....	259	2	10
Forster	81	6	8	2	10	6	.....	.....	.....	11	19	3	95	16	5
Grafton	89	0	3	0	13	2	.....	.....	.....	.....	.....	.....	89	13	5
Mulyan (Cowra)	89	10	0	1	0	11	0	10	0	.....	.....	.....	91	0	11
Rolland's Plains	41	7	5	0	9	3	5	0	0	.....	.....	.....	46	16	8
Waliaga Lake .....	.....	.....	.....	.....	.....	.....	1	1	10	.....	.....	.....	1	1	10
Warangesda	173	10	0	9	14	6	4	18	6	0	19	6	189	2	6	
Wanchope	41	7	5	0	9	2	5	0	0	.....	.....	.....	46	16	7
Totals	£	958	11	9	23	12	10	33	14	2	12	18	9	1,028	17	6

APPENDIX H.

CENSUS Returns, Brewarrina, Brungle, Cumeroogunga, Grafton, and Warangesda Aboriginal Stations, 1896.

Stations.	Population, 31st December, 1896.						Grand Total.	Daily average population throughout the year.						Grand Total.
	Full-bloods.			Half-castes.				Full-bloods.			Half-castes.			
	Adults.	Children.	Total.	Adults.	Children.	Total.		Adults.	Children.	Total.	Adults.	Children.	Total.	
Brewarrina ..	16	5	21	3	18	21	42	17	8	25	3	10	22	47
Brungle	22	11	33	29	34	63	96	25	13	38	29	29	58	96
Cumeroogunga ..	27	4	31	78	97	175	206	18	5	23	60	84	144	167
Grafton	23	24	47	5	6	11	58	23	21	44	5	4	9	53
Warangesda ..	21	9	30	28	43	71	101	31	10	41	29	43	72	113
	109	53	162	143	198	341	503	114	57	171	126	179	305	476

APPENDIX I.

REPORTS OF LOCAL BOARDS.

Sir,

In compliance with your request, we now beg to submit the following Report of the proceedings that have taken place at Cumeroogunga Aboriginal Station for the past year.

Improvements made during the year consist of 14 chains of six-wire fencing erected, also 10 chains of six-wire fencing re-erected; 500 acres cleared of suckers, and dead timber burnt off; a two-roomed weatherboard cottage erected, and another in course of building; a log hut built for aged men; a 3,000 gallon tank erected on stand for main water supply; 160 acres ploughed, 150 acres put under wheat, 2½ acres under potatoes, also a small patch planted with pumpkins.

The

The farm-blocks' men ploughed an aggregate of 70 acres, which they put under wheat. John Atkinson ploughed and sowed 27 acres with wheat—about 4 acres were destroyed by rabbits; 17 acres were cut for hay, giving a total yield of about 4 tons; 6 acres were stripped, giving a total yield of 72 bushels. He returned 12 bags of wheat to Station, that quantity having been supplied him for seed. He has cut most of his hay into chaff, and has sold over 1 ton. Robert Cooper ploughed and sowed 9 acres with wheat, which he cut for hay, getting a return of about $3\frac{1}{2}$ tons. E. Joachim ploughed and sowed 10 acres with wheat; cut 3 acres for hay, getting about 1 ton return; stripped the other 7 acres for about 38 bushels of wheat. F. and H. Walter ploughed and sowed 8 acres with wheat; cut 7 acres for hay, getting about $2\frac{1}{2}$ tons hay; and stripped 1 acre for 9 bushels, which they returned to Station. Bagot Morgan ploughed and sowed 8 acres with wheat, which he cut for hay, getting about a ton, which he sold for £3 10s. George Allen ploughed and sowed 9 acres; rabbits destroyed about 2 acres; crops cut for hay, about $1\frac{1}{2}$ ton.

The Station's returns show as follows:—110 acres cut for hay; yield, about 45 tons—30 tons in a stack and 10 tons under the shed, 5 tons having been used during the harvesting. About 25 acres have been stripped, the yield being 120 bushels of wheat. There are 14 acres more to strip, but it is not quite ready.

The average attendance for the year at the school is as follows:—Boys, 34.7; girls, 34.3; total, 69. The general efficiency of this school compared with last year shows the results are higher. The following is an extract of the observations from the School Inspector's report:—"The pupils are bright and cheerful in demeanour, are healthy and well cared for in appearance. The government is genial and firm, the order is good, and the teaching has been earnest and successful."

The general condition of the school is very satisfactory.

The health of the people on the Station has been good. The conduct of the residents has been good with the exception of a few, and the Local Board have instructed the Manager to take severe measures to eradicate the evil unless they very materially reform. The management of the Station is satisfactory.

The population averages about 170 persons. There have been twelve births (all half-castes), three marriages (all half-castes), and two deaths (one child half-caste, and one adult full-blood).

We have, &c.,

A. E. KINSEY, Chairman.

C. L. BLAIR, Hon. Secretary.

The Secretary, Aborigines Protection Board.

Sir,

Local Board, Darlington Point, 16 February, 1897.

We have the honor to report that during the past year the Local Board held eleven meetings, at each of which there was much to occupy their attention. Disputes had to be settled, differences adjusted, misconduct rebuked, and advice given upon many matters.

We regret that the moral tone of the Station has been far from satisfactory. While the majority of the residents have conducted themselves circumspectly, a large minority have not done so, some having been guilty of gross misconduct.

We also regret that more useful work has not been done. When the number of strong able-bodied men who are to be seen about the Station is taken into consideration, the amount of work done is insignificant. Less useful work was done during the past year than during previous years.

A large spacious dormitory for girls was erected. The work was faithfully performed by a carpenter sent from Sydney. Authority was given for the erection of three new cottages and a hut for single men. Part of the necessary material was supplied and the work of erection commenced by some of the men, under the supervision of the Manager. Some minor improvements were effected by the erection of sapling fences at the Manager's residence, and at some of the cottages. The land (about 50 acres) that was cleared and grubbed in 1895, was enclosed with a substantial six-wire fence. The contract was let to some of the men, and was carried out in a thoroughly satisfactory manner. A few acres of this land was fallowed, but on account of the hardness of the ground, due to the long continued dry weather, fallowing had to be discontinued.

Only a very small area was put under cultivation, and in consequence of the severity of the drought the return was extremely poor.

The stock are in poor condition, owing to the scarcity of feed.

Towards the close of the year the Dormitory Matron, and the girls under her charge, moved into the new dormitory, where they are enjoying a measure of comfort and happiness which they did not experience in the old building.

The village has invariably presented a clean and orderly appearance.

The tidiness of the dormitory girls, and also of the women and children outside, reflects the greatest credit upon Mrs. Pridham and Mrs. Smith.

The school has made remarkable progress. The enrolment has largely increased.

The health of the residents has been fairly good.

During the year there were five deaths and five marriages.

We have, &c.,

H. KOOK, Chairman.

C. R. F. NOBBS, Hon. Secretary.

The Secretary, Aborigines Protection Board.

Sir,

Local Board, Grafton, 31 January, 1897.

We have the honor to report that satisfactory progress has been made at the Home for Aborigines in this district. Frequent visits have been made by the members of the Board, and we have been pleased to note the general contentment amongst the inmates, and the desire by the Manager and Matron to increase the usefulness of the Home.

You will note under the headings given below that considerable land has been put under cultivation, roads and bridges repaired, buildings erected, &c.

On the farm about 13 acres are now under crop, which have entailed a large amount of clearing, grubbing, and burning off. The crops have turned out fairly well, but dry weather is now retarding their growth. In buildings, a store and workshop have been erected, a cottage for the school teacher, and a large new school room, 27 x 16, is in course of erection.

A very fair cash return has been taken from the land, as will be seen in the Manager's report, but when additional land is under cultivation a large amount of current expenses will be saved. The potato crop has assisted in this direction, and a great quantity has been consumed by the aborigines.

Stock.—The grass has been good on the Home, and the stock in first-class condition, and during the coming winter months it will not be necessary to purchase much beef.

The health of the inmates of the Home has been satisfactory. Their conduct has been fairly good; but, of course, in dealing with aborigines we must not expect as much as from white people.

In conclusion, we regret that Mr. Frank Norrie's residence now in Sydney prevents us from having the benefits of his knowledge and experience.

The Board are pleased indeed to report matters are proceeding satisfactorily.

We have, &c.,

THOMAS PARKER, Chairman.

JAS. C. WILCOX.

The Secretary, Aborigines Protection Board, Sydney.

Manager's Report on the Home for Aborigines, Clarence River, for the year 1896.

On the 31st December the ordinary population was considerably reduced through people and children going away for school and Xmas holidays. The numbers of aborigines who ordinarily live at the Home, and receive rations there, are:—Full-bloods—15 men, 13 women, 7 boys, 15 girls; total, 50; half-castes—3 men, 4 women, 5 boys, 1 girl; total, 13; grand total, 63.

The daily average population for the year was 53.

The number of aboriginal children ordinarily attending the Home school—10 boys, 13 girls; total, 23.

Permanent improvements effected during the year.

Farm.—Eight acres new forest land cleared, partly stumped, ploughed, and planted with maize; 5 acres roughly worked last year, properly cultivated and planted; a great number of stumps and roots burnt and grubbed out; roads and bridges repaired after floods.

Buildings.

Buildings.—Store and workshop (one building) erected, 27 feet long, 14 feet wide, 8 feet wall, roofed with iron, wall partly boards, partly good ironbark slabs, split by Home men. Cottage, for school teacher, two rooms, board floor, and papered walls, with canvas ceiling, with skillion and verandah; total, floor, 23 feet x 20 feet. New school-room, 27 feet long x 16 feet wide, 10 feet wall, half-hipped Swiss roof, to be covered with iron, with verandah full length, 7 feet wide. (This is not erected, but all parts of it are cut and finished, and a few days work will see it ready for use.) One hundred and fifty slabs and 3,000 shingles were split in the bush, and brought to the Home for use in building; 65 sheets of bark were also stripped; an underground tank to catch roof water was commenced.

Cultivation.—The maize crop planted 1895, and gathered this year yielded from very poorly on bad land to good on richer ground. The poor land was left out of cultivation this year, and work concentrated on the best land. The cash return from 1895-6 crop was over £35, £21 being paid in cash to the Local Board, and the balance expended by the Manager, by permission of the Local Board, for a spring-van and harness, seed potatoes, and small items. There are now planted about 18 acres maize, 1½ acre potatoes, ½ acre tomatoes, 1½ acre onions, ½ acre lucerne, and 3 acres are under preparation for winter potatoes. The early maize is bearing a heavy crop. The potatoes yielded very well, but from the glut in the market will only just pay for the seed in cash, though there are several tons over for the people to eat, and for next planting. The onions are making a very profitable crop. The tomatoes were cut back by the frost, and will give no profit, though the Home people have greatly benefited by them, as a skin disease which troubled them has disappeared since they had free run of the tomatoes. The yield from late corn depends entirely on the weather, which threatens to be very dry. The people have been well supplied with vegetables this year. They have eaten several tons of sweet and ordinary potatoes, and have had plenty of cabbage, beans, pumpkins, melons, and tomatoes.

Stock.—The Home horses are in good condition, but one draught mare is lame and unfit for any more heavy work. The cattle are doing very well. The expense for beef was greatly reduced this year by killing Home cattle, and in a few weeks it will be cool enough to commence killing again.

Health of Aborigines.—The general health has been good.

Deaths.—One old man, a full-blood, about 65 years of age, died from inflammation of the lungs.

Births.—Nil.

Conduct.—There was absolutely no serious quarrelling or fighting of any kind, nor was there any person at the Home at any time really intoxicated. The aborigines now make a habit of settling their disputes away from the Home, and sleeping off the effects of liquor before they come in if they have too much. The vice of gambling, so prevalent among aborigines, is strong among these people, and occasionally gives trouble. Still, under persuasion, the men continue to spend most of their wages usefully, and all the people are well clothed and more comfortable under the care of the Board than they could be anywhere else.

General.—The cash value of permanent improvements effected, crop to hand, &c., is nearly, if not quite, £200, and the farm is replanted with crops for next season in addition to this sum; and, as the Home has undoubtedly made progress, I am emboldened to hope that the work for the year may meet with the approval of the Board.

The Chairman, Local Board, Grafton.

F. C. CURREY,
Manager.

Sir,

Local Board, Brewarrina, 13 March, 1897.

The work performed during the year for the improvement of the Station has consisted principally of the erection of about 3 miles and 77 chains new five-wire division fencing and the removal of about 30 chains old fence to a more suitable position. The Station is now subdivided into three paddocks on the Cato Creek and five paddocks on the Barwon River, also a cultivation paddock of 12 acres, which has been sown with wheat for the last four years, and in only one year was a crop taken off it. The Board, therefore, are doubtful if it is advisable to continue cultivating this.

A new verandah has been lately erected all round the schoolroom, and the room has been ceiled. This has greatly improved the place, and the work has been carried out satisfactorily. It was only intended to erect this verandah on three sides, but, for the protection of the building, the Board thought it advisable and necessary to put it all round.

Suckering ringbarked country on the station.—There are about 3,000 acres now ringbarked, which will improve the carrying capacity of the country. All the improvements are in good state of repair, and are well looked after. The Board consider the Station now fully improved for all present requirements.

There were 42 aborigines slept on the station during the last nights of the year, and the monthly average was 48.9. There were 20 children enrolled on the school roll at end of year, and the monthly average was 19.6. The children passed a creditable examination.

There are eleven boys and five girls bound out at satisfactory wages, some of them just ending their third year, and, in most cases, giving satisfaction to their employers. Numbers of applications are continually being made for children.

There were six deaths during the year, nearly all from old age. The general health and conduct of the people are good.

The stock at end of year consisted of 42 cattle including calves, 20 horses, and 723 sheep including lambs. All these are in good condition.

The net proceeds of wool for 1896 from 619 sheep was £91 12s. 1d.

Sheepskins realised £19 15s. 3d., and extra wool £2 2s. Five hundred sheep were killed for rations during the year, being an average per month of 41.8.

The Manager and his wife have taken a great interest in everything connected with the Station during the year. The whole place is kept thoroughly clean, and the aborigines are well satisfied. The children have also greatly improved under their care. Considering the very satisfactory way in which the place has been managed, my Board would suggest that a small increase might be given the Manager if funds would allow of it.

The Secretary, Aborigines Protection Board.

H. LORAINÉ CATHIE,
Chairman.

Gentlemen,

Aborigines' Station, Brungle, 1 February, 1897.

Subjoined I have the honour to present the Annual Report of this Station for the year 1896.

School.—This has been in operation every school-day throughout the year, except during the time when the alterations were being effected. The average attendance for the whole year was:—Boys, 9.9; girls, 9.9; total, 19.8. The normal attendance is about 22, but a period of sickness amongst the children reduced the average. The District Inspector's report on the year's work is very satisfactory.

Health.—The general health of the camp during the year has been only moderate, and one special case of cardiac disease has rendered a heavy expense for doctor's attendance necessary.

Births.—Full-blood—Male, 2. Half castes—Male, 2; female, 2. Total, 6.

Deaths.—Full-blood—Male, 3; female, 2. Half-castes—Male, 3. Total, 8.

Cultivation.—A new paddock, containing about 15 acres, has been grubbed and cleared ready for the plough; but it will be impossible to turn up any ground, either new or old, with the plough now on the Station, it being completely worn out. I very much regret to say that this year's operations in wheat-growing have resulted very unfavourably. There was every prospect of a good crop, and, to avoid risk of stacking, I arranged to strip the wheat. I found, however, that the stripper was leaving nearly half the grain, and I, therefore, stopped it, and procured a reaper and binder to complete the work. During January, and before I could get a thrashing machine, very heavy rain fell, and, in common with all others, the wheat in stack was seriously damaged. The whole had to be pulled to pieces and spread out to dry and restacked, in which process a large amount of grain was lost. The crop was actually better than last year, but, in consequence of these circumstances, only thirty-one bags were obtained.

Conduct.—The general moral tone of the camp is, I think, steadily, though slowly, improving. There has been only one minor disturbance in the camp during the year, and less trouble is experienced in the neighbouring towns with regard to men drinking. One white man was detected bringing liquor to the camp, and brought before the Bench and heavily fined.

I have, &c.,

J. G. USSHER,
Superintendent.

Approved by Local Board.—A. M'GRUER, Acting Chairman.

[2d.]

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

INSPECTOR-GENERAL OF THE INSANE.

(REPORT FOR YEAR 1896.)

Presented to Parliament, pursuant to Act 42 Vic. No. 7, sec. 73.

Printed under No. 5 Report from Printing Committee, 27 May, 1897.

The Inspector-General of the Insane to The Chief Secretary.

Sir, Lunacy Department, Inspector-General's Office, Gladesville, 15 May, 1897.

I do myself the honor, in accordance with the 73rd section of the Lunacy Act of 1878, to submit for your information a report on the state and condition of the Hospitals and other Institutions for the Insane for the year ending 31st December, 1896.

I have, &c.,

F. NORTON MANNING,
Inspector-General.

On the 31st December, 1896, the number of insane persons under official cognisance was 3,845, and their distribution was as follows:—

Institution.	Number on Register.			Number on Leave.		
	Male.	Female.	Total.	Male.	Female.	Total.
Hospital for the Insane, Gladesville	522	346	868	1	22	23
Do Parramatta (Free)	685	383	1,068	7	7	14
Do do (Criminal)	44	14	58	.....	.....	.....
Do Callan Park	469	411	880	9	10	19
Do Newcastle	153	153	306	1	1	2
Do Rydalmere	315	151	466	.....	.....	.....
Do Kenmore	154	.....	154	1	.....	1
Licensed House for the Insane, Cook's River.....	11	23	34	.....	.....	.....
Do do Ryde .....	.....	5	5	.....	.....	.....
Do do Picton—Swiss Cottage .....	.....	1	1	.....	.....	.....
Do do Picton — Woodland Cottage .....	.....	1	1	.....	.....	.....
South Australian Hospitals	3	1	4	.....	.....	.....
Total.....	2,356	1,489	3,845	19	40	59

The number at the close of 1895 was 3,720, so that the increase during the year 1896 was 125 made up of 67 males and 58 females.

114—A

[525 copies—Approximate Cost of Printing (labour and material), £21 5s. 6d.]

This.

This increase was slightly less than that for the preceding year, but over the average for the last twenty years, 1877 to 1896 inclusive, which was 105.

During the twenty years, 1872 to 1891 inclusive, the proportion of insane to population, though varying slightly from year to year, remained practically stationary, but the five years, 1892 to 1896 inclusive, have added 711, or an average of 142 annually, to the number of insane persons under care.

The proportion of insane to population, which at the end of 1891 was 1 in 371, or 2.69 per thousand, was at the close of 1896, 1 in 337, or 2.96 per thousand.

The cause of this increase is to be found, as I have pointed out in prior reports, in the general commercial depression of the Colony, which has brought to many altered circumstances, trouble, and stress, which have served to break down in mind those who are neurotic and unstable, and least able to fight the battle of life under adverse conditions.

Of the total number of insane persons on the register at the close of the year, 3,782 were in the Hospitals and Licensed Houses in this Colony, 59 were absent on leave under the provisions of the Lunacy Act, and 4 were in Hospitals for the Insane in South Australia under the provisions of the Lunacy Convention Act of 1894.

The returns from the Hospitals and Licensed Houses show that there was an increase of 20 at Gladesville, 15 at Parramatta, 41 at Callan Park, 35 at Rydalmere, 8 at Kenmore, 6 at the Hospital for Criminals at Parramatta, and 1 at the Licensed House at Ryde, whilst there was a decrease of 1 at the Hospital at Newcastle, and 3 at the Licensed House at Cook's River. The number under care in South Australia and in the Licensed Houses for single patients at Picton remained unaltered.

The wards at Gladesville, Callan Park, and Parramatta were at the close of the year in a dangerously overcrowded condition, and a more than usually anxious charge to the Medical Superintendents, the excessive number of patients interfering seriously with the management, tending to quarrels and accidents, and militating against the physical health and the mental restoration of the inmates. The new wards at Kenmore, which should have been ready for occupation by the end of December, were then not nearly finished, and, though some of the buildings have since been taken over and occupied, it seems probable that it will be the end of June next, or six months beyond contract time, before all the wards are completed and so fitted and furnished that patients can be placed in them.

The arrangement, sanctioned by Act of Parliament and carried out under convention with the Colony of South Australia, by which patients from the district of Broken Hill in this Colony have been taken charge of by the authorities of South Australia, and maintained in the Hospitals for the Insane of that Colony, has been carried out during the year without any difficulties.

At the close of 1895, 4 such patients were in the South Australian Hospitals. During the year 1896, 7 were received, making a total of 11 under care. Of these, 5 were discharged recovered, 2 died, and 4 remained on December 31, 1896.

The following tables show the admissions, discharges, and deaths, the proportion of recoveries, the rate of mortality, the causes of insanity in those admitted, those who recovered and those who died, the causes of death, the length of residence in those who recovered and those who died, and also the ages, condition as to marriage, religious profession, nationality, and previous occupation of those admitted and of all under care, as well as the form of mental disorder in those admitted, those who recovered, and those who died during the year:—

TABLE 1.

SHOWING the Admissions, Readmissions, Discharges, and Deaths in the Hospitals and Licensed Houses for the Insane during the year 1896.

	Male.	Female.	Total.
Hospital on 31st December, 1895	2,286	1,430	3,716
	Male.	Female.	Total.
Admitted for the first time during the year	378	251	629
Readmitted during the year	72	39	111
Transferred during the year	83	52	135
	533	342	875
Total under care during the year 1896.....	2,819	1,772	4,591
Discharge or removal—			
Recovered	185	147	332
Relieved	26	19	45
Transferred	83	52	135
Escaped (and not recaptured).....	7	.....	7
Died	165	66	231
Total discharged or died during the year 1896	466	284	750
Remaining	2,353	1,488	3,841
Average number resident during the year	2,298	1,412	3,710
* Persons under care during the year†	2,808	1,770	4,578
* Persons admitted	511	325	836
* Persons recovered	182	146	328

* Persons, *i.e.*, separate persons in contradistinction to "cases," which may include the same individual more than once.
 † Total cases minus readmission of patients discharged during the current year.

TABLE 2.

SHOWING the Admissions, Readmissions, Discharges, and Deaths, with the Mean Annual Mortality, and the Proportion of Recoveries, &c., per cent., in the Hospitals for the Insane, for the years 1876 to 1896 inclusive, and including the Licensed Houses, from the year 1882.

Year.	Admitted.			Transferred from other Hospitals, &c.			Discharged.			Transferred to other Hospitals, &c.			Escaped and not recaptured within 28 days.			Died.			Remaining in Hospital 31st December in each year.			Average number resident			Percentage of recoveries on admissions and readmissions			Percentage of recoveries on admissions and readmissions for Quinquennial periods.			Percentage of patients relieved on admissions and readmissions.			Percentage of patients relieved on admissions and readmissions for Quinquennial periods.			Percentage of deaths on average numbers resident.			Percentage of deaths on average numbers resident for Quinquennial periods.																				
	Admitted for the first time.		Readmitted.	M.		F.	Total.	Re-covered.		Re-lieved.		M.		F.	Total.	M.		F.	Total.	M.		F.	Total.	M.		F.	Total.	M.		F.	Total.	M.		F.	Total.	M.		F.	Total.																					
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.																					
1876	182	111	293	33	27	60	101	12	113	88	70	158	17	19	36	100	45	145	78	29	107	1072	533	1605	1052	536	1588	40	90	50	72	44	75	7	90	13	76	10	19	7	41	5	41	6	73														
1877	262	100	362	62	24	86	133	14	147	137	61	201	17	18	35	130	21	151	97	20	117	1147	548	1695	1130	529	1659	42	28	51	61	44	56	4	97	14	51	7	81	8	58	3	78	7	05														
1878	212	120	338	40	38	78	112	36	148	108	46	154	17	20	37	113	45	158	99	28	127	1174	609	1783	1175	579	1754	42	85	28	05	37	01	42	28	39	86	41	42	6	75	12	19	8	89	6	80	13	77	9	28	8	42	4	83	7	24		
1879	241	128	369	40	26	66	98	12	110	112	58	170	21	28	49	97	17	114	91	26	117	1232	646	1878	1188	620	1808	39	86	37	66	39	08	7	47	18	18	11	26	7	66	4	19	6	47														
1880	267	145	412	28	30	58	42	24	66	133	63	196	21	19	10	40	35	75	3	3	96	40	136	1276	688	1964	1249	665	1914	45	08	36	00	41	70	7	11	10	85	8	51	7	68	6	01	7	10													
1881	284	134	418	35	27	62	31	9	40	133	73	206	16	14	30	34	19	53	5	5	84	26	110	1354	726	2080	1314	700	2014	41	69	45	34	42	91	5	01	8	69	6	25	6	39	3	71	5	46													
1882	286	142	428	20	25	45	38	14	52	116	84	202	22	16	38	38	14	52	3	3	93	48	141	1430	877	2307	1392	854	2246	38	56	50	29	42	70	7	18	9	58	8	03	6	68	5	62	6	27													
1883	272	161	433	21	22	43	29	14	174	119	75	194	19	11	30	29	145	174	111	45	156	1474	929	2403	1443	904	2347	40	61	40	98	40	75	40	07	42	27	40	89	6	48	6	01	6	30	5	65	8	36	6	66	7	69	4	98	6	64		
1884	281	159	440	20	33	53	130	42	172	103	79	182	16	12	28	107	42	149	4	4	123	38	181	1552	972	2524	1503	932	2435	34	21	41	14	36	91	5	31	6	25	5	67	5	18	6	22	7	43													
1885	318	205	523	20	24	44	29	83	112	157	83	234	15	25	40	29	83	112	7	7	118	49	167	1599	1044	2643	1550	985	2535	14	67	36	24	41	26	4	43	10	91	7	05	7	61	4	97	6	58													
1886	345	196	541	18	8	26	27	88	115	174	99	273	16	10	26	27	88	115	7	7	121	66	187	1644	1073	2717	1604	1035	2639	47	93	48	52	48	14	4	40	4	90	4	58	7	54	6	37	7	08													
1887	302	179	481	30	21	51	19	10	29	115	99	214	11	14	25	19	10	29	4	4	111	74	185	1735	1086	2821	1670	1052	2722	34	63	49	50	40	22	3	31	7	00	4	69	6	64	7	03	6	79													
1888	333	196	529	32	27	59	37	14	51	167	108	275	20	11	31	37	14	51	5	5	132	68	200	1776	1122	2898	1738	1077	2815	45	75	48	43	46	76	41	33	49	30	44	34	5	47	4	93	5	27	4	29	4	36	4	31	7	59	6	31	7	10	
1889	294	186	480	41	29	70	37	12	49	135	109	244	8	4	12	37	12	49	8	1	9	138	71	209	1822	1152	2974	1785	1104	2889	40	29	50	69	44	36	2	38	1	86	2	18	7	00	5	73	6	52												
1890	341	215	556	35	20	55	41	33	74	141	116	257	21	8	29	41	33	74	2	2	4	128	65	193	1906	1196	3102	1827	1133	2960	37	50	49	36	42	06	5	58	3	40	4	74	7	00	5	73	6	52												
1891	327	212	539	31	26	57	227	34	261	168	129	297	11	17	28	227	31	261	6	6	6	167	66	233	1912	1222	3134	1982	1167	3149	46	92	54	20	49	83	3	07	7	14	4	69	8	42	5	65	7	39												
1892	377	208	585	39	42	81	125	41	166	154	107	261	17	14	31	125	41	166	4	1	5	122	69	191	2031	1281	3312	1946	1205	3151	37	01	42	80	39	18	4	08	5	60	4	65	6	26	5	72	6	06												
1893	355	227	582	55	51	106	104	61	165	156	130	286	21	21	42	104	61	165	1	1	1	172	74	246	2092	1333	3423	2054	1258	3312	38	04	46	93	41	63	39	56	48	06	42	87	5	12	7	58	6	11	5	24	7	51	6	12	8	37	5	88	7	42
1894	395	249	644	31	37	68	84	104	188	162	134	296	27	27	54	84	104	188	1	1	1	130	69	199	2198	1389	3587	2124	1321	3445	38	02	46	85	41	57	6	33	9	44	7	58	6	12	5	22	5	77												
1895	389	220	609	61	45	106	205	68	273	175	133	308	32	20	52	205	68	273	3	3	3	151	72	223	2287	1429	3716	2209	1365	3574	38	00	50	19	43	08	7	11	7	54	7	21	6	83	5	27	6	24												
1896	378	251	629	72	39	111	83	52	135	185	147	332	26	19	45	83	52	135	7	7	7	165	66	231	2353	1488	3841	2298	1412	3710	41	11	50	68	44	86	5	77	6	55	6	08	7	18	4	67	6	22												

Average percentage of recoveries on admissions and readmissions for ten years, 1887-1896
 Average percentage of patients relieved on admissions and readmissions for ten years, 1887-1896
 Average percentage of deaths on average numbers resident for ten years, 1887-1896

Males.	Females.	Total.
39.76	48.87	43.29
4.95	6.25	5.45
7.21	5.73	6.65

TABLE 3.

SHOWING the Causes of Insanity,* apparent or assigned, in the Admissions and Readmissions in the Hospitals and Licensed Houses for the Insane, during the year 1896.

Causes of Insanity.	Number of Instances in which each cause was assigned.								
	As predisposing cause.†			As exciting cause.†			Total.‡		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
MORAL—									
Domestic trouble (including loss of relatives and friends) .....	...	6	6	2	16	18	2	22	24
Adverse circumstances (including business anxiety and pecuniary difficulties)	7	1	8	28	4	32	35	5	40
Mental anxiety and "worry" (not included under above two heads), and overwork.....	1	4	5	19	5	24	20	9	29
Religious excitement .....	...	...	...	1	4	5	1	4	5
Love affairs (including seduction).....	...	...	...	1	7	8	1	7	8
Fright and nervous shock .....	...	...	...	...	7	7	...	7	7
Isolation.....	2	2	4	1	...	1	3	2	5
Nostalgia	2	1	3	...	...	...	2	1	3
PHYSICAL—									
Intemperance in drink.....	9	3	12	67	6	73	76	9	85
Do (sexual).....	...	...	...	1	...	1	1	...	1
Veneral disease	4	1	5	3	...	3	7	1	8
Self-abuse (sexual)	2	...	2	2	...	2	4	...	4
Sunstroke	2	3	5	6	3	9	8	6	14
Accident or injury	13	4	17	2	3	5	15	7	22
Pregnancy .....	...	...	...	...	3	3	...	3	3
Parturition and the puerperal state .....	...	6	6	...	25	25	...	31	31
Puberty	4	1	5	1	...	1	5	1	6
Change of life .....	...	1	1	...	9	9	...	10	10
Fevers.....	...	...	...	...	2	2	...	2	2
Privation and overwork	6	3	9	...	2	2	6	5	11
Phthisis .....	...	1	1	1	...	1	1	1	2
Epilepsy.....	15	9	24	9	10	19	24	19	43
Disease of skull and brain	3	2	5	13	6	19	16	8	24
Old age	24	9	33	1	...	1	25	9	34
Other bodily diseases and disorders and chronic ill health.....	8	14	22	5	6	11	13	20	33
Excess of opium	2	...	2	...	...	...	2	...	2
PREVIOUS ATTACKS	52	40	92	1	1	2	53	41	94
HEREDITARY INFLUENCE ASCERTAINED	35	32	67	1	...	1	36	32	68
CONGENITAL DEFECT ASCERTAINED	28	12	40	...	...	...	28	12	40
OTHER ASCERTAINED CAUSES .....	...	3	3	2	2	4	2	5	7
UNKNOWN.....	...	...	...	...	...	...	125	56	181

* These "causes" are taken from the statements in the papers received with the patients on admission, and are verified or corrected as far as possible by the Medical Officers.

† No cause is enumerated more than once in the case of any patient.

‡ The aggregate of the totals exceeds the whole number of patients admitted, the excess being due to the combinations.

TABLE 4.

SHOWING the Causes of Death in the Hospitals and Licensed Houses for the Insane during the year 1896.

	Male.	Female.	Total.
CEREBRAL DISEASE—			
Apoplexy and paralysis	7	1	8
Epilepsy and convulsions	13	4	17
General paralysis	46	4	50
Maniacal and melancholic exhaustion and decay	4	5	9
Inflammation and other diseases of the brain, softening, tumour, &c.	19	7	26
THORACIC DISEASE—			
Inflammation of lungs, pleura, and bronchi.....	8	11	19
Pulmonary consumption	17	8	25
Disease of heart and blood-vessels	5	5	10
Asthma	1	...	1
ABDOMINAL DISEASE—			
Inflammation and ulceration of stomach, intestines, and peritoneum	1	8	9
Dysentery and diarrhoea	2	1	3
Albuminuria	4	1	5
Disease of bladder and prostate	1	...	1
Disease of liver .....	...	1	1
Disease of uterus .....	...	1	1
GENERAL DEBILITY AND OLD AGE.....	27	7	34
GANGRENE	1	...	1
SEPTICÆMIA .....	...	1	1
CANCER	2	1	3
LOCOMOTOR ATAXY	1	...	1
LEUCOCYTHÆMIA	1	...	1
ACCIDENT	3	...	3
SUICIDE	2	...	2
Total.....	165	66	231

TABLE 5.

SHOWING the Length of Residence in those discharged recovered, and in those who have died in the Hospitals and Licensed Houses for the Insane during the year 1896.

	Recovered.			Died.		
	Male.	Female.	Total.	Male.	Female.	Total.
Under 1 month	9	4	13	4	7	11
From 1 to 3 months.....	54	44	98	10	5	15
„ 3 to 6 months	57	29	86	16	4	20
„ 6 to 9 months.....	19	26	45	11	4	15
„ 9 to 12 months.....	19	12	31	12	4	16
„ 1 to 2 years.....	14	18	32	31	11	42
„ 2 to 3 years.....	7	7	14	18	5	23
„ 3 to 5 years.....	2	5	7	25	7	32
„ 5 to 7 years.....	2	1	3	6	2	8
„ 7 to 10 years.....	2	.....	2	7	3	10
„ 10 to 12 years.....	.....	1	1	.....	5	5
„ 12 to 15 years.....	.....	.....	.....	7	.....	7
Over 15 years .....	.....	.....	.....	18	9	27
Total.....	185	147	332	165	66	231

TABLE 6.

SHOWING the Ages of the Admissions and Readmissions, Discharges, and Deaths, and also the Ages of all Patients under care, during the year 1896, in the Hospitals and Licensed Houses for the Insane.

	Admitted and readmitted.			Recovered.			Removed, relieved, &c.			Died.			Patients under care during year 1896.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
1 to 5 years .....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	1	1	1	7	8
5 to 10 years	5	5	10	.....	.....	.....	.....	3	3	3	1	4	27	17	44
10 to 15 years	6	7	13	.....	1	1	1	2	3	4	1	5	35	22	57
15 to 20 years	13	14	27	4	10	14	7	5	12	4	3	7	54	57	111
20 to 30 years	90	74	164	37	34	71	14	12	26	16	7	23	389	273	662
30 to 40 years	130	98	228	47	44	91	33	16	49	34	10	44	671	430	1,101
40 to 50 years	86	40	126	39	32	71	25	17	42	25	15	40	613	302	1,005
50 to 60 years	67	29	96	38	20	58	19	12	31	34	9	43	560	338	898
60 to 70 years	33	13	46	14	5	19	8	4	12	17	8	25	319	152	471
70 to 80 years	18	6	24	4	1	5	8	.....	8	24	9	33	124	62	186
80 to 90 years	2	2	4	2	.....	2	1	.....	1	4	2	6	24	12	36
90 and upwards .....	.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	1	3
Total.....	450	290	740	185	147	332	116	71	187	165	66	231	2,819	1,772	4,591

TABLE 7.

SHOWING Conditions as to Marriage in those admitted and readmitted, and those under care in the Hospitals and Licensed Houses for the Insane during the year 1896.

	Admissions and readmissions.			Under care during the year 1896.		
	Male.	Female.	Total.	Male.	Female.	Total.
Single	278	114	392	1,918	768	2,676
Married	132	147	279	575	748	1,323
Widowed.....	13	16	29	109	189	298
Unascertained.....	27	13	40	217	77	294
Total.....	450	290	740	2,819	1,772	4,591

TABLE 8.

SHOWING the Religious Professions of those admitted and readmitted, and those under care in the Hospitals and Licensed Houses for the Insane during the year 1896.

Religious Profession.	Admissions and readmissions.			Under care during the year 1896.		
	Male.	Female.	Total.	Male.	Female.	Total.
Protestant—						
Church of England	199	138	337	1,199	726	1,925
Presbyterian	40	17	57	210	107	317
Wesleyan	20	18	38	106	71	177
Lutheran	7	1	8	67	11	78
Other Protestant Denominations	22	9	31	104	63	167
Roman Catholic	136	99	235	935	749	1,684
Pagan	8	.....	8	78	.....	78
Hebrew	5	1	6	23	8	31
Mahomedan	1	.....	1	11	1	12
Unascertained	12	7	19	86	36	122
Total	450	290	740	2,819	1,772	4,591

TABLE 9.

SHOWING the Native Countries of those admitted and readmitted, and those under care in the Hospitals and Licensed Houses for the Insane during the year 1896.

	Admitted and readmitted during 1896.			Under care during 1896.		
	Male.	Female.	Total.	Male.	Female.	Total.
British Colonies {						
New South Wales	168	150	318	920	765	1,685
Other Colonies	41	29	70	167	100	267
England	110	56	166	660	306	966
Scotland	21	5	26	145	65	210
Ireland	69	40	109	547	461	1,008
France	2	1	3	19	6	25
Germany	8	2	10	81	19	100
China	8	.....	8	87	.....	87
Other Countries	23	7	30	193	50	243
Total	450	290	740	2,819	1,772	4,591

TABLE 10.

SHOWING the Form of Mental Disorder in the Admissions, Readmissions, Recoveries, and Deaths of the year 1896, and of Inmates in Hospitals and Licensed Houses for the Insane, on 31st December, 1896.

Form of Mental Disorder.	Admissions and readmissions.			Recoveries.			Deaths.			Remaining in Hospital 31st Dec., 1896.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
CONGENITAL OR INFANTILE MENTAL DEFICIENCY—												
(a) with Epilepsy	7	6	13	1	.....	1	10	2	12	83	62	145
(b) without Epilepsy	27	15	42	.....	2	2	13	5	18	240	161	401
Epileptic Insanity	21	15	36	5	4	9	8	4	12	100	58	158
General Paralysis of the Insane	36	4	40	.....	.....	.....	41	1	42	66	3	69
MANIA—												
Acute	27	45	72	18	37	55	3	3	6	78	65	143
Chronic	6	5	11	2	1	3	4	6	10	205	214	419
Recurrent	25	12	37	14	4	18	2	4	6	58	65	123
Delusional	125	45	170	66	22	88	26	9	35	603	259	862
A Potu	24	3	27	21	1	22	.....	2	2	18	5	23
Puerperal .....	.....	20	20	.....	12	12	.....	.....	.....	.....	36	36
Senile	2	3	5	.....	.....	.....	4	.....	4	8	9	17
MELANCHOLIA—												
Acute	5	3	8	4	4	8	2	2	4	27	21	48
Chronic	1	.....	1	.....	1	1	8	1	9	67	46	113
Recurrent	2	4	6	.....	2	2	.....	.....	.....	13	13	26
Delusional	85	94	179	43	52	95	7	10	17	332	277	609
Puerperal .....	.....	3	3	.....	3	3	.....	1	1	.....	6	6
Senile .....	.....	.....	.....	.....	1	1	1	.....	1	8	7	15
A Potu	1	.....	1	2	.....	2	.....	.....	2	.....	.....	2
DEMENTIA—												
Primary	20	5	25	7	1	8	6	4	10	119	42	161
Secondary	16	1	17	1	.....	1	7	5	12	226	102	328
Senile	16	7	23	1	.....	1	20	7	27	90	33	123
Organic (i.e., from Tumours, coarse Brain Disease, &c.)	4	.....	4	.....	.....	.....	3	.....	3	10	4	14
Total	450	290	740	185	147	332	165	66	231	2353	1488	3941

TABLE II.

SHOWING the Occupations of those Admitted and Readmitted, and those under Care, in the Hospitals and Licensed Houses for the Insane, during the year 1896.

Occupations.	Admitted and readmitted during 1896.			Under care during 1896.		
	Male.	Female.	Total.	Male.	Female.	Total.
Professional	21	.....	21	74	.....	74
Commercial	41	.....	41	197	.....	197
Agricultural and pastoral	33	.....	33	161	1	162
Mechanics, tradesmen, &c., actively employed, and in out-door avocations	50	.....	50	315	.....	315
Mechanics, tradesmen, &c., employed at sedentary or indoor occupations	25	.....	25	184	.....	184
Domestic service	12	.....	12	92	28	120
Miners, labourers, seamen, shepherds, &c.	220	.....	220	1,403	.....	1,403
Educational and higher domestic duties	3	15	18	9	58	67
Ordinary domestic work .....	.....	95	95	.....	523	523
Commercial — actively employed .....	.....	5	5	.....	70	70
Commercial — employed in sedentary occupations .....	.....	17	17	.....	66	66
Wives of professional men .....	.....	5	5	.....	18	18
Wives of commercial men .....	.....	11	11	.....	45	45
Wives of tradesmen, mechanics, &c. ....	.....	21	21	.....	97	97
Wives of agricultural and pastoral men .....	.....	17	17	.....	89	89
Wives of .....	.....	30	30	.....	207	207
No occupation	39	72	111	268	456	724
Unknown	6	2	8	116	114	230
Total	450	290	740	2,310	1,772	4,591

Admissions.

The number of patients admitted during the year was 740—450 males and 290 females—a larger number than was admitted in any previous year. Up to 1893 the number received in any one year did not reach 700. In 1894 it was 712; in 1895, 715; and in 1896, as above stated, 740. Of the total number, 629 were admitted for the first time, whilst 111 had been at some former time inmates of one or other of the Hospitals for the Insane in this Colony. The proportion of re-admissions to original admissions is not larger than usual, and many of the patients were absent for very long periods; but the tendency to relapse in mental disease is well illustrated by the fact that in the case of nearly one-seventh of the whole number of admissions the patients had been previously under treatment.

The ratio of admissions to the general population of the Colony, or what is known as the ratio of "occurring insanity," was 1 in 1,753. This ratio was higher than in any year since 1882. The number of admissions from places beyond the Colony, reported under the provisions of section 4 of the Lunacy Act Further Amendment Act, was 4 only. In all these cases steps were taken by the Master in Lunacy to recover the charges for the maintenance of these patients from the persons liable by statute. The statutory provisions for this purpose, strictly enforced as they have been, have practically put a stop to the deportation of insane persons to this Colony, which had gone on unchecked for many years, and entailed a heavy expenditure for maintenance.

Attention has been directed in former reports to the very careless and unsatisfactory manner in which the medical certificates and other legal papers on which patients are sent to hospital are prepared; but this appears to have had but little effect. In no less than 174 cases, or something like one-fourth of the total number of admissions, the papers have been irregular, and it has been necessary to call for their amendment under the provisions of section 9 of the Lunacy Act Further Amendment Act. In some cases the medical certificates were vague, inconclusive, or incomplete in form; in others the order issued by the magistrates was irregular or defective. In not a few cases every legal document in the case showed evidence of want of care in its preparation and required amendment, and in occasional instances, the cases not being urgent or immediately dangerous, the patients were refused admission.

The provisions of the Lunacy Statute are simple. The requirements are duly set forth on the Schedule, and it ought not to be difficult for medical practitioners, Police Magistrates, and Clerks of Petty Sessions to realise that these papers are important legal documents, and that it is imperative that they should be correct in form in even minor particulars, and contain evidences of insanity at once exact and conclusive. Though the Lunacy Act gives power to amend defective papers within twenty-eight days of the admission of the patient, it was surely never intended that this provision was to cover repeated sins of omission and commission and the general neglect of all concerned in dealing with the commitment of the insane.

It

It is only right to add that on request being made the necessary amendments were made in all but four cases, in which, the patients being undoubtedly insane, fresh proceedings were taken; and that in no case during the year was any patient sent to hospital who was not insane and a fit subject for hospital treatment.

Transfers.

The number of patients transferred from one hospital to another, under the provisions of section 80 of the Lunacy Act, was 135. The greater number of these transfers was made from Callan Park and Gladesville to Rydalmere, chronic cases being sent to the latter institution, so as to relieve as far as possible the congested condition of the wards at the two main hospitals where acute cases are received. A few idiot and imbecile patients, sent in error to Callan Park and Gladesville, were sent on to Newcastle, the hospital specially set apart for this class of cases. Some twenty-four cases from the southern districts of the Colony were sent from Gladesville and Parramatta so that they might be nearer their relatives and friends, and a number of patients were transferred from one hospital to another at their own request or on the recommendation of the medical officers, with the hope that the change might be beneficial to their general or mental health.

The following return gives the particulars of the transfers for the year:—

RETURN showing Transfers for year 1896.

Transferred from—	Transferred to—																							
	Gladesville.			Parramatta (Free).			Parramatta (Criminal).			Callan Park.			Newcastle.			Rydalmere.			Kenmore.			Cook's River.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
Gladesville.....	...	...	...	1	3	4	...	...	...	2	2	4	...	2	2	12	10	22	23	...	23	...	...	...
Parramatta (Free)	1	1	2	...	...	...	...	...	...	1	...	1	...	...	...	1	1	2	1	...	1	...	...	...
Parramatta (Criminal).....	...	...	...	2	1	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Callan Park	4	3	7	1	2	3	1	...	1	...	...	...	3	1	4	20	22	42	...	...	...	...	...	...
Newcastle .....	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...
Rydalmere.....	...	...	...	3	3	6	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Kenmore .....	...	...	...	3	...	3	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...
Cook's River .....	...	1	1	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Total.....	5	5	10	10	9	19	1	...	1	5	2	7	3	3	6	35	33	68	24	...	24	...	...	...

Discharges.

The number of patients discharged during the year was 377, and of these 332 were reported as recovered and 45 as relieved. The recoveries give a percentage of 44.86, and the cases relieved a percentage of 6.08 on the admissions, so that over 50 per cent. so far recovered under care and treatment as to be able to again take their places in the world. This recovery rate is somewhat above the average for the last ten years, and as it includes the returns from the Hospital for the Insane at Newcastle, where only idiot and imbecile patients are admitted, must be considered satisfactory.

The recovery rate varied at the different institutions, being 53.30 at Gladesville, 43.92 at Callan Park, 38.16 at Parramatta Free, 10.00 at Parramatta Criminal, and 42.85 at Cook's River. There were no recoveries at Newcastle.

Deaths.

The deaths numbered 231, and the percentage on the daily average number resident was 6.22, being somewhat below the average for the last ten years. The percentage at the different hospitals was as follows:—Gladesville 4.01, Parramatta Free 7.30, Parramatta Criminal 1.85, Callan Park 8.25, Rydalmere 5.19, Kenmore 1.30, Newcastle 7.71, and the percentage at the Licensed House, Cook's River, was 8.10.

In Table 4 the causes of death are set forth in detail, and from this it will be seen that in 110 cases, or nearly one-half of the total mortality, death was due to cerebral disease, in no less than 55 cases to thoracic affections, and in 20 cases to affections of the abdominal organs. In 34 cases the cause of death was reported as general debility and old age, in 3 as cancer, 3 as accident, and in 2 as suicide.

In reviewing this table, the high death-rate from general paralysis of the insane and from pulmonary consumption are perhaps the most striking features. That 50 patients—by far the highest number heretofore registered—should in one year have died from general paralysis of the insane, a disease which thirty years ago was almost unknown in this Colony, calls for some comment. This disease, always progressive, and ultimately fatal, would appear to be a product of modern civilisation. First described in 1839 as a distinct affection, it remained a rare disease for some years, and was practically unknown forty years ago, except to a few alien physicians. Even thirty years ago, though well known in England, it was seldom seen in institutions for the insane in Scotland and Ireland, and more rarely still in American institutions. Now it is common enough in all these places, and is very decidedly increasing in all, so-called, civilised communities. It is distinctly an urban disease. More than two-thirds of all the cases admitted to the hospitals for the insane in this Colony are to be found at Callan Park, where patients from the Metropolitan district are received, and the areas within which it originates are for the most part those pervaded by telephones and other kindred contrivances. Its causation may be expressed in the words hurry, high pressure, and excess.

There has always been a subtle connection between pulmonary consumption and insanity, and the percentage of deaths from consumption in the asylums of Great Britain has always been a high one, and very much in excess of that in this Colony. The percentage, however, is now increasing here, and was greater during the last than in any preceding year. The establishment of up-country hospitals for the insane will permit of patients threatened with pulmonary phthisis being sent away for a change to drier and more suitable climates; but it will probably be advisable, now that the pathology of this affection is better known, to make arrangements for the special isolation in separate buildings within the hospital grounds of all cases of this disease in its most infective form.

Total

Total number under Care, &c.

The total number of patients under care during the year was 4,591. The average daily number resident was 3,710, and the number on the registers at its close was 3,841, of whom 2,353 were males and 1,488 females. These numbers are exclusive of those patients belonging to this Colony who are under care in the Hospital for the Insane in South Australia.

Leave of Absence.

By the provisions of section 82 of the Lunacy Act, leave of absence can be granted to patients in institutions for the insane, and under those provisions 59 patients were absent on leave at the end of 1895. During 1896 leave was granted in 121 cases, making, with those already absent, 180 on leave. Of this number, 71 were discharged recovered at or before the time when their leave expired, 49 were returned to hospital, 1 died, and 59 were still on leave at the close of the year. The death was due to accident in an epileptic patient, the friends to whose care and at whose request the patient was allowed to leave the hospital not apparently having exercised the supervision which was necessary.

The system of granting leave of absence has been specially useful as a preliminary to discharge; but it also enables more or less chronic cases to spend short periods with their relatives and friends, and thus adds materially to their contentment and happiness.

The following return gives particulars as to leave of absence during the year:—

RETURN showing particulars as to Leave of Absence during the year 1896.

Institution.	Remaining on leave 31st December, 1895.			Number granted leave during the year 1896.			Discharged recovered.			Returned to Hospital.			Died whilst on leave.			Remaining on leave 31st December, 1896.		
	M.	F.	Total	M.	F.	Total	M.	F.	Total	M.	F.	Total	M.	F.	Total	M.	F.	Total
Gladesville	5	20	25	14	38	47	8	16	24	9	15	24	1	...	1	1	22	23
Parramatta	9	9	18	12	11	23	11	11	22	3	2	5	...	...	...	7	7	14
Callan Park	6	8	14	15	24	39	8	13	20	4	10	14	...	...	...	9	10	19
Newcastle	1	...	1	3	2	5	...	1	1	3	...	3	...	...	...	1	1	2
Rydalmere .....	...	...	...	1	...	1	...	...	...	1	...	1	...	...	...	...	...	...
Kenmore	1	...	1	...	1	1	...	1	1	...	...	...	...	...	...	1	...	1
Cook's River .....	...	...	...	2	3	5	2	1	3	...	2	2	...	...	...	...	...	...
Total	22	37	59	48	73	121	30	41	71	20	29	49	1	...	1	19	40	59

Accidents.

In a large population made up of patients, some of whom are excited and aggressive, others demented and careless, not a few epileptic and impulsive, and all more or less irresponsible for their actions, accidents, even with careful classification and efficient supervision, are almost unavoidable, especially in wards much overcrowded.

The number of accidents during the last year has been fewer than usual, but included two cases which resulted fatally. One of these occurred at Callan Park and one at Gladesville. In addition to these, there were two cases of suicide, both of which were due to hanging, and both of which occurred at Parramatta. In all these cases, as well as in a case of death, inquests were held by the Coroner of the district.

The other accidents included 2 dislocations of the shoulder through falling in fits, 2 fractures of the thigh, 4 fractures of the collar-bone, 3 fractures of the leg, 3 fractures of the arm, and 1 fracture of the bones of the hands. All of these were at once reported by the Medical Superintendents, and were made the subjects of such inquiries as appeared necessary. The majority of these accidents occurred in epileptic patients, a few were due to quarrels, and others occurred in the course of ordinary work in the wards or on the hospital gardens or farms.

Increase in the number of "Alien" Patients.

In Table 9 notice is called to the nationality of the patients under care, and it may be advisable to take notice of the increasing number of those who, for want of a better name, may be called "aliens."

In 1896 there were 87 natives of China under care, and 243 patients classified under the general heading of "other countries." On analysing the figures under this latter heading, it appears that a considerable number belong to coloured races, and on 31st December, 1896, there were 106 patients under care, classified as follows:—Chinese, 73; East Indians, Cingalese, &c., 14; Syrians and Levantines, 2; South Sea Islanders, 2; other coloured races (not including Australian aborigines), 14.

It has become the rule in civilised communities to treat, maintain, and care for the sick and insane, whatever the nationality to which they may belong, in the countries where they may fall ill, and this reciprocal action is greatly to the advantage of the sufferers. This has always been the course pursued with regard to those falling insane in this Colony, and should no doubt be continued in the case of natives of all countries in which there is reciprocity in this respect, or where the persons falling sick have come to New South Wales as *bonâ fide* colonists, intending to make their home in the Colony. It is open to question, however, if natives of China and other countries with which there is no reciprocal action whatever, and who come here for the most part as visitors, should be permanently cared for in the hospitals for the insane in this Colony. In the acuter stages of their malady they must be taken care of and treated for the safety of themselves and others; but there appears to be no reason why, when their condition has become chronic and generally incurable, they should not be deported to the countries to which they belong. Their maintenance involves a very considerable expense to the Colony, they are a foreign and often offensive element in the hospitals, and it would be cheaper to deport them with all necessary care for their protection and welfare during the journey.

The Government of Western Australia has recently taken some action in this direction, and in the Annual Medical Report of the civil hospitals and lunatic asylums at the Straits Settlements for the year 1895 is the following passage:—"Measures were taken to reduce the number of lunatic patients by discharging and sending home some of the chronic cases which were considered harmless, in fair bodily health, and not in need of medical treatment; and it was found possible in this way to send back 57 Chinese patients to China and 4 Tamils to Madras."

Changes in the Staff.

The changes among the officers of the Department have been as follows:—Dr. Robert U. Russell, the Senior Medical Officer of the Hospital at Parramatta was promoted, after six years' service in this Department, to the charge of the Coast Hospital in the Department of the Medical Adviser to the Government; and consequent on this, Dr. Gavin Morton, the Junior Medical Officer at Gladesville, became Senior Medical Officer at Parramatta, and Mr. Hogg, M.B. and C.M., of the University of Edinburgh, succeeded Dr. Morton at Gladesville.

Miss Cooke, the Matron of the Hospital for the Insane at Parramatta, resigned her appointment after three years' service, and was succeeded by Miss Quinn, the Matron of the Hospital at Newcastle. Miss Newton, who had for a considerable period been Senior Nurse of the General Hospital at Newcastle, was appointed Matron to the Hospital for the Insane at Newcastle in succession to Miss Quinn.

Among the members of the general staff the changes were much more numerous than during any former year. No less than 68 attendants, nurses, and servants vacated their positions; a considerable number of these leaving the Service owing to their dissatisfaction with the rate of salary allotted to them under the original grading of the Public Service Board. This wholesale loss of members of the staff, selected for their special qualification and trained for their special duties, caused very considerable embarrassment to the Medical Superintendents in charge—embarrassment which was not lessened by the paucity of suitable applicants for the vacant positions.

Need for Additional Accommodation.

At the close of the year there was accommodation in the hospitals for 3,409 patients, whilst the number of inmates was 3,798, or 389 more than the buildings would properly accommodate. The condition was one of dangerous overcrowding, and the Department of Public Works was moved to urge the contractors for the additional buildings in progress at Rydalmere and Kenmore to complete and hand over these as soon as possible. Early in 1896 wards to accommodate 34 patients at Rydalmere and 215 at Kenmore—a total of 249—were ready for occupation, and steps were taken for the transfer of patients to these from the overcrowded wards of the other hospitals; but even with this addition to the ward space there were still 140 patients more than could be properly housed. The necessity for proceeding with the erection of additional wards at Kenmore is apparent, and it is hoped that no unnecessary delay will occur in carrying out this work. By the end of 1897 the surplus number of 140 will have been increased by at least another 100, and the state of matters at the end of the current year will be but little better than that at the end of 1896.

Receipts and Expenditure.

The receipts of the Department from all sources amounted to £13,913 5s. 10d., and was made up as follows:—Collected by the Master in Lunacy towards the maintenance of patients in hospitals, £13,103 2s. 3d.; paid by the Imperial Treasury for the maintenance of convict patients, £177 19s. 3d.; received from sale of fat and old stores, £590 9s. 1d.; and from rent of land, £41 15s. 3d. The receipts were somewhat less under every heading than during 1895, and fell short of the total amount received during that year by £814 1s. The details are shown in the following return:—

TABLE showing Total Receipts on account of Institutions for the Insane during the year 1896.

Name of Institution.	Collected for maintenance of Patients.	Paid from Imperial Treasury for maintenance of Patients.	Sale of Fat and old Stores.	Rent of Land.	Total
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Hospital for the Insane, Gladesville.....	3,780 3 8	.....	181 2 1	.....	3,961 5 9
Do Parramatta	1,753 17 9	148 6 1	235 0 9	.....	2,137 4 7
Do Callan Park	5,572 5 3	.....	114 9 4	.....	5,686 14 7
Do Newcastle	853 13 2	29 13 2	20 19 11	.....	904 6 3
Do Rydalmere.....	962 7 8	.....	38 17 0	.....	1,001 4 8
Do Kenmore	166 0 8	.....	.....	.....	166 0 8
Licensed House for the Insane, Cook's River.....	.....	.....	.....	.....	.....
Reception House for the Insane, Darlinghurst	14 14 1	.....	.....	.....	14 14 1
Inspector-General's Office .....	.....	.....	.....	41 15 3	41 15 3
Total	£ 13,103 2 3	177 19 3	590 9 1	41 15 3	13,913 5 10

The total expenditure amounted to £103,928 5s. 3d., and was made up as follows:—Maintenance of patients in Hospitals for the Insane, £99,900 10s. 11d.; maintenance of patients in the Reception House at Darlinghurst, £1,457 1s.; maintenance of patients in South Australian Hospitals, £204 0s. 3d.; and general expenses—including cost of Inspector-General's Office, payments to official visitors, maintenance of steam-launch, &c.—£2,366 13s. 1d. With the exception of the payment to the South Australian Government, the expenses were lower than during 1895 in every item, although the average daily number of patients under care was 136 more than during that year.

The average weekly cost per patient was 10s. 5½d., without deducting collections, and 9s. 0½d. when these were deducted. The cost at Kenmore, though considerably less than during last year, is still higher than that at other hospitals, owing to the small number of inmates and the many initial expenses incidental to a new institution.

The following returns show—(1st) the average weekly cost of the hospitals for the last ten years, 1887 to 1896 inclusive; (2nd) the weekly cost at each hospital from 1870 to 1896 inclusive; and (3rd) the particulars of expenditure at the hospitals during the year 1896.

RETURN showing Weekly Cost for Maintenance in Hospitals for the Insane for ten years, 1887 to 1896 inclusive.

Year.	Without deducting Collections.	Deducting Collections.
1887.....	£ s. d. 0 11 11½	£ s. d. 0 10 6
1888.....	0 11 8½	0 10 2
1889.....	0 12 9½	0 11 3½
1890.....	0 11 11½	0 10 4½
1891.....	0 12 1½	0 10 5½
1892.....	0 11 11½	0 10 2
1893.....	0 11 2½	0 9 6½
1894.....	0 10 7	0 8 11
1895.....	0 10 11½	0 9 4
1896.....	0 10 5½	0 9 0½
Average for ten years	0 11 6½	0 9 11½

The following return shows the weekly cost in all hospitals from 1870 to 1896 inclusive :—

TABLE showing Weekly Cost of Maintenance at Hospitals for the Insane during the years 1870 to 1896, inclusive.

Year.	Gladesville.		Parramatta.		Newcastle		Callan Park.		Rydalmere.		Kenmore.	
	Collections deducted.	Collections not deducted.	Collections deducted.	Collections not deducted.	Collections deducted.	Collections not deducted.	Collections deducted.	Collections not deducted.	Collections deducted.	Collections not deducted.	Collections deducted.	Collections not deducted.
1870.....	£ s. d. 0 12 0	£ s. d. 0 12 11	£ s. d. 0 9 0	£ s. d. 0 9 1½	£ s. d. 0 10 11	£ s. d. 0 10 11	£ s. d. 0 10 11	£ s. d. 0 10 11	£ s. d. 0 10 11	£ s. d. 0 10 11	£ s. d. 0 10 11	£ s. d. 0 10 11
1871.....	0 11 11½	0 12 4	0 9 0	0 9 3	0 10 0	0 10 1	0 10 0	0 10 1	0 10 0	0 10 1	0 10 0	0 10 1
1872.....	0 12 8	0 13 2	0 9 3	0 9 4	0 10 11	0 10 11	0 10 11	0 10 11	0 10 11	0 10 11	0 10 11	0 10 11
1873.....	0 12 7	0 13 0	0 11 4½	0 12 5	0 10 0	0 10 1	0 10 0	0 10 1	0 10 0	0 10 1	0 10 0	0 10 1
1874.....	0 12 2½	0 12 10½	0 12 3	0 12 4½	0 13 5½	0 13 6	0 13 6	0 13 6	0 13 6	0 13 6	0 13 6	0 13 6
1875.....	0 12 2½	0 12 6½	0 11 10½	0 11 10½	0 14 1½	0 14 3	0 14 3	0 14 3	0 14 3	0 14 3	0 14 3	0 14 3
1876.....	0 12 5	0 13 1	0 10 0½	0 11 3½	0 14 1	0 14 4½	0 14 4½	0 14 4½	0 14 4½	0 14 4½	0 14 4½	0 14 4½
1877.....	0 12 5	0 13 1	0 11 8½	0 11 10½	0 14 1½	0 14 7	0 14 7	0 14 7	0 14 7	0 14 7	0 14 7	0 14 7
1878.....	0 11 4½	0 12 3½	0 12 9½	0 12 10½	0 13 3½	0 14 6½	0 14 6½	0 14 6½	0 14 6½	0 14 6½	0 14 6½	0 14 6½
1879.....	0 11 2½	0 12 1½	0 11 2½	0 11 7	0 12 8½	0 13 1½	0 13 1½	0 13 1½	0 13 1½	0 13 1½	0 13 1½	0 13 1½
1880.....	0 9 5	0 11 2½	0 10 5½	0 11 1½	0 11 5	0 12 0½	0 13 3½	0 13 10½	0 13 11½	0 13 11½	0 13 11½	0 13 11½
1881.....	0 10 1½	0 12 2½	0 10 2½	0 10 9½	0 10 9½	0 11 8	0 12 10½	0 13 8½	0 13 8½	0 13 8½	0 13 8½	0 13 8½
1882.....	0 10 11	0 13 0½	0 12 6	0 13 0½	0 10 10	0 11 5½	0 14 2½	0 16 2½	0 16 2½	0 16 2½	0 16 2½	0 16 2½
1883.....	0 10 4½	0 12 6½	0 10 10½	0 11 4½	0 11 3½	0 12 0½	0 16 4	0 17 3½	0 17 3½	0 17 3½	0 17 3½	0 17 3½
1884.....	0 10 4½	0 12 6½	0 9 11½	0 10 7	0 10 11	0 12 0	0 17 2½	0 18 8½	0 18 8½	0 18 8½	0 18 8½	0 18 8½
1885.....	0 10 11	0 13 2	0 9 10½	0 10 7½	0 10 11½	0 12 1	0 15 9	0 17 4	0 17 4	0 17 4	0 17 4	0 17 4
1886.....	0 11 8	0 13 0½	0 10 2	0 10 11½	0 10 7½	0 11 6½	0 12 5½	0 14 4½	0 14 4½	0 14 4½	0 14 4½	0 14 4½
1887.....	0 11 8	0 13 0½	0 9 7½	0 10 8	0 12 0	0 12 9½	0 10 5½	0 12 4½	0 12 4½	0 12 4½	0 12 4½	0 12 4½
1888.....	0 9 7½	0 11 10½	0 10 0½	0 11 1	0 11 2	0 11 11	0 10 7½	0 12 2½	0 12 2½	0 12 2½	0 12 2½	0 12 2½
1889.....	0 12 1	0 14 8	0 10 9½	0 11 4	0 11 10½	0 12 3½	0 10 11½	0 12 11½	0 12 11½	0 12 11½	0 12 11½	0 12 11½
1890.....	0 10 9½	0 12 11½	0 9 10½	0 10 11	0 10 2	0 11 2½	0 10 3½	0 12 4½	0 12 4½	0 12 4½	0 12 4½	0 12 4½
1891.....	0 10 8	0 12 11½	0 9 10½	0 10 9	0 9 10½	0 11 2½	0 10 1½	0 12 8½	*0 15 4½	*0 15 4½	*0 15 4½	*0 15 4½
1892.....	0 10 8	0 12 11	0 9 4	0 10 3	0 9 8½	0 10 11½	0 10 2½	0 13 0½	0 13 4½	0 13 4½	0 13 4½	0 13 4½
1893.....	0 10 2½	0 12 4	0 8 8½	0 9 7½	0 9 2½	0 10 6	0 9 10½	0 12 7½	0 9 9½	0 10 5½	0 10 5½	0 10 5½
1894.....	0 9 6	0 11 6½	0 8 7	0 9 5½	0 8 1½	0 9 2½	0 8 7½	0 11 5	*0 10 1½	0 10 1½	0 10 1½	0 10 1½
1895.....	0 9 10½	0 11 10½	0 8 7½	0 9 6½	0 7 10½	0 9 0	0 9 2½	0 12 0½	0 8 10½	0 9 9	*0 10 1½	*0 10 1½
1896.....	0 9 6½	0 11 5	0 8 8½	0 9 4½	0 7 4½	0 8 7½	0 8 10½	0 11 6½	0 8 1½	0 8 11½	0 14 7½	*0 15 0

* First year, and including cost of stores and outfit. † Opening of new Hospital. ‡ Opening of new wards for women.

TABLE showing Annual Cost of Patients in Hospitals for the Insane during the year 1896.

Institution.	Total number under care.	Average number resident.	Total cost.	Amount of collections.	Total annual cost per Patient, without deducting collections.	Annual cost per Patient, deducting collections.
Hospital for the Insane, Gladesville.....	1,100	821	£ s. d. 24,483 1 4	£ s. d. 3,961 5 9	£ s. d. 29 16 5	£ s. d. 24 19 11
Do Parramatta.....	1,267	1,095	26,899 5 9	2,137 4 7	24 11 1½	22 12 9½
Do Callan Park.....	1,163	824	24,741 18 7	5,686 14 7	30 0 6½	23 2 6
Do Newcastle.....	339	311	7,000 14 6	904 6 3	22 10 2½	19 12 1
Do Rydalmere.....	499	462	10,786 14 2	1,001 4 8	23 6 11½	21 3 7½
Do Kenmore.....	170	153	5,988 16 7	166 0 8	39 2 10	38 1 1½
	4,538	3,666	99,900 10 11	13,856 16 6	27 5 0	23 9 5

RETURN showing the Average Annual Cost of Maintenance per Patient at the Hospitals for the Insane for the year 1896.

Name of Hospital.	Daily average number of patients resident.	Salaries, money allowances, and fees.	Provisions extras, medical comforts, and forage.	Stimulants—Wines, spirits, beer, &c.	Medicines and surgical instruments.	Stores, including clothing, bedding, and materials for manufacture.	Fuel, light, and water.	Incidental and miscellaneous expenses, including library, amusements, &c.	Total expenditure.	Collections for maintenance, &c.	Annual cost for maintenance per patient.	Annual cost per patient, deducting collections for maintenance, &c.
Gladesville	821	18 1 2½	10 3 3	0 1 5	0 4 9½	3 10 10½	1 9 2½	1 5 8	24,433 1 4	3,961 5 9	29 16 5	24 13 11
Parramatta	1,095	10 4 1½	8 7 11¼	0 1 4½	0 4 4½	3 8 0½	1 6 5½	0 18 9¼	26,800 5 9	2,137 4 7	24 11 1½	22 12 3½
Callan Park	824	12 13 10	10 14 4½	0 1 5	0 5 6½	3 8 3	1 10 9½	1 6 4½	24,741 18 7	5,636 14 7	30 0 6½	23 2 6
Newcastle	311	9 11 5	6 9 3	.....	0 2 11½	3 3 1	1 12 5½	1 11 1½	7,000 14 0	904 0 3	22 10 2½	19 12 1
Rydalmere	462	9 13 7½	7 9 9½	.....	0 2 9½	3 13 3½	1 6 3	1 1 1½	10,730 14 2	1,001 4 8	23 6 11½	21 3 7½
Kenmore	153	15 6 9½	12 9 2	.....	0 9 9½	6 18 2½	0 6 0	3 12 10	5,938 16 7	160 0 8	39 2 10	33 1 1½

RETURN showing the Average Weekly Cost of Maintenance per Patient at the Hospitals for the Insane for the year 1896.

Name of Hospital.	Daily average number of patients resident.	Weekly cost calculated on average number resident.							Total weekly cost for maintenance per patient.	Average weekly collections for maintenance per patient.	Weekly cost per patient, deducting collections for maintenance, &c.
		Salaries, money allowances, and fees.	Provisions extras, medical comforts, and forage.	Stimulants—Wines, spirits, beer, &c.	Medicines and surgical instruments.	Stores, including clothing, bedding, and materials for manufacture.	Fuel, light, and water.	Incidental and miscellaneous expenses, including library, amusements, &c.			
Gladesville	821	£ s. d. 0 5 0½	£ s. d. 0 3 10½	£ s. d. 0 0 0½	£ s. d. 0 0 1	£ s. d. 0 1 4½	£ s. d. 0 0 6½	£ s. d. 0 0 6½	£ s. d. 0 11 5	£ s. d. 0 1 10½	£ s. d. 0 0 0½
Parramatta	1,095	0 3 11	0 2 2½	0 0 0½	0 0 1	0 1 3½	0 0 6	0 0 4	0 9 4½	0 0 9	0 8 8½
Callan Park	824	0 4 10½	0 4 1½	0 0 0½	0 0 1½	0 1 3½	0 0 7½	0 0 6	0 11 6½	0 2 7½	0 8 10½
Newcastle	311	0 8 8½	0 2 5½	.....	0 0 0½	0 1 2½	0 0 7½	0 0 7½	0 8 7½	0 1 1½	0 7 0½
Rydalmere	462	0 3 8½	0 2 10½	.....	0 0 0½	0 1 5	0 0 6	0 0 5	0 8 11½	0 0 10	0 8 1½
Kenmore	153	0 5 10½	0 4 9½	.....	0 0 2½	0 2 8	0 0 1½	0 1 4	0 15 0	0 0 4½	0 14 7½

Average weekly cost without deducting collections, 10s. 5½d., or deducting collections, 9s. 0½d.

The following return shows the number of Insane Patients under care on 31st December of each year, the number of Admissions for each year, and the Total Expenditure in the Lunacy Department for each of the ten years from 1887 to 1896 inclusive:—

Year.	No. of Patients on 31st December.	Admissions.	Total Expenditure.
1887	2,821	532	£ 89,213
1888	2,898	588	89,895
1889	2,974	550	100,302
1890	3,102	611	96,138
1891	3,134	596	100,112
1892	3,312	666	102,519
1893	3,425	688	101,077
1894	3,537	712	99,425
1895	3,720	715	104,846
1896	3,845	740	103,928

The number of patients in Hospitals for the Insane has in ten years increased by 1,020, whilst the number annually admitted has risen from 532 to 740. During the same period the cost, which has varied somewhat from year to year with varying seasons and the cost of provisions and other necessaries, has increased by £14,715. In other words, whilst the number of patients resident has increased in ten years by 36 per cent., and the admissions—an expensive class of cases—by 39 per cent., the expenditure has, under a judicious system of economy, only increased by 16½ per cent.

The maintenance rate in the Hospitals for the Insane in this Colony is now so low that it cannot well be reduced without impairing the health, comfort, and well-being of the patients—without, in fact, sacrificing efficiency to economy, jeopardising the recovery of the inmates by an unwise parsimony, and running the risk of making into chronic cases and permanent inmates those who under wise and liberal expenditure would recover, and be no longer a burden upon the State.

Reception House for the Insane, Darlinghurst.

The statistics of this institution are not included with those for the Hospitals and Licensed Houses, as the patients are for the most part only admitted for temporary care and treatment on their way to the hospitals, or whilst awaiting the signature of the certificates and orders necessary for their admission to these institutions.

The number of patients remaining on December 31, 1895, was 6, and the number admitted during the year 1895, was 593, making a total of 599 under care and treatment. This number, which was somewhat less than that for several previous years, was made up of two classes—those under certificates of insanity (365 in number), and those under remand under section 1 of the Lunacy Act Amendment Act, of whom there were 228. Taking these classes separately; of the 365 under certificate, 10 were discharged recovered, 352 were sent to hospitals for the insane, 1 died, and 2 remained at the close of the year; whilst of the 228 under remand, 110 were discharged recovered, 113 were sent to the Police Court, certified as insane, and returned to the Reception House, 1 died, and 4 remained at the end of the year. It will be seen that

110 of the number were first admitted in one, and subsequently in the other class. The Superintendent of the Reception House reports that 5 cases under certificate, and 10 cases under remand, were admitted twice during the year 1896, and that no less than 85 of the patients admitted during the year had in some one of the thirty years during which the institution has been in existence previously been inmates. The large majority of these recurrent cases were suffering from the temporary insanity due to drink. The institution has done good and useful work. The total number of patients discharged as recovered was 120, and the deaths were 3 only. Considering that a very large proportion of the cases was in an acute stage of the malady, the death-rate is a very small one, and the fact that no case of serious accident or suicide has occurred is creditable to the management.

The following table gives the detailed statistics of the Reception House for the year 1896:—

RETURN showing the Admissions, Discharges, Deaths, &c., of Patients in the Reception House for the Insane during the Year 1896.

	Remaining on 31st December, 1895.			Admitted during 1896.			Total Number of Patients under care.			Patients Discharged, Transferred, Died, &c.												Remaining on 31st December, 1896.								
	Discharged Recovered, by Certificate.		Discharged Recovered, from Police Court.		Discharged Relieved.		Sent to Police Court and Returned to Reception House under Certificate.		Transferred to Hospitals or Licensed Houses.		Escaped, and not Recaptured within twenty-eight days.		Died.		Total Number Discharged, Died, &c.															
	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Total.									
On Remand under Section 1, Lunacy Act Amendment Act	4	4	105	59	224	109	59	228	...	...	80	21	110	...	...	76	37	113	...	...	1	1	106	53	224	3	1	4
Under Lunacy Certificate	2	2	252	111	363	254	111	365	6	4	10	245	107	352	1	1	252	111	363	2	...	2
Total	6	6	417	170	587	423	170	593	6	4	10	80	21	110	76	37	113	245	107	352	2	2	418	169	587	5	1	6		

The Observation Wards at H.M. Gaols, Darlinghurst and Parramatta.

These wards are "set apart for the detention of any prisoner who may be supposed to be insane, or who, from mental imbecility, may be supposed to be unfit for penal discipline, in order that he may be there placed under observation until it be certified that he is of sound mind, or is insane and a fit subject for detention in an hospital for the criminal insane." Unfortunately, owing to the very overcrowded condition of the existing hospital for the criminal insane and the impossibility of transferring more patients of the criminal class thereto without serious danger, prisoners have, during the last three or four years, been still detained in the Observation Ward after a conclusion as to their insanity has been arrived at.

In addition to the original purpose for which the wards were established, they have been used for a number of other cases in which the question of mental capacity has been raised, including cases awaiting trial at the Supreme Court or Quarter Sessions, and under minor sentence or remand from the Police Court.

The accumulation of cases of various kinds has served in a measure to defeat the special objects contemplated in setting apart these wards and given malingeringers object lessons which might serve to assist in defeating the scrutiny of the medical officers and warders in charge.

The statistics of these wards are as follows:—There were at the ward at Darlinghurst on December 31, 1895, 9 inmates, and 49 were received during the year, making 58 under care. Of these, 36 were discharged of sound mind, 4 were sent to hospitals for the insane, 1 was sent to Police Court and discharged, 2 were transferred to the Observation Ward at Parramatta, and 15 remained at the close of the year.

In addition to these inmates, for whom the ward was specially set apart, 156 other prisoners were for short periods inmates, the majority of these being cases suffering from temporary mental symptoms due to alcohol whilst serving sentences of a few days, or whilst under remand.

At the ward at Parramatta there were on December 31, 1895, 10 inmates, and 43 were received during the year, making 53 under observation. Of these, 34 were discharged as of sound mind, 3 were sent to hospitals for the insane, 1 was discharged at Police Court, 1 died, and 14 remained at the close of the year. Into this ward, also, a number of similar cases to those received at Darlinghurst were admitted, the total number of these being 35.

The Lunacy Act provides that these wards should be visited by the Inspector-General of the Insane, and special visits of inspection were paid to the ward at Darlinghurst on January 14, April 15, July 8, and November 4, and to the ward at Parramatta on January 16, April 30, August 13, and October 19. The wards have also been visited at other times to see individual prisoners or at the request of the visiting medical officers. At the visits of inspection care has been taken to see and speak to every prisoner and to inquire into the circumstances of his case as well as to make a careful examination into the general management of the ward.

I have been satisfied with the care exercised in the general treatment and observation of the inmates, but I have had reason to criticise the methods adopted in individual cases, and I have called special attention to the necessity for providing day-rooms, provided with fires, for the accommodation of the inmates in the winter weather.

The Comptroller-General of Prisons has courteously furnished the following returns, showing the general statistics of the two wards for the year 1896:—

RETURN showing the number of Persons received into the Observation Ward, H.M. Gaol, Darlinghurst, during the year 1896, the places whence received, and their disposal.

Whence received.	Remaining on 31st December, 1895.			Received.			Discharged.												Transferred to Observation Ward, Parramatta.			Remaining on 31st December, 1896.							
	Male.	Female.	Total.	Male.	Female.	Total.	Of Sound Mind.			To Hospitals for the Insane.			To Police Courts.			Died.			Male.	Female.	Total.	Male.	Female.	Total.					
							Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.											
H.M. Gaols—																													
Admitted under the provisions of section 63 of the Lunacy Act and section 4 of the Lunacy Act Amendment Act, from	Darlinghurst	1	1	21	1	22	13	1	14	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	6	4	6	
	Goulburn	1	1	3	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Bathurst	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Maitland	1	1	10	10	10	7	7	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Berrima	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Armidale	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Trial Bay Prison	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Young	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Tamworth	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Bileela Gaol	1	1	2	2	2	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Dubbo	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Bingara	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Grafton	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Bega	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Total	9	9	44	5	49	32	4	36	3	1	4	1	1	1	1	1	1	1	1	1	1	1	1	2	2	15	15	
Awaiting Trial	Supreme Court, Sydney, Quarter Sessions	1	1	4	4	4	3	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Acquitted on the ground of Insanity, and awaiting Governor's pleasure		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
From Police Courts	Under Sentence	15	7	22	15	6	21	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	On Remand	2	2	4	94	30	124	2	2	2	91	32	123	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Total	12	2	14	158	42	200	50	10	60	6	2	8	92	32	124	2	2	2	2	2	2	2	2	2	2	20	20	

RETURN showing the number of Prisoners received into the Observation Ward, H.M. Gaol, Parramatta, during the year 1896, the place whence received, and their disposal.

Whence received.	Remaining on 31st December, 1895.			Received.			Discharged.												Remaining on 31st December, 1896.									
	Male.	Female.	Total.	Male.	Female.	Total.	Of Sound Mind.			To Hospital for Insane.			To Police Courts.			Died.			Male.	Female.	Total.							
							Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.										
H.M. Gaols—																												
Admitted under the provisions of section 63 of the Lunacy Act and section 4 of the Lunacy Act Amendment Act, from	Darlinghurst	4	4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	Parramatta	5	5	39	39	39	30	30	30	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Mudgee	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Bourke	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Windsor	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Total	10	10	43	43	43	34	34	34	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Awaiting Trial	Supreme Court, Quarter Sessions	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Acquitted on grounds of Insanity, and awaiting Governor's pleasure		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
From Police Courts	Sentenced	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Remand	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
	Totals	13	13	75	75	75	95	35	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	

1897.

—
 LEGISLATIVE ASSEMBLY.
 NEW SOUTH WALES.

—
 STATE CHILDREN'S RELIEF BOARD.
 REPORT

OF THE

PRESIDENT, THE HON. SIR ARTHUR RENWICK, K.B., M.L.C.,
 &c., &c., &c.,

FOR THE

YEAR ENDING 5 APRIL, 1896.

Presented to Parliament, pursuant to Act 44 Vic. No. 24, sec. 12.

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The President of the State Children's Relief Board to The
Chief Secretary.

Charitable Institutions of New South Wales,
State Children's Relief Board,
Richmond-terrace, Sydney, 5 April, 1896.

Sir,

In accordance with the provisions of Act 44 Vic. No. 24, I have the honor to submit for the information of the Honorable the Chief Secretary my Report upon the operations of the State Children's Relief Board for the official year which closed on the 5th April.

It is sixteen years since Parliament passed the measure by means of which the boarding-out system was legally established in New South Wales, in substitution of the method of dealing with State children previously existing (unpopularly known as the barrack system), which was both cumbersome and expensive, and under which all family principles of training the young were systematically ignored. The history of the movement has been one of uninterrupted progress, although at the outset the Board entrusted with its administration had to encounter many difficulties arising mainly from want of knowledge among those who had for many years managed and generously supported the larger institutions in which the poor children of this Colony were clothed, fed, and educated, and who naturally looked with suspicion upon the efforts of the few philanthropic ladies and gentlemen in New South Wales who were endeavouring to effect the reforms already adopted in two of the younger colonies, at a cost which was small when compared with the lasting good results that had been obtained.

It is now unnecessary, of course, to say anything in laudation of the boarding-out system, which is at present the national policy of dealing with the dependent children of this country. It has long ago passed beyond its tentative stages, and the physical, moral, and material advantages that have resulted to the thousands of children who have been rescued from poverty and evil association and provided with the advantages of wholesome family life in clean healthy homes, and useful trades and occupations, are "household words," and speak more forcibly than could any commendation from me, but when compared with the old-time "barrack system," last years computations will show that taking no heed whatever of any other consideration but the untenable one of pounds, shillings, and pence, the boarding-out system is to be credited with an absolute saving of over £170,000 during that period. These results have only been obtained by careful administration, constant watchfulness, and sustained enthusiasm on the part of the Board and its trusted officials.

The following table shows the rate at which the number of children under the care of the Board has increased annually since the initiation of the boarding-out system :—

Under control on	Supported by Government.			Adopted without payment.			Apprenticed.			Total under control.		
	Boys.	Girls.	Total.	Boys.	Girls.	Total.	Boys.	Girls.	Total.	Boys.	Girls.	Total.
5 April, 1881	24	35	59	...	...	...	...	...	...	24	35	59
5 " 1882	40	60	100	...	3	3	...	...	...	40	63	103
5 " 1883.....	118	174	292	1	10	11	...	4	4	119	188	307
5 " 1884.....	221	289	510	6	15	21	5	16	21	232	320	552
5 " 1885.....	523	363	886	15	35	50	26	64	90	564	462	1,026
5 " 1886.....	614	411	1,025	28	65	93	137	111	248	779	587	1,366
5 " 1887.....	741	473	1,214	49	74	123	309	156	465	1,099	703	1,802
5 " 1888.....	793	485	1,278	52	84	136	357	189	546	1,202	758	1,960
5 " 1889.....	815	526	1,341	61	93	154	440	238	678	1,316	857	2,173
5 " 1890.....	805	543	1,348	62	96	158	513	265	778	1,380	904	2,284
5 " 1891.....	807	566	1,373	67	91	158	543	295	838	1,417	952	2,369
5 " 1892.....	776	613	1,389	69	94	163	545	299	844	1,390	1,006	2,396
5 " 1893.....	821	643	1,464	61	97	158	590	325	915	1,472	1,065	2,537
5 " 1894.....	955	786	1,741	59	106	165	592	311	903	1,606	1,203	2,809
5 " 1895.....	1,167	927	2,094	56	91	147	599	334	933	1,822	1,352	3,174
5 " 1896.....	1,356	1,085	2,441*	50	76	126†	548	341	889‡	1,954	1,502	3,456

* This total includes 6 children in Hospital, 150 in Cottage Homes, 30 in Depot, 13 under 2½ years paid for at 7s. per week, 37 paid for at 6s., 13 infants paid for at 8s. per week, and 3 infants paid for at 10s. per week.

† This total includes 125 children who are classed as "Boarders without subsidy," that is, placed with guardians who, as in the case of adopted children, do not receive payment for maintenance.

‡ This total includes 27 absconders, whose names still appear on the books, and 15 children classed as unofficial.

There has been a substantial falling off in the number of young children, whom it was found necessary, after careful investigation, to place under the control of the Board, and the figures may be accepted as a wholesome sign of improvement amongst the poorer classes of the community. At the end of the twelve months which closed on the 5th of April, 1896, there were 282 more children under control than in 1895, when the numbers were 365 in excess of the previous year, showing a proportionate falling off of 83 as compared with the operations of 1895. In 1895 there were 2,094 children supported by the Government, while apart from the adoption and apprenticing divisions, there are now 2,441 maintained in the various registered homes scattered throughout the Colony—an increase of 347 in the division in which payment is made to State guardians, whose homes are only approved by the Board after careful inspection and report by officers of the Department. When the official year closed in 1895 there were 3,174 children under control; there are now 3,456, comprising 1,954 boys and 1,502 girls, all of whom are either supported by the State, adopted without payment, apprenticed to useful trades and occupations, or detained in one or other of the cottage homes at Pennant Hills and Mittagong for observation and medical attendance. Taken altogether these results are satisfactory.

During the official year with which I am now dealing there were 1,954 boys and 1,502 girls under control, or a total of 3,456 children altogether, showing an increase of 282 over and above those dealt with in the year 1895, when the numbers were 1,822 and 1,352 respectively, or a total of 3,174—an excess of 365 over the previous twelve months. The falling off in the number of children admitted to State control does not necessarily mean that the number of applications for the admission of children was less either now or at any other time. There are always numbers of such applications that are not entertained, and official investigation has from time to time frustrated many cases where efforts were made by unworthy parents and others to place their offspring under official control, the real object of course being to release themselves from their responsibilities and shift their burdens to the shoulders of the Government. Such instances are not unknown to the Department, but the numbers have been growing smaller from year to year as the system of inspection and supervision improves, and the certainty of detection is more widely understood.

Speaking

Speaking in a general way of the children who are now under the control of the Board, it is gratifying to be able to say that their circumstances are not only very much improved all round, but their general condition is most satisfactory. In a few exceptional cases little difficulties and annoyances have been experienced, but they have been fairly dealt with and adjusted, and beyond the ordinary commonplace accidents, mishaps, and shortcomings of life there has been very little to complain of, either as against the children or the great body of guardians throughout the country. There were 506 boys and 423 girls, or a total of 929 children boarded out during the year, as against 601 boys and 452 girls, or a total of 1,053 children, so dealt with in 1895, showing a decrease in the paying section of 124, which means a substantial saving under this head. In 1895 there were 353 more children paid for under this head than in 1894, and alone involved an increased expenditure of something like £5,000. A saving of about £1,700 was effected in the boarding-out section of 1896. Of the 4,103 children dealt with during the year now under review, 288 were discharged upon the parents or relatives satisfying the Board that they were in a position to properly provide for them; 199 were released because the children having attained the age of 17 years (124 boys and 75 girls), they became entitled to their release under the Act; 30 were removed by death, 1 child was drowned at the Rookwood Asylum; 1 boy was transferred to the "Sobraon," 4 were removed to the Deaf, Dumb, and Blind Institution; there were 33 at the Boys Home at Dundas; 14 at the Benevolent Asylum, Sydney; 4 at the Newington Asylum; 5 at the Imbecile Asylum, Newcastle; 43 at the Shaftesbury Reformatory; 10 at the Carpenterian Reformatory; 3 at St. Vincent de Paul's; 1 at the Macquarie-street Asylum; 1 at the Convent at Manly; 1 at the Callan Park Asylum, and 9 absconded. These are accounted for in this way—374 boys and 273 girls, or a total of 647, which leaves a balance of 3,456 now under control. Of the 2,441 children who were paid for by the Government, 6 are in hospital, 152 are in the cottage homes at Parramatta and Mittagong, 10 are at the depôt at Paddington; 8 delicate infants are paid for at the rate of 10s. a week, 13 at 8s. a week, 13 at 7s. a week, and 37 at 6s. a week; whilst the whole of the remainder, who are counted in the paying division, are provided for at the rate of 5s. a week.

In the matter of expenditure, the closest economy consistent with the importance of the service has been observed, but the yearly increasing demands upon the resources of the Board have certainly not lessened the appeals that have had to be made to the Treasury to enable it to meet its engagements, and it may therefore be said that the high-water of expenditure has been reached this year. Deposits amounting to £42,026 10s. 3d. were received from the Treasury during 1895-6, to which must be added a sum of £214 10s. 9d., carried forward to the credit of the Board from the previous year's transactions, making a total of £42,241 1s. placed at the disposal of the Board during the year. After making provision for the payment of accounts due up to the closing of the books, the gross expenditure for 1895-6 was £42,200 14s. 11d., which left a credit balance of £40 6s. 1d. to be carried forward to 1896-7. The total cost of the boarding-out children was £31,780 8s. 5d. The daily average number of children placed out as boarders during the year was 2,170, an increase of 188, and the gross average cost per head was £14 12s. 10d. The gross receipts from those parents who contributed something towards the maintenance of their offspring amounted to £969 19s. 4d., and after deducting this amount from the gross expenditure, it will be seen that the actual capitation cost was £14 3s. 11d. A more detailed account of the expenditure for the year is given in the appendices.

LIST OF GUARDIANS' OCCUPATIONS.

The following is the classification of the guardians' occupations:—
 Accountants, 4; agents, 9; auctioneers, 2; attendants, 12; bakers, 6; bootmakers, 16; bricklayers, 5; brickmakers, 6; butchers, 8; builders, 7; brassfinisher, 1; boilermaker, 1; broom-makers, 2; blacksmiths, 11; bank managers, 4; clergymen, 12; carters, 6; coach-proprietor, 1; clerks, 24; cooks, 4; cabinet-makers, 2; carver, 1; carpenters, 37; contractors, 12; commercial travellers, 7; conveyancers, 2; coach-builders, 2; civil servants, 22; confectioners, 3; carrier, 1; chemists, 3; cordial makers, 4; collectors, 3; caretakers, 9; compositor, 1; cooper, 1; cabmen, 2; dairy farmers, 43; domestics, 327; dress-makers, 21; dealers, 3; doctors, 5; draper, 1; drovers, 3; draftsmen, 2; engine-drivers, 4; electrician, 1; engine-smiths, 2; engineers, 8; farmers, 865; fruiterers, 6; fishermen, 4; ferryman, 1; gardeners, 22; graziers, 28; gunsmith, 1; gatekeepers, 2; grocers, 9; grooms, 2; hairdresser, 1; independent, 42; instrument-maker, 1; inspectors, 2; ironworkers, 2; journalists, 2; labourers, 28; lamplighter, 1; laundresses, 8; letter carriers, 4; librarian, 1; miners, 36; merchants, 4; milkmen, 2; moulder, 1; machinist, 1; mariners, 5; messengers, 3; mine manager, 1; maintenance men, 2; nurses, 14; news agents, 2; orchardists, 76; organist, 1; plumbers, 11; painters, 9; plasterers, 5; printers, 4; poultry farmers, 2; photographer, 1; postmasters, 4; piano-tuner, 1; quarrymen, 4; railway employees, 29; school teachers, 19; shopkeepers, 24; shipwrights, 3; solicitors, 6; soapmaker, 1; smelter, 1; sailmaker, 1; surveyor, 1; stonemasons, 8; stationers, 2; storekeepers, 24; sawyer, 1; selectors, 12; stokers, 2; saddlers, 6; stevedore, 1; tailors, 7; upholsterer, 1; undertaker, 1; vigneron, 2; vanman, 1; warehousemen, 3; warders, 5.

The utmost precautions are taken not only to ensure the selection of the most suitable guardians under whom the children may ultimately acquire such trades and occupations as will enable them to earn their own livelihood in after life when they have been removed from supervision, but to confine the operations to the healthier districts of the Colony where climatic influences might be expected to assist in strengthening the weak and build up strong and robust constitutions amongst these helpless little dependents of the State. A thorough system of inspection is maintained—the homes of new applicants are visited, and careful inquiries made into antecedents, circumstances, and surroundings; and, subsequently, when appointed guardians the children are visited periodically, unannounced, at the schools as well as at the homes, not only by the official inspectors but by ladies residing in the various districts who take a creditable interest in the children, and generously give their gratuitous services to the work. Frequent changes are made in the guardians for a great variety of reasons, the most important of which is the always paramount interest of the children, but no very serious grounds of complaint exist against the guardians in any of the districts. There was a decrease of 118 in the number of children placed out with farmers, the total number for 1896 being 865, and the number of girls placed in domestic service was 327, whilst in all the other useful trades and callings satisfactory selections have been made. The number of foster parents has increased during the year from 1,925 to 2,055 that is to say that there are now 130 more guardians than there were in 1895. Taking all the trades and occupations into account, it will be seen that there are now 3,254 children being trained in the almost certain prospect of their being able when they arrive at years of manhood and womanhood to be able to provide satisfactorily for themselves.

LIST OF DISTRICTS IN WHICH CHILDREN ARE PLACED.

Children are placed out in the undermentioned districts in the numbers stated:—Ashfield, 15; Arncliffe, 2; Annandale, 17; Auburn, 29; Albury, 7; Albion Park, 1; Adamstown, 7; Armidale, 16; Balmain,

Balmain, 132; Berrima, 12; Botany, 14; Blackheath, 1; Burwood, 27; Boggabri, 1; Bexley, 13; Balmoral, 3; Bowral, 20; Bowning, 1; Braidwood, 15; Bulli, 50; Berry, 30; Bungendore, 7; Binalong, 2; Brogo, 2; Bathurst, 27; Brewongle, 3; Blacktown, 2; Branxton, 39; Croydon, 14; Camperdown, 17; Canterbury, 1; Campbelltown, 4; Castle Hill, 4; Cowra, 2; Crookwell, 20; Canley Vale, 14; Camden, 30; Cootamundra, 11; Cambewarra, 14; Cargo, 4; Cooma, 3; Cessnock, 4; Coolac, 3; Cudal, 1; Clarencetown, 7; Dapto, 12; Dungog, 9; Douglas Park, 1; Dural, 7; Dubbo, 6; Eden, 2; Forbes, 8; Glebe, 22; Gladesville, 15; Goulburn, 315; Grabben Gullen, 18; Granville, 79; Guildford, 12; Gunning, 14; Glenbrook, 1; Gerrington, 10; Girilambone, 1; Glen Innes, 3; Gosford, 6; Greta, 2; Gulgong, 4; Hunter's Hill, 15; Hurstville, 27; Hexham, 2; Helensburg, 2; Hinton, 3; Hartley, 1; Hawkesbury, 101; Islington, 1; Junee, 2; Jamberoo, 10; Kogarah, 18; Kellyville, 3; Kangaloon, 11; Kiama, 23; Kangaroo Valley, 30; Leichhardt, 86; Liverpool, 19; Lambton, 16; Lismore, 5; Lawson, 1; Manly, 10; Maitland East, 23; Maitland West, 87; Marrickville, 76; Macdonaldtown, 26; Mummel, 14; Menangle, 1; Minmi, 8; Mittagong, 110; Moss Vale, 8; Marulan, 11; Murrumburrah, 7; Milton, 29; Moruya, 5; Mulgrave, 7; Mudgee, 5; Molong, 6; Miller's Forest, 17; Morpeth, 4; Muswellbrook, 6; Manning River, 4; Macleay River, 2; Nevertire, 1; Newbridge, 1; Newtown, 70; Nowra, 21; Newcastle, 81; Nelson's Plains, 6; North Sydney, 63; Oberon, 1; Orange, 4; Ourimbah, 3; Pymont, 12; Paddington, 38; Parramatta, 187; Petersham, 27; Parkesbourne, 5; Patterson, 24; Picton, 37; Pitt Town, 26; Penrith, 14; Parkes, 5; Prospect, 7; Queanbeyan, 7; Quirindi, 1; Rockdale, 14; Rookwood, 36; Redfern, 43; Rydalmere, 2; Ryde, 12; Randwick, 9; Riverstone, 27; Richmond, 12; Rooty Hill, 2; Raymond Terrace, 11; Raglan, 1; Summer Hill, 8; Sydney, 8; Singleton, 14; Surry Hills, 36; Shellharbour, 4; St. Mary's, 11; St. Alban's, 6; Sassafras, 2; Stockton, 1; Scone, 3; Taralga, 4; Tarago, 6; Tumut, 1; Thirlmere, 17; Tilba Tilba, 1; Tamworth, 4; Tirranna, 5; Waverley, 21; Woolloomooloo, 13; Woollahra, 24; Waterloo, 41; Wheeo, 19; Windellama, 3; Watson's Bay, 4; Wagga Wagga, 2; Wollongong, 27; Windsor, 41; Wallerawang, 1; Wentworth, 3; Waratah, 8; Wilberforce, 22; Wellington, 4; Wallsend, 12; Wickham, 2; Woodville, 4; William Town, 3; Wombat, 1; Wilcannia, 1; Wollombi, 5; Wyce, 1; Yass, 8; Young, 2; out of Colony, 4. Total, 3,254.

A very large number of new applications were received from persons in almost every district in the Colony who desired to be appointed State guardians, and the most careful examination has been made by the Inspectors into the circumstances of each applicant, in order that none but the most suitable homes should be selected.

There were 1,520 new applications received during the year, and of the total 1,124 were from the various Protestant denominations, and 396 from Roman Catholics. The 1,124 Protestant applications sought to obtain 1,807 "boarders," 250 apprentices, and 13 children for adoption, making up a total of 2,070, while the 396 Roman Catholic applications sought to obtain 585 "boarders," 78 apprentices, and 6 children for adoption. Of the new applications received in 1896, 1,256 were reported upon by the inspectors, who approved of 858 and refused 398 on a variety of grounds that were considered sufficient by the members of the S.C.R. Board. The balance of these applications has not yet been reported upon.

There were twelve sittings of the Board during the year, at which the members attended as follows:—The Hon. Sir Arthur Renwick, Kt., M.D., M.L.C., President, 12; Mrs. Garran, 10; The Hon. L. F. Heydon, 10; Lady Windeyer, 10; Mrs. Goodlet, 10; Lady Manning, 7; Mrs. McMillan, 6; The Hon. W. J. Trickett, M.L.C.,

M.L.C., 6; Mrs. Slattery, 5. Mrs. McMillan was absent in Europe during a portion of the year, and Lady Manning was granted leave of absence since January, 1896.

The following is the usual list of lady visitors, under whose supervision the homes are placed in various parts of the Colony, and whose voluntary services are so valuable a factor in the working of the system:—Armidale, Mrs. Alingham, Mrs. S. A. Kearney, Mrs. J. J. Bliss; Albury, Mrs. Edmondson; Ashfield, Mrs. Wilson; Bowral, Mrs. Bagot, Mrs. D'Arcy Irvine; Bega, Mrs. Evershed; Balmain, Mrs. W. McKenzie, Mrs. Pole, Mrs. J. Dixon; Branxton, Mrs. J. A. Tulloch, Mrs. Bereini, Mrs. E. Smith; Bundanoon, Mrs. Osborn; Bathurst, Mrs. Marriott, Miss Newman, Mrs. Deighton; Berrima, Mrs. G. Shephard, Mrs. Wilshire; Bethungra, Mrs. M. Sawyer; Baulkham Hills, Mrs. Wm. Best; Berry, Mrs. E. Morris, Mrs. English; Boolong, Miss Grant; Burrowa, Mrs. C. Robinson, Mrs. J. H. Boucher; Barraba, Mrs. Kidd; Bulli, Mrs. J. B. Nicholson; Braidwood, Mrs. O'Brien; Cootamundra, Mrs. E. Barnes, Mrs. W. H. Mathews, Mrs. E. G. Webster; Camden, Mrs. Chas. Furner; Cassilis, Mrs. Traill; Cooma, Mrs. King; Carlingford, Mrs. H. Cox; Cowra, Mrs. Johnson; Cambewarra, Mrs. Brennan; Collector, Mrs. Best; Cessnock, Mrs. M'Donald; Campbelltown, Mrs. J. Kidd, Mrs. J. Loney; Crookwell, Miss Olivia Smith; Croydon, Mrs. Wilson; Cobargo, Mrs. Tarlinton; Cobbity, Mrs. G. H. Allnutt; Deniliquin, Mrs. H. M'Cullough, Mrs. A. H. Noyes, Mrs. Holt; Dungog, Mrs. M. Day, Mrs. Waller; Dalton, Mrs. H. T. Beresford; Dubbo, Mrs. Phillips; Forbes, Mrs. Raymond, Goulburn, Mrs. Ross, Mrs. Oliver, Mrs. Greig, Mrs. Arthur Chisholm, Mrs. Spencer, Mrs. De Lauret, Mrs. Hancock-Burkitt, Mrs. M'Killop, Mrs. E. Gillespie, Mrs. Jessop, Mrs. Craig, Mrs. L. Barber, Mrs. E. Zouch; Glebe, Mrs. Munro, Mrs. Graham; Gladesville, Mrs. Lumsdaine; Guildford, Mrs. Gurney; Granville, Mrs. E. B. Docker; Gunning, Mrs. Saxby; Gresford, Mrs. Logan; Gerringong, Mrs. Heighway; Gosford, Mrs. Powell; Mrs. J. King Brown; Gordon, Mrs. Richardson; Hay, Mrs. Johnson, Mrs. Lavender; Junee, Mrs. Studds; Kogarah, Mrs. M. Grosvenor; Kempsey, Mrs. Minnet; Katoomba, Miss E. Gittins; Liverpool, Mrs. Tillet; Leichhardt, Mrs. J. Dougherty; Maclean, Mrs. M'Innes; Moss Vale, Mrs. Gale; Maitland, Mrs. J. Prentice, Mrs. M. Smith, Miss Annie Wolfe, Mrs. W. G. Lipscombe, Miss Alice Hyndes; Menangle, Mrs. Onslow; Morpeth, Mrs. Thomas; Murrumburrah, Mrs. G. Barnes, Mrs. C. Cutcliffe; Mittagong, Miss Burke, Mrs. Beaumont; Mudgee, Mrs. E. J. Willis, Mrs. M. Crossing; Marulan, Mrs. M. E. Shaw; Moruya, Mrs. Archibald; Milton, Miss Kendall; Marrickville, Mrs. W. W. Clarke; Molong, Mrs. Aldis, Mrs. Dr. Browne, Mrs. Panton; Muswellbrook, Miss Luke, Mrs. W. S. Wilson; Minmi, Mrs. Froome; Newcastle, Mrs. Weatherill, Mrs. J. Harris, Mrs. Ireland, Mrs. M'Donnell, Mrs. Cuthbertson, Mrs. Davidson, Mrs. Arnott, senr., Mrs. Froome; Nowra, Mrs. Morton; North Sydney, Mrs. T. O'Sullivan; Newtown, Mrs. R. Scott, Mrs. Clegg, Mrs. J. E. Lee, Mrs. Goldsmith, Mrs. Hobbs; Orange, Mrs. Jas. Dalton; Parramatta, Mrs. W. J. Gunther, Mrs. H. Taylor, Mrs. C. E. Lamb; Penrith, Mrs. Lethbridge, Mrs. Ewans, Mrs. Woodriffe; Picton, Mrs. Gibson, Mrs. Sheppard, Mrs. W. B. Antill; Prospect, Mrs. Remington; Qucanbeyan, Mrs. G. Campbell, Mrs. P. G. Smith, Mrs. Willans, Mrs. Emery; Redfern, Mrs. Boyce; Raymond Terrace, Mrs. J. Richardson; Ryde, Mrs. Collingridge; Richmond, Mrs. Onus, Miss Onus; Rooty Hill, Mrs. Mackay; Rouse Hill, Mrs. M. Pearce; Randwick, Mrs. Hellicar; Sutton Forest, Mrs. A. G. Stoddart; Stroud, Mrs. Rushforth; Stockton, Mrs. S. W. Smith; Summer Hill, Mrs. W. E. Shaw, Mrs. Holland; St. Peters, Mrs. E. D. Madgwick; Stanmore, Mrs. W. W. Clarke; The Burrier, Mrs. Thompson; Tamworth, Mrs. Middleton, Mrs. Wiseman; Tumut, Mrs. A. M. Brown; Tenterfield, Mrs. Armstrong; Tarago, Miss May Roberts; Windsor, Mrs. J. B. Johnson, Mrs. Hall, Mrs. W. Deane,

Deane, Miss Hall, Mrs. J. C. Fitzpatrick, Mrs. Holland; Wollongong, Mrs. Elder; Woollahra, Mrs. Newton, Mrs. Gerber; Wallsend, Mrs. Neilson; Waverley, Mrs. W. H. Simpson, Mrs. Best, Miss Walker; Wallerawang, Mrs. Abbott; Wagga Wagga, Mrs. G. Coleman; Windeyer, Mrs. Mallon; Wiseman's Ferry, Miss Laughton, Miss Wilson; Woodville, Mrs. Graham, Mrs. Thomas; Wybong Creek, Mrs. Cox; Wentworth, Mrs. A. H. Davies, Mrs. Wilkinson; Windellama, Mrs. Calthorpe; Yarrunga, Mrs. Throsby; Young, Mrs. Dr. Heeley, Mrs. M. Byrne; Yass, Mrs. Sheehy, Mrs. H. Faunce.

The inspection of the Homes under the control of the Board—both by the voluntary lady visitors and the official inspectors—numbered 8,614, which was 458 in excess of the previous year. The voluntary visitors made 2,008 inspections, whilst the official inspections numbered 6,606. Subjoined are the details of the visits—Honorary lady visitors 1889, 1,356; 1890, 1,292; 1891, 1,225; 1892, 1,383; 1893, 1,638; 1894, 1,666; 1895, 1,305; 1896, 2,008; or an increase of 703 on the previous year. Official visits by inspectors during year ending 5th April, 1893, 5,969; 1894, 6,323; 1895, 6,851; 1896, 6,606. The average number of children under supervision for the year ending 5th April, 1896, was 3,114. The total number of visits of inspection was 8,614, or an average of $2\frac{3}{4}$ visits to each child as against $2\frac{2}{3}$ in the previous year.

The Board has as usual endeavoured to reduce the number of children in every house without separating families. The statistics of 1896 show:—

1,271	homes with 1 child.			
470	" "	2 children, including 265 with children of one family.		
225	" "	3 " "	94	" "
81	" "	4 " "	29	" "
6	" "	5 " "	4	" "
1	home	6 " of one family.		
1	" "	8 " "		

2,055 homes, containing 3,254 children (exclusive of 27 absconders, 6 in hospitals, 159 in cottage homes, and 10 in depôt); total, 3,456.

In consequence of the adoption of the principle of keeping families of children in the same home, as far as possible, there are thus 394 such families with separate guardians; and exclusive of homes of this character there are—

1,271	homes with 1 child.		
205	" "	2 children each.	
131	" "	3 " "	
52	" "	4 " "	
2	" "	5 " "	

1,661 homes, containing 2,292 children (a little over $1\frac{1}{2}$ average, or 1.38); last year the average was 1.41, or slightly in excess of this year.

NURSING CHILDREN.

The number of children of this class under control during the year was less than for any similar period since 1893, when the capitation cost averaged as high as £25, owing in a great measure to the difficulty of securing the services of a superior class of creditable matronly persons in the initiatory stages of the experiment. It was difficult at the outset to obtain clean wholesome women in healthy localities willing to suckle these sick and delicate infants, but after a time the increased payments induced a good class of women to undertake the duties, and there is now no question as to the wisdom of the experiment. Practical experience has not only proved its wisdom, but to its early adoption and the care that was taken in the selection of the wet-nurses may now be attributed the lives of hundreds of delicate infants now grown strong and lusty who would otherwise have been sacrificed inevitably in the closer confinement and partial care of ordinary asylum nurses. The payments now vary from 6s. to 10s. per week for very young and very delicate children, while the ordinary children

children of the State who are boarded out are paid for at the rate of 5s. per week. At the termination of the past year there were 71 such delicate children under control as against 96 in 1895, whilst the daily average throughout the year was 95, and the total cost of their maintenance £2,112, or an average capitation cost of £22.

ADOPTED CHILDREN.

Good results continue to attend the practice of encouraging the adoption of young children by well-to-do persons who desired to bring them up without remuneration as members of the family. A very large number of children, who would otherwise have become a charge upon the public revenue for many years, have been dealt with in this way, and there is hardly an instance in which the permanent welfare of the children was not assured. In all these cases the supervision of the Board is continued until the children reach the age of 17 years, when the visits of the Inspectors cease as a matter of course, but it has been ascertained that although the names of the children have been removed from the registers they still continue with the foster-parents as if they were really their own, and are, without exception, happy and well provided for. When the year closed there were 101 such children under supervision, as against 124 in 1895, the diminution being accounted for by the number of children who were written off the books upon reaching the age of 17 years. Their religious classification was as follows:—Protestants, 38 boys and 54 girls; Roman Catholics, 4 boys and 5 girls; total, 42 boys and 59 girls. Taking the lowest possible estimate of the cost that would have been incurred had these children not been dealt with in the manner described, it will be seen that a saving of £1,495 was effected during the year, or a total of £8,660 for the five years ending on the 5th April, 1896. It is needless to say that the greatest care is always taken in the selection of these foster-parents, and thorough inspection is made of their homes and circumstances before the children are placed under their control; and in order to prevent the guardians from obtaining cheap servants under this section, only very young children are placed out for adoption.

APPRENTICED CHILDREN.

It is satisfactory to be able to say that out of the whole number of 3,456 children now under the control of the Board, there are no less than 847 learning useful trades and occupations, and practically earning their own livelihood. It has been the practice heretofore to apprentice State children to selected trades when they reached the age of 12 years, but it was found that owing to the youth of the children the apprenticeship was for a considerable time only an apprenticeship in name, and after consideration it was decided to invite Parliament to extend the powers of the Board in this and other important directions. As these powers have now been obtained, more satisfactory results may be looked for in connection with the class of children who are dealt with in this way in future. There were 847 children under indentures when the books closed for 1896. The girls in this class numbered 327, all of whom are at domestic service, and the boys 520, all of whom are learning to become blacksmiths, boot-makers, butchers, builders, carpenters, chemists, coach-builders, dairymen, dealers, drapers, farmers, gardeners, grooms, grocers, orchardists, plumbers, saddlers, and tailors. The number of apprentices discharged during the year was 126 boys and 52 girls, or a total of 178 as against 172 during 1895 and 148 during 1894. The total cost of management of the apprentices division was £2,195, a decrease of £75, and brought the average cost to £2 10s. per head, the same as the previous year, when the expenditure under this head was £2,270. When it is considered that there were such a large number of apprentices under control, the low cost of administration will be perceived and appreciated.

CHILDREN

CHILDREN CLASSED AS UNOFFICIAL.

The children who are brought under the operation of the Act for self-protection continue to increase from year to year, and with very good results. In these cases children who are too old to be placed under control in the ordinary way surrender themselves to the Board chiefly with the object of being provided with occupations that will enable them to earn their own livelihood. Last year there were 12 children of this class under supervision—now the number has increased to 15. They are all doing well. The expense to the Board is small, being merely the small proportion of the cost of inspection, and since the initiation of the scheme some 50 children have been dealt with in this way, and they may literally be regarded as having been rescued from the streets.

THE CENTRAL HOME.

During the year some 1,332 children passed through the Central Home at Paddington, as against 1,703 in 1895, a substantial saving of time and money having been effected in a large number of instances by dealing with the children in some of the more suitable districts without first forwarding them to the Dépôt. The daily average of admissions was 17, and the average cost of maintenance £9 15s. 1d. The total cost of maintenance of children at the Central Home was £165 16s. 11d. The home is a mere receiving house, whence children are boarded out, and they seldom remain in it more than a few days.

COTTAGE HOMES FOR INVALID CHILDREN.

The principle of providing cottage homes in healthy localities for invalid and delicate young children has been extended and improved, and the most gratifying results have been obtained during the year that has just closed. Both at Pennant Hills and at Mittagong large numbers of weakly children have been restored to health and strength under the kind matronly care of specially selected women, and it is not an exaggeration to say that the whole of the children sent to these homes during the year were most materially benefited by the pure fresh air, good food, and clean wholesome surroundings. There were 159 in the Homes on the 5th April, 1896, namely, 38 boys and 121 girls, as against 146 at the end of the previous year.

The following is the usual table of particulars :—

	Boys.	Girls.	Total.
Total number of children admitted to Cottage Homes to 5th April, 1896	561	702	1,263
Total number of children discharged from Cottage Homes to 5th April, 1896	523	581	1,104
Number in Homes on 5th April, 1896	38	121	159
In Homes on 5th April, 1895	35	111	146
Admitted during year ended 5th April, 1896	51	92	143
	86	203	289
Discharged during last year	48	82	130
In Homes, 5th April, 1896...	38	121	159
Discharged :—			
To relatives	3	5	8
Boarded out...	37	43	80
Died...	4	1	5
Rydalmere	3	0	3
Newington Asylum	0	3	3
Deaf and Dumb and Blind Institution	0	4	4
Shaftesbury	0	5	5
Moorcliffe	0	1	1
Prince Alfred Hospital	1	1	2
Imbecile Asylum	0	2	2
Sydney Hospital	0	1	1
Over age	0	16	16
	48	82	130

The following return indicates the afflictions from which the children were suffering when they were admitted :—

Abscesses	3	Hand, necrosis of	1
Abscesses and swollen glands	1	Hydatids	1
Bronchitis (chronic)	3	Hip, accident to	1
"	6	Knee-pan, injury to	1
Chilled feet	1	Kleptomania	3
Croup	1	Influenza	3
Contraction of leg sinews	2	Malformed feet	4
Cripples	23	" hands	1
Chinese (half)	2	Marasmus	4
Catarrh	7	Malformed mouth	3
Delicate	57	Necrosis of foot	1
" and lame	5	One leg	2
" and ophthalmic	15	One eye	2
" and partial paralysis	5	Ophthalmia	282
" and running ears	10	" and scrofulous	7
" and scrofulous	12	" semi-idiotic	1
Debility (general)	253	" ulcerated foot	2
" and turned eyes	1	" running ears	13
" and measles	4	" and scalp eruption, and	
Dysentery	4	general debility	21
Dirty habits and sore ear	6	Paralysis	16
Dropsy and rheumatism	3	" of brain	1
Deaf and dumb (change of air)	19	" (partial) and spinal disease	1
"	1	Running ears	18
Diarrhoea	11	" and skin eruption	5
Defective palate	2	Rheumatism	4
Dumb	1	Ring-worms	25
Dirty habits	15	Spinal disease	10
Deformed and paralyzed	5	Strumous	1
Eczema	1	Semi-idiotic	6
Enemia	2	St. Vitus' Dance	3
Eruptions	37	Sore leg	5
" scalp and deformed chest	1	Syphilis	1
" and bad habits	4	Sore foot	2
" and scrofulous	5	Sore ear	13
" of scalp	15	Scrofulous	40
Epilepsy	7	Scabies	12
Eruptions of scalp and body	8	Tecthing	1
Fits	3	Typhoid	1
Fractured limb	1	Ulcers	4
Hip disease	7	Weak legs	3
" and partial paralysis	1	Whooping cough	14
Heart disease	5	Weak intellect	20
Hip disease and running ears	5	Water, incontinence of	7
Half-caste	7	Children who have passed through	
Hand, accident to	1	homes as apprentices	105

The total expenditure upon the Homes was £3,707, or £3,280 15s. 3d. for maintenance, management, medical expenses, salaries, &c., and £426 14s. 4d., the value of clothing furnished to the inmates from the Central Store at Paddington, and the proportionate cost of inspection. The capitation cost was £21 16s. 2d., or a reduction of 3s. 10d. per head upon the operations of 1895.

CONCLUDING REMARKS.

I regret that I have not been able to submit the Report with my usual punctuality. In consequence of the new arrangements made in connection with the officials who carry out the practical details of the Department, various changes have resulted which have occasioned this delay. I do not, however, propose to refer to these matters in the present Report, as they will properly fall within the scope of next year's Report; and I now allude to this subject merely to explain the unusual delay which has taken place in submitting this Report.

In conclusion, I have much pleasure in conveying the thanks of the members of the Board to Mr. Critchett Walker, C.M.G., the Principal Under Secretary, and to Mr. Fosbery, the Inspector-General of Police, for the valuable assistance rendered to the Department during the year.

I have, &c.,

ARTHUR RENWICK,

President.

APPENDIX

APPENDIX E.

INSTITUTIONS from which Children treated at Cottage Homes for Sick Children have been received during the year.

Benevolent Asylum, Sydney.	Central Depôt, Paddington.	Little Bay.	Sydney Hospital.	"Sobraon."	Moorechiff Hospital.	Deaf, Dumb, and Blind Institution.	Shaftesbury Receiving House.	Total.
42	64	4	6	1	4	4	18	143

APPENDIX F.

DISTRIBUTION of Children under control of State Children's Relief Department on the 5th April, 1896.

	Boarders.						Apprentices.	Adopted.	Boards with- out Saturday.	Absconded.	Unofficial.	In Hospitals.	In Cottage Homes.	In Depôt.	Total at present under control.
	In- fants, 10s.	Under 2 years, 8s.	Under 2½ years, 7s.	Under 3 years, 6s.	5s.	Total.									
Boys	1	9	6	21	1,271	1,308	520	42	8	22	6	4	38	6	1,954
Girls	7	4	7	16	924	958	327	59	17	5	9	2	121	4	1,502
Total	8	13	13	37	2,195	2,266	847	101	25	27	15	6	159	10	3,456

APPENDIX G.

THE State Children's Relief Department in account with the Colonial Treasurer during year ending 5th April, 1896.

Dr.	£	s.	d.	Cr.	£	s.	d.
To Balance	214	10	9	By Maintenance ..	£27,993	18	9
„ Deposit from Treasury—				„ Clothing	3,324	16	9
3 June, 1895	£1,000	0	0	„ Salaries	3,955	7	3
22 July, „	8,000	0	0	„ Medical	664	19	0
19 Aug., „	2,000	0	0	„ Gas	45	7	8
12 Sept., „	2,000	0	0	„ Books	13	17	5
24 Oct., „	7,000	0	0	„ Incidentals	480	0	1
11 Nov., „	2,000	0	0	„ Conveyance	682	14	1
7 Jan., 1896	7,000	0	0	„ Travelling	1,293	1	9
29 „ „	2,000	0	0	„ Cottage Homes..	3,280	15	3
7 April, „	7,000	0	0	„ Depôt	165	18	11
8 May, „	700	0	0	„ Travelling Advance	300	0	0
„ Salaries from Treasury	3,326	10	3	„ Balance			
	42,026	10	3		42,200	14	11
	£42,241	1	0		40	6	1
					£42,241	1	0

APPENDIX H.

Dr.	£	s.	d.	Cr.	£	s.	d.
1895.				1895.			
30 April—To Collections	51	5	7	1 May—By Cash to Treasury	51	5	7
31 May „ „	65	7	4	1 June „ „	65	7	4
30 June „ „	70	6	7	1 July „ „	70	6	7
31 July „ „	82	13	4	1 Aug. „ „	82	13	4
31 Aug. „ „	72	5	0	1 Sept. „ „	72	5	0
30 Sept. „ „	60	8	5	1 Oct. „ „	60	8	5
31 Oct. „ „	87	4	7	1 Nov. „ „	87	4	7
30 Nov. „ „	47	17	0	1 Dec. „ „	47	17	0
31 Dec. „ „	114	15	0	1896.			
1896.				1 Jan. „ „	114	15	0
31 Jan. „ „	44	1	6	1 Feb. „ „	44	1	6
29 Feb. „ „	44	9	6	1 Mar. „ „	44	9	6
31 March „ „	61	0	6	1 April „ „	61	0	6
7 April „ „	168	5	0	8 „ „ „	168	5	0
	£969	19	4		£969	19	4

APPENDIX I.

SHOWING Social Antecedents of all Children hitherto placed out under the Boarding-out System in New South Wales.

Father dead, mother blind	2
„ „ „ contributes to support	23
„ „ „ dead	671
„ „ „ deserted	112
„ „ „ destitute	1090
„ „ „ drunkard	95
„ „ „ consumptive	11
„ „ „ half-caste aboriginal	4
„ „ „ in asylum	37
„ „ „ in gaol	82

Father cannot work, cripple, mother in gaol	2
" " " " " " deserted	8
" " " " deformed, mother prostitute	3
" " " " destitute, mother ill	11
" " " " " " dead	6
" " " " in asylum, mother deserted	7
" " " " destitute, " "	8
" " " " ill, mother ill	6
" " " " in hospital, mother insane	24
" " " " " " destitute	33
" " " " invalid, mother doubtful character	1
" " " " in hospital, mother unknown	5
" " " " paralysed, mother deserted	6
" " " " consumptive, mother in asylum	7
" " " " in asylum, mother bad repute	7
" " " " consumptive, mother dead	11
" " " " consumptive, mother has other children	1
" " " " one arm, mother drunkard	1
" " " " subject to fits, mother dead	5
" " " " hip disease, mother dead	2
" " " " mother dead	28
" " " " " " deserted	2
" " " " " " destitute	17
" " " " " " bad character	5
" " " " in hospital, mother in gaol	2
" " " " blind, mother deserted	4
" " " " in hospital, mother drunkard	2
" " " " consumptive, mother delicate	4
" " " " sickly, mother sickly	5
" " " " in hospital, mother in hospital	12
" " " " contributes, mother dead	156
" " " " " " deserted	23
" " " " " " drunkard	40
" " " " " " insane	3
" " " " " " in gaol	9
" " " " " " in gaol (illegitimate)	1
" " " " " " prostitute	22
" " " " " " unknown	14
" " " " " " sickly	7
" " " " " " illtreats child	10
" " " " cannot support, out of work, mother drunkard	14
" " " " unemployed, mother deserted	113
" " " " " " " " dead	270
" " " " " " " " in asylum	58
" " " " " " mother insane	26
" " " " " " cannot support	129
" " " " " " of dissolute habits, mother prostitute	7
" " " " " " French convict, mother dead	2
" " " " " " has 15 children, mother dead	2
" " " " ill, mother dead	5
" " " " " " destitute	14
" " " " " " in hospital	5
" " " " cannot support, has 7 children, mother dead	1
" " " " " " has large family	1
" " " " " " an actor, mother prostitute	1
" " " " " " keeps 2 children, mother insane	1
" " " " " " unemployed, mother in gaol	3
" " " " " " of dissolute habits, mother dead	9
" " " " " " children uncontrollable, mother dead	6
" " " " " " an Indian, mother unknown	2
" " " " at sea, mother in hospital	10
" " " " " " deserted	3
Mother contributes	3
" " " " has bad leg	1
" " " " in gaol	1
" " " " in asylum	5
" " " " insane	1
" " " " drunkard	3
" " " " half-caste	1
" " " " " " living with man at Narrabri	1
" " " " " " in service, another illegitimate child	2
" " " " confined of another illegitimate child	4
Parents keep a brothel	4
Child from Dublin Orphan Asylum	1
Father attempted to outrage child, mother in hospital	1
Parents acquitted of murder, mother in gaol for sheep-stealing	1
Parents unable to control	88
Father bad character, mother dead	6
" " " " " " bad character	7
" " " " " " killed child and stabbed wife	3
" " " " " " neglects child, mother insane	4
" " " " " " too old to work, mother unknown	2
" " " " " " in hospital, mother destitute	25
" " " " " " drunkard	5
" " " " " " dead	2
" " " " " " in gaol	1
Foundlings	93
Total	7,602

APPENDIX J.

Mrs. M. A. Alhutt, Cobbity :—

I have no hesitation in saying, from my personal observation of the State children in this district, that I can hardly conceive of anything better for the mental and bodily health of the children who are thrown upon the care of the State. In every case that has come under my notice the children have improved in every way by the natural life they lead, with the fresh air and the general care and kindness of their foster parents. The girls especially receive a home training which should fit them for becoming useful members of society.

Mrs. Mary S. Antill, Pieter :—

The boarding-out system is a very good one. I have taken an interest in the State children in this district for some years and they appear very healthy and happy and are taught many useful things on the farms, and there are very few complaints from either guardians or children.

Mrs. A. M. Bagot, Bowral :—

In the homes about Bowral where I visit, the boarding-out system works very well. The homes, with one or two exceptions, here are most comfortable and the foster parents very proud and fond of the little ones.

Mrs. L. M. Beresford, Dalton :—

I consider the institution an excellent one.

Mrs. F. Bliss, Armidale :—

I think it an excellent system—a great improvement on the old way of keeping the children in asylums. All the children boarded-out in this district are happy and contented, and their guardians are careful of and kind to them.

Mrs. F. B. Boyce, Redfern :—

The children under my supervision appear in every respect to be perfectly happy and well looked after. I do not know one case where I would wish the conditions of foster mother and child altered.

Mrs. Brennan, Cambewarra :—

The boarding-out system is working well in my district. I have five boys and one girl under my supervision, and I do not hear one complaint from either the children or guardians. The children all look happy and well cared for.

Mrs. M. J. Byrne, Young :—

As far as my experience goes I think the system of boarding-out children is an admirable one, especially when children are placed in good country homes.

Mrs. A. Cuthbertson, Newcastle :—

I am every day more convinced of the great benefit the children derive from this excellent institution. Having acted as lady visitor for the past eight years, I have had every opportunity of seeing how the children fare, and with very few exceptions they all appeared very happy and well cared for, and the foster parents all that could be desired.

Mrs. Roderick Davidson, Newcastle :—

In my one year's experience as lady visitor in the Newcastle district the boarding-out system is a great success. Great care is taken in the selection of homes for the children. The frequent visits of the inspectors and lady visitors can only have a good effect. Those under my supervision appear happy and well cared for. My visits to the homes and schools are always unexpected, and in all instances things have been satisfactory. The children and guardians become attached to one another, and I do not think their parents could do better for them. I believe the system is an admirable one, and a great blessing to the poor children who benefit by it.

Mrs. M. M. Dalton, Orange :—

The system is a great boon to many poor children who would otherwise become waifs. I have visited some homes in my capacity as a Benevolent Society visitor, where it would be well for the poor children there if they could be removed from such homes, and either boarded-out or apprenticed to someone who would teach them to become virtuous and useful members of society.

Mrs. G. Deighton, Bathurst :—

I cannot speak too highly of the system. During my office as lady visitor in Bathurst, and in cases I have come in contact with in other towns, the children are well treated, and generally between the foster parent and child there grows a wonderful affection.

Mrs. J. Dougherty, Leichhardt :—

These children are very well cared for and better looked after than the majority of the children that are cared for by their own parents—I mean the working classes—as I have a very good chance to judge of both, being always amongst them.

Mrs. W. N. M. Edmondson, Albury :—

I am quite sure that it is very much better for the children to be in families than institutions. After they have lived in institutions I think they are very unfit to live in families with children.

Mrs. Marion Ewan, Penrith :—

The boarding-out system in this district is a complete success. The State children here are perfectly happy and well cared for.

Mrs. M. A. Froome, Plattsburg :—

I have not the slightest hesitation in saying that I believe the system of boarding-out the children with suitable people to be far preferable than to herd them together in large numbers in asylums. The home life of the former system must operate for good on the average run of children.

Mrs. J. E. Gibson, Pieter :—

The boarding-out system cannot be improved upon. The children have had good homes and been well cared for, especially in this district.

Miss J. Kendall, Milton :—

The boarding-out system in this district has worked very well on the whole. In a few cases, where the children have run away from their homes, it seems to have been more from a love of wandering or from the whim of the moment than for any other reason. There have been very few cases of ill-treatment by guardians. The children are taught how to work and earn their living, and they are healthy and strong.

Mrs. Emily Logan, Gresford :—

The boarding-out system is satisfactory. The children are happy and fond of the children with whom they are placed.

Mrs. Bertha Marriott, Bathurst:—

I am very pleased to express my opinion of the boarding-out system in Bathurst and the vicinity where I have the privilege and responsibility of observing its working. I am convinced it is a thorough success. All the children here are in comfortable homes, and are well cared for and as kindly treated as they could be if they were with their own parents.

Mrs. Maria O'Brien, Braidwood:—

My experience for the past few years I find the boarding-out system most beneficial for the children's welfare. They are carefully looked after by their guardians, have clean comfortable homes, and all look well and happy. Those who attend school, the teachers speak very highly of them being well conducted and truthful. I think it is a great blessing for those poor children to have such an institution, where they are so carefully trained and looked after.

Mrs. S. Oliver, Goulburn:—

I am very favourable to the boarding-out system for children needing State protection, with the frequent supervision of those whose duty it is to take the oversight. I can find no fault at present with the homes I visit. The children seem happy and well cared for, and their dress and appearance at school compare favourably with their schoolmates.

Mrs. D. Osborn, Bundanoon:—

Having more children boarding out in my district than formerly, have better opportunity of judging of the system, which answers admirably. The children seem as happy and as comfortable as if they were with their own parents, and are treated just the same as the children of the family.

Mrs. M. Pole, Bahmain:—

It gives me great pleasure to express my continued satisfaction with the working of the boarding-out system. Some of the cases here lately have been very trying, and involved a great amount of patient self-denial and watchful care on the part of the foster-parents, especially the mothers, which has been cheerfully given. Though little or no immediate results are seen, I trust it will bear fruit in after life and reward their anxious care.

Mrs. M. Remington, Prospect:—

For the last five years I have taken an interest in watching the success of your system, and have come to the conclusion that it cannot be improved on; it leads to the amelioration of the unhappy conditions which children of the class cared for are necessarily placed under. Under it they imbibe domestic affections of a healthier moral class than that from which many of them are reclaimed. They receive a fair education and their physical wants receive due attention. The children under my observation are healthy and happy.

Mrs. Julia Richardson, Gordon:—

So far, my experience in this district would lead me to the conclusion that boarding out is a success, but, at the same time, the children under my supervision have been fortunate in having exceptionally good homes. I am not in favour of the children being taught at home when it is at all possible to send them to a public school, as such teaching is generally of an erratic and uncertain character.

Miss. Olivia Smith, Crookwell:—

The boarding-out system appears to me to answer admirably in this district. All the children are well clothed and fed, and attend school regularly.

Rev. Canon Taylor, Newtown:—

I regard the boarding-out system as infinitely superior to that which it has superseded. The children are commonly brought up as members of the family in which they are placed, so that the training of family life—with its joys and sorrows—its little difficulties and perplexities, is obtained by the children. Such training seems to me invaluable. It is well calculated to develop the varied powers of the children, and gradually to prepare them for the independent stand which they must take in after life.

Mrs. M. Willans, Queanbeyan:—

I think very highly of the boarding-out system, and, from my own experience, can testify to the love and affection shown on both sides.

Mrs. Agnes Wilson, Ashfield:—

In the districts of Ashfield and Croydon the children have all, with one or two exceptions, comfortable and happy homes. The children are really and truly cared for, return the affection that seems given to them, look well and happy, and are being brought up useful members of society. In the large institutions it is simply impossible to get very near to any child, and one corrupt child infects scores, whereas, in the private homes, when the guardians are respectable and well-living people, the children are duly looked after both morally and physically.

Mrs. E. J. Willis, Mudgee:—

I can candidly state that the boys seemed very contented with their homes and their work, and those in charge spoke encouragingly of them. I think they have a better chance of doing for themselves to greater advantage by being apprenticed to steady, hardworking families. They also have home life which cannot possibly be known in an institute.

LETTERS FROM SCHOOL TEACHERS.

Teacher, Superior Public School, Bathurst:—

The boarding-out system simply strengthens my previously expressed opinions upon it, viz. that, from a school point of view, the State children are in every sense upon an equality with the other pupils. They are neat and clean in dress, present a well-nourished physical appearance, and are, as a rule, beyond the average in regularity of attendance. Case of neglect in any of these particulars is soon remedied, owing to the excellent supervision given by the Departmental officers. Many children under their parental control are not so fortunate and blessed.

Teacher, Public School, Brauxton:—

In cases where children show a due appreciation of their surroundings, they appear to be happy, comfortable, and well cared for.

Teacher, Public School, Coolac:—

I have much pleasure in testifying to the very favourable results of the boarding-out system. All the State children who have been enrolled in the school under my charge were fairly regular in their attendance, clean and tidy in dress, and in most cases equal to, and in some instances, surpassed in attainments the other children. The boarding-out system is proving every day that it is one of sound common sense.

Teacher, Public School, Campbelltown:—

The State children attending this school are well behaved, punctual and regular in their attendance. They are comfortably clothed, and apparently well kept, and compare very favourably with the other children under my charge. As far as my observation goes, the boarding-out system works very satisfactorily in this portion of the district.

Teacher

Teacher, Public School, Cootamundra :—

From an experience extending over many years I have no hesitation in saying the boarding-out system is a splendid one. The children are, as a rule, well cared for, and much happier than they would be in their own homes. I have always found the inspecting officers thoroughly in earnest and most painstaking in ascertaining the actual state, moral and physical, of those children under their charge. The day that alters present circumstances in such a manner as to deprive these unfortunates of isolated country homes, where they get fresh air and plain wholesome food, and thorough inspection, will be a sad one.

Teacher, Superior Public School, Granville :—

The State children attending this school compare very favourably with the other pupils, and their attendance is more regular. Their progress is fairly good.

Teacher, Public School, Gunning :—

I have a very high opinion of the boarding-out system, and consider it a great blessing to those brought under its operation. The children attending this school have good homes; they attend regularly, and appear well fed; their clothes are always clean, and they seem quite happy; in fact, in these hard times they are better off than many of the children living with their own parents.

Teacher, Public School, Gerringong :—

The children placed in this district are well cared for, nourished, and clothed.

Teacher, Public School, Jamberoo :—

The boarding-out system is all that could be expected. The children are neatly dressed, well-behaved, and attend school punctually and regularly. They possess an intelligence somewhat above the average child, which is partly accounted for by the parental manner in which they are treated by their guardians.

Teacher, Public School, Mittagong :—

The State Children attending this school compare very favourably with the other children in regularity, cleanliness, and intelligence.

Teacher, Superior Public School, Picton :—

The boarding-out system works well as far as my experience goes. The children are almost all very carefully kept, and seem contented and well treated. Their conduct is satisfactory, and is in almost every case up to the usual standard of behaviour. The State children now in attendance here give me no special reason for complaint.

Teacher, Public School, Parkes :—

On the whole, the boarding-out system is a good one. In several instances I have noticed a strong attachment grow between the State child and its guardians; and, in the majority of cases, the children have been neatly clothed and apparently well cared for.

Teacher, Public School, Parramatta North :—

Re the boarding-out system, the children attending my school appear to be well cared for, and your system is no doubt a great blessing to them.

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

STATE CHILDREN RELIEF BOARD.

REPORT

OF THE

PRESIDENT, THE HON. SIR ARTHUR RENWICK, K.B., M.L.C.,
&c., &c., &c.,

FOR THE

YEAR ENDING 5 APRIL, 1897.

Printed under No. 25 Report from Printing Committee, 8 December, 1897.

SYDNEY: WILLIAM APPLGATE GULLICK, GOVERNMENT PRINTER.

The President of the State Children Relief Board to The
Chief Secretary.

Charitable Institutions of New South Wales,
State Children Relief Board,
Richmond-terrace, Sydney, 5 April, 1897.

Sir,

In accordance with the provisions of Act 44 Vic. No. 24, I have the honor to submit for the information of the Honorable the Chief Secretary my Report upon the operations of the State Children Relief Board for the official year which closed on the 5th April.

Seventeen years have now elapsed since the State Children Relief Act was assented to, and the change made in the treatment of dependent children of the State has resulted in the most satisfactory exemplification of the beneficial effect of the boarding-out system, both on the ground of the development of the family system among the children and that of economy to the State.

When the Act referred to was under consideration by the Legislature, it experienced considerable opposition, and the supposed dangers and defects surrounding the system sought to be established were pointed out. Many of those who were interested in the various institutions for the housing of the dependent children of the State regarded the scheme with distrust, and, in some cases, even with suspicion. Having occupied the position of President from the initiation of the system, I have watched with great interest the gradual relaxation of the suspicious attitude of the opponents of the proposed boarding-out Act, and have gladly observed the growth of a more sympathetic feeling, and the uninterrupted and satisfactory progress of the movement from year to year, until it has come to be the national policy of dealing with the dependent children of this country.

The defects which surrounded the initiation of the system unquestionably led to the submission to Parliament of the Act for boarding-out children as a tentative measure; and, as a consequence, a number of powers and provisions, which practical experience in the working of the Act suggested from time to time, demanded further legislation. With the approval of the State Children's Relief Board, I therefore introduced to Parliament the measure now known as the State Children Relief Act of 1896 (which is construed as one with the State Children Relief Act of 1831). The principal provisions of the Amended Act are as follow:—

Age for apprenticeship.

1. The age at which children are retained under the provisions of the Principal Act shall be extended to fourteen years at the discretion of the Board.

Regulations.

2. It shall be lawful for the Governor to frame regulations from time to time—
- (i) exempting any boarded-out child from apprenticeship and extending the time for a period not exceeding three years during which such child may be maintained;
 - (ii) prescribing the terms and conditions of indentures of apprenticeship of boarded-out children, with power to transfer such apprentices or to cancel their indentures in case of ill-treatment of the children, or for other sufficient cause;
 - (iii) authorising the Board to deduct from payments due to apprentices in the event of misconduct;
 - (iv) defining the mode of procedure for the recovery of wages due to apprentices;
 - (v) and generally for the purpose of enabling the Board to carry out the objects of the Principal Act and of this Act in regard to apprenticed children.

Extension of period of supervision.

3. The Board shall have power to visit and inspect all children for two years after their official period of boarding out or apprenticeship shall have terminated.

Penalty for withdrawing, harbouring, &c., apprentices.

4. If any person shall directly or indirectly withdraw from, or counsel, or induce any apprentice to abscond from the person to whom such apprentice is indentured before the expiration of his term of apprenticeship, or knowing any apprentice to have so withdrawn or to have so absconded shall harbour or conceal such apprentice or prevent him from returning to the person to whom he was apprenticed or to the place of his original detention (as the case may be) such person shall be liable for any such offence to a penalty not exceeding twenty pounds, or to be imprisoned with or without hard labour for any term not exceeding two months.

Power of arrest of absconding apprentices, &c.

5. It shall be lawful for any Justice of the Peace to issue a warrant for the arrest of any apprentice or boarded-out or adopted child who may have absconded or been illegally removed by parents or other persons from the control of the legal guardian under the provisions of this or the Principal Act.

Money and other property of State children to be controlled by Board.

6. All moneys and other property to which children boarded out, adopted, or apprenticed shall be entitled shall be placed to a separate fund, and shall be under the control of the Board for the benefit and maintenance of such children.

Payment for outfits by parents on restoration of their children.

7. At the discretion of the Board, parents, on the restoration of their children, may be compelled to pay the value of their outfits.

Power to compel payment for neglect of care of outfits by guardians.

8. It shall be lawful for the Board to deduct from the payments due to the guardians such amounts as may be deemed equivalent to the loss occasioned by their neglect to keep outfits up to regulation standard.

Parents to have no further control of children after adoption.

9. Whenever a child is surrendered by his parents for adoption such parents shall have no further control over such child, except by the consent of the Board.

Deserving widows and deserted wives may have their children boarded out to them.

10. It shall be lawful for the Board if it shall think fit to board out to deserving widow and deserted wives their own children under the provisions of the Principal Act, but in the latter class of cases only by an unanimous vote of a meeting of the Board and with the approval of the Colonial Secretary.

Children placed in cottage homes.

11. It shall be lawful for the Board to place invalid or sick children under its control in cottage homes in approved localities, and to make the necessary regulations for their management.

Prosecution of defaulting parents.

12. The Board shall in the name of its boarding-out officer have power to institute legal proceedings against all parents for moneys expended in the maintenance of their children when satisfied that they are in a position to pay for such maintenance.

The like in the case of illegitimate children.

13. The Board may in the name of the boarding-out officer institute legal proceedings against the parents of illegitimate children for the recovery of maintenance money; the father and the mother to be liable jointly or severally.

REVISION OF REGULATIONS.

Consequent upon the passing of these new provisions, it has been found necessary to revise the whole of the Regulations, with a view to their conformity with the altered conditions of the system, and to the additional provisions now having the force of law. These Regulations have been submitted to the Crown Law Officers for approval, and will be published at an early date.

ANNUAL INCREASE IN NUMBER OF STATE CHILDREN SINCE INITIATION OF BOARDING-OUT SYSTEM.

The following table shows the rate at which the number of children under the care of the Board has increased annually since the initiation of the boarding-out system :—

Under control on	Supported by Government.			Adopted without payment.			Apprenticed.			Total under control.		
	Boys.	Girls.	Total.	Boys.	Girls.	Total.	Boys.	Girls.	Total.	Boys.	Girls.	Total.
5 April, 1881.....	24	35	59	...	...	...	...	...	...	24	35	59
5 „ 1882.....	40	60	100	...	3	3	...	...	...	40	63	103
5 „ 1883.....	118	174	292	1	10	11	...	4	4	119	188	307
5 „ 1884.....	221	289	510	6	15	21	5	16	21	232	320	552
5 „ 1885.....	523	363	886	15	35	50	26	64	90	564	462	1,026
5 „ 1886.....	614	411	1,025	28	65	93	137	111	248	779	587	1,366
5 „ 1887.....	741	473	1,214	49	74	123	309	156	465	1,099	703	1,802
5 „ 1888.....	793	485	1,278	52	84	136	357	189	546	1,202	758	1,960
5 „ 1889.....	815	526	1,341	61	93	154	440	238	678	1,316	857	2,173
5 „ 1890.....	805	543	1,348	62	96	158	513	265	778	1,380	904	2,284
5 „ 1891.....	807	566	1,373	67	91	158	543	295	838	1,417	952	2,369
5 „ 1892.....	776	613	1,389	69	94	163	545	299	844	1,390	1,006	2,396
5 „ 1893.....	821	643	1,464	61	97	158	590	325	915	1,472	1,065	2,537
„ 1894.....	955	786	1,741	59	106	165	592	311	903	1,606	1,203	2,809
5 „ 1895.....	1,167	927	2,094	56	91	147	599	334	933	1,822	1,352	3,174
5 „ 1896.....	1,356	1,085	2,441	50	76	126	548	341	889	1,954	1,502	3,456
5 „ 1897....	1,506	1,145	2,651*	55	71	126†	524	370	894‡	2,085	1,586	3,671

* This total includes 9 children in Hospital, 153 in Cottage Homes, 17 in Depôt, 24 under 2½ years paid for at 7s. per week, 39 paid for at 6s., 18 infants paid for at 8s. per week, and 12 infants paid for at 10s. per week.

† This total includes 24 children who are classed as "Boarders without subsidy," that is, placed with guardians who, as in the case of adopted children, do not receive payment for maintenance.

‡ This total includes 20 absconders, whose names still appear on the books, and 14 children classed as unofficial.

These figures speak for themselves. From them it will be seen that a still further relative decrease has taken place in the number of young children placed under the care of the Board throughout the year. This is in some measure due to the section 10 clause of State Children Relief Act, which came into operation in October last, and of which mention will be made later on. There is now a total of 3,671 children under control, as against 3,456 in 1896, showing an increase of 215 children, whilst the last year's lists gave 292 more than the previous year, there thus being a decrease of 67 in comparison with last year's figures. These children are all supported by the State, adopted without payment, apprenticed to useful trades or occupations, or placed for treatment in the cottage homes established by the Department.

It

It has been found necessary in some cases to make changes in the guardianship of the children in order to ensure their welfare. In a few instances the guardians themselves have relinquished their charges on account of bad behaviour. These latter have, however, shown signs of improvement on being transferred to other homes. Taking them as a whole, the relations between guardian and child are most harmonious, and there can be no doubt as to the reality of the affection existing between them.

Four hundred and twenty-three boys and 362 girls (or a total of 785 children) were placed out during the year as against 506 boys and 423 girls (or a total of 929 children) in 1896, a relative decrease in the paying section of 144, which, of course, means a proportionate saving in expenditure.

A large number of applications for discharge from State control were dealt with during the year, and out of the 4,241 children under supervision, the Board approved of 294 being handed over to parents or other relatives, who proved that they were in a position to satisfactorily provide for the children; 91 boys and 61 girls (or a total of 152) were discharged upon their attaining the age of 17 years; 32 deaths were recorded; 1 boy was transferred to the "Sobraon"; 4 were removed to the Deaf and Dumb and Blind Institution; there were 8 at the Benevolent Asylum, Sydney; 24 at the Boys' Home, Newington Asylum; 2 at the Imbecile Asylum, Newcastle; 13 at Shaftesbury Reformatory; 2 at Carpenterian Reformatory; 2 at Home for Boys, Westmead; 3 to Female Refuge; 1 to St. Joseph's Providence; 1 to Tempe Refuge; 5 to friends; 3 to guardians; 2 to St. Martha's Home; 5 to Industrial School for Girls, Parramatta; and 16 absconded. As there were 3,456 children under control on 5th April, 1896, and as 785 were admitted and 570 discharged during the year, the total number under the control of the Board on 5th April, 1897, was 3,671.

Of the 2,651 children paid for by the Government, 9 are in hospital; 153 are in the Cottage Homes at Mittagong and Parramatta; 17 are at the Dépôt at Paddington; 12 delicate children are paid for at the rate of 10s. per week; 18 at 8s. per week; 24 at 7s. per week; and 39 at 6s. per week; the remainder, who are all included in the paying division, are provided for at the rate of 5s. per week.

It has been found necessary during the past year to exercise the most rigid economy over the expenditure, in consequence of the manner in which the resources of the Board have been taxed. In addition to the sum of £40 6s. 1d., which was carried forward to the credit of the Board from the previous year's transactions, deposits and accounts, amounting to £51,124 7s. 1d., were received from the Treasury during 1896-7, making a total of £51,164 13s. 2d. placed at the disposal of the Board during the year. After deducting the amount due for accounts owing at the closing of the books, the gross expenditure for 1896-7 was £48,166 5s. 4d., there then being a credit balance of £2,998 7s. 10d. to be carried forward to 1897-8.

The total cost of the maintenance of boarding-out children was £36,157 1s. 5d. The daily average number of children placed out as boarders during the year was 2,494, and the average cost per head was £14 9s. 11d. The contributions of those parents who were able to help to maintain their children amounted to £839 0s. 2d., and after this sum had been deducted from the gross expenditure, the actual capitation cost was £14 3s. 2d. A full account of the annual expenditure will be found in the Appendices.

GUARDIANS' OCCUPATIONS.

Actor ...	1	Domestics ...	308	Master mariners...	4
Accountants ...	8	Dairy farmers ...	34	Mailmen ...	2
Agents ...	9	Drapers ...	4	Nurses ...	13
Artists ...	3	Dress-makers ...	20	Nurserymen ...	3
Attendants ...	12	Doctors ...	4	News agents ...	4
Auctioneer ...	1	Dealers ...	3	Orchardists ...	80
Bricklayers ...	4	Drovers ...	4	Organist ...	1
Bootmakers ...	27	Engine-drivers ...	5	Painters ...	8
Bakers ...	8	Engineers ...	9	Plumbers ...	11
Bankers ...	5	Fishermen ...	5	Printers ...	6
Brickmakers ...	7	Farmers ...	830	Plasterers ...	3
Blacksmiths ...	7	Fruiterers ...	9	Photographers ...	2
Butchers...	11	Firemen ...	4	Postmasters ...	5
Broom-maker ...	1	Gunsmith ...	1	Porters ...	4
Builders ...	5	Graziers ...	38	Poultry farmers ...	2
Bookbinder ...	1	Gardeners ...	20	Piano-tuner ...	1
Civil Servants ...	9	Gatekeepers ...	2	Quarrymen ...	3
Clerks ...	9	Grocers ...	13	Railway employces	22
Clergymen ...	12	Householders ...	9	Selectors ...	17
Contractors ...	10	Hairdressers ...	2	Slater ...	1
Carpenters ...	42	Ironworkers ...	11	Saddlers ...	3
Cooks ...	2	Instrument-maker	1	Solicitors ...	5
Collectors ...	3	Independent ...	27	Seamen ...	3
Carters ...	12	Inspector ...	1	Salesmen ...	2
Confectioners ...	2	Journalist ...	1	Storekeepers ...	56
Cordial manu- facturers ...	2	Labourers ...	84	Soap-boiler ...	1
Cabmen ...	2	Laundresses ...	18	Sawyers ...	5
Cabinet-makers ...	2	Letter-carriers ...	3	Sailmaker ...	1
Caretakers ...	7	Librarian ...	1	Teachers ...	24
Currier ...	1	Lamplighter ...	1	Tailors ...	11
Chemists...	2	Miners ...	62	Undertaker ...	1
Cooper ...	1	Merchants ...	7	Vignerons ...	2
Coach proprietors	2	Moulders ...	5	Wire-workers ...	3
Compositor ...	1	Managers ...	3	Warders ...	8
Coach-builders ...	2	Masons ...	10		
		Milk-vendors ...	5		

The foregoing table shows the class of people who now seek to have children placed with them. When selecting homes, the greatest care is taken by the inspecting staff to reject those applicants who are not in sufficiently comfortable circumstances to warrant their providing for the children in a proper manner. Preference is naturally given to those living in healthy localities; and, upon a reference to the return shown upon page 6, it will be seen that a large number of children are placed out in the perfect climates of the South Coast, New England, and the Southern and Blue Mountain ranges. That the children must of necessity improve in bodily health under such climatic influences is a foregone conclusion, and as the homes in these districts are all of an excellent class, there need be no fear as to the future well-being of the inmates. Many of the guardians become so much attached to their charges, that upon the latter reaching the age of 12 years, they are retained as apprentices until they pass from under State control. In very many instances they then further elect to remain with their late guardians, being by that time looked upon quite as members of the family.

There are now as guardians 830 farmers, as against 865 in 1896, a slight decrease of 35 having taken place during the year. A larger number of children have, however, been placed out amongst mechanics and artizans, &c. The number of guardians for the official year amounts to 2,115, an increase of 60 over the previous year, when a total of 2,055 was shown in the statistics. There are now, therefore,

no less than 3,472 children boarded out with a class of people the greater number of whom are in a position to equip those entrusted to their care to fight the battle of life, and become valuable members of the community.

LIST OF DISTRICTS IN WHICH CHILDREN ARE PLACED.

CHILDREN are placed out in the under-mentioned districts in the numbers stated :—

District.	No.	District.	No.	District.	No.
Ashfield ...	12	Glen Innes... ..	3	Orange	4
Arncliffe ...	8	Gosford	1	Pymont	10
Annandale ...	21	Greta	2	Paddington... ..	46
Auburn	25	Gunnedah	2	Parramatta... ..	198
Albury	11	Gundagai	15	Petersham	26
Albion Park ...	1	Gulgong	3	Paterson	30
Adamstown ...	12	Geo Plains	2	Picton	40
Armidale	19	Hunter's Hill ...	19	Pitt Town	25
Balmain	121	Hurstville	24	Penrith	11
Berrima	8	Hexham	5	Parkes	6
Botany	13	Helonsburgh ...	2	Queanbeyan ...	12
Burwood	12	Hinton	3	Quirindi	1
Boggabri	1	Hartley	1	Rockdale	13
Bexley	10	Hawkesbury	101	Rookwood	48
Balmoral	3	Hillston	2	Redfern	51
Bowral	3	Hay	1	Ryde	12
Bundanoon... ..	3	Homebush	28	Randwick	10
Bungonia	5	Islington	5	Riverstone	38
Braidwood	14	Jugiong	2	Richmond	4
Bulli	51	Junee	4	Rooty Hill	8
Berry	21	Jamberoo	23	Raymond Terrace	12
Binalong	2	Jerilderie	1	Raglan	2
Brogo	2	Kogarah	16	Rosedale	4
Bathurst	25	Kangaroo	2	Rylstone	4
Brewongle	3	Kiama	13	Richmond River	20
Blacktown	2	Kangaroo Valley	13	Summer Hill ...	14
Branxton	41	Katoomba	1	Sydney	20
Byrock	1	Leichhardt	77	Singleton	28
Blackheath ...	1	Liverpool	32	Surry Hills... ..	50
Croydon	16	Lambton	15	Shellharbour ...	6
Camperdown ...	11	Lismore	2	Stockton	2
Canterbury ...	2	Lawson	1	Scone	4
Coogee	1	Lochinvar	3	Taralga	5
Corowa	1	Manly	9	Tarago	17
Cudal	3	Maitland, East ...	10	Tumut	2
Campbelltown ...	3	Maitland, West ...	81	Thirlmere	19
Castle Hill ...	4	Marrickville	88	Tamworth	5
Canley Vale ...	13	Macdonaldtown ...	32	Tempe	2
Crookwell	18	Mummel	14	Temora	3
Camden	35	Minmi	1	Uralla	2
Cootamundra ...	9	Mittagong	108	Waverley	20
Cambewarra ...	8	Moss Vale	9	Woolloomooloo ...	26
Cargo	3	Marulan	7	Woollahra	10
Cooma	2	Murrumburrah ...	8	Waterloo	57
Cessnock	4	Milton	33	Wheeo	14
Clarencetown ...	11	Moruya	2	Windellama	3
Cooranbong ...	1	Mulgrave	7	Watson's Bay ...	7
Deniliquin	2	Mudgee	7	Wagga Wagga ...	1
Dapto	7	Molong	4	Wollongong	38
Dungog	8	Miller's Forest ...	18	Windsor	38
Douglas Park ...	3	Morpeth	6	Wentworth... ..	3
Dural	5	Muswellbrook ...	8	Waratah	11
Dubbo	19	Manning River ...	3	Wilberforce	37
Dora Creek... ..	4	Macleay River ...	1	Wellington... ..	4
Eastwood	8	Murrurundi	1	Wallsend	14
Forbes	13	Newtown	74	Wickham	2
Glebe	22	Nowra	18	Woodville	3
Gladesville ...	22	Newcastle	89	William Town ...	3
Goulburn	286	Nelson's Plains ...	4	Wollombi	7
Grabben Gullen ...	18	Narrabri	3	Wyee	2
Granville	99	Narrandera	1	Yass	28
Guildford	21	North Sydney ...	69	Young	2
Gunning	25	Nyngan	2	Out of Colony ...	4
Gerrington... ..	13	North Rocks	7		
Girilambone ...	1	Oberon	4	Total... ..	3,472

APPLICATIONS FOR STATE CHILDREN.

It has been found a very difficult matter throughout the year to cope with the numerous applications which continue to increase in number. As the success of the boarding-out scheme depends in a very large measure upon the selection of the homes in the first instance, the greatest care has to be exercised by the Inspectors in making their decisions either for or against those who desire to become State guardians. For a variety of reasons, but principally on the grounds of insufficient means or accommodation and unsuitable localities, no less than 301 applications were refused by the Board on the recommendation of the Inspectors, who also approved of 769 homes, making a total of 1,070 reported upon during the year. There still remains a balance of 440 not yet dealt with. Of the 1,510 applications received, 1,079 were from the various Protestant denominations, and 431 from Roman Catholics. The 1,079 applications from the Protestants were for 1,152 boarders, 221 apprentices, and 16 children for adoption, whilst the 431 Roman Catholics applied for 657 boarders, 86 apprentices, and 7 children for adoption.

BOARD MEETINGS.

There were eighteen (18) sittings of the Board during the year, viz., 12 general, 3 special, and 3 adjourned, at which the members attended as follows:—The Hon. Sir Arthur Renwick, Kt., M.L.C., President, 18; Mrs. Garran, 18; Mrs. Goodlet, 17; Mr. McMillan, 14; Lady Windeyer, 13; the Hon. L. F. Heydon, 9; Mrs. Slattery, 6; the Hon. W. J. Trickett, 5; and Lady Renwick, 2. Lady Manning was on leave of absence visiting Europe during the whole of the time. Lady Windeyer resigned her position on the 22nd February, 1897, and Lady Renwick was appointed on the 26th February in her place. The Hon. W. J. Trickett was seriously ill during several months, and was consequently unable to attend.

LADY VISITORS.

As is now well known, the State homes in various parts of the Colony are placed under the supervision of lady visitors, whose voluntary services on behalf of the children cannot be too highly appreciated. The usual list is appended hereto, viz.:—Armidale, Mrs. Allingham, Mrs. J. J. Bliss; Albury, Mrs. E. Edmondson; Ashfield, Mrs. Wilson; Bowral, Mrs. J. C. Bagot, Mrs. D'Arcy Irvine; Bega, Mrs. Evershed; Balmain, Miss C. B. R. Dixon, Mrs. W. McKenzie, Mrs. G. Boulton, Mrs. Venables, Mrs. Pole; Branxton, Mrs. J. A. Tulloch, Mrs. Bercini, Mrs. E. Smith; Bundanoon, Mrs. Osborn; Bathurst, Mrs. Marriott, Miss Newman; Berrima, Mrs. G. Shephard, Mrs. Wilshire; Bethungra, Mrs. M. Sawyer; Baulkham Hills, Mrs. W. M. Best; Berry, Mrs. E. Morris, Mrs. English; Boolong, Miss Grant; Burrowa, Mrs. C. Robinson, Mrs. J. H. Boucher; Barraba, Mrs. Kidd; Braidwood, Mrs. O'Brien, Mrs. Bayley; Cootamundra, Mrs. E. Barnes, Mrs. W. H. Mathews, Mrs. E. G. Webster; Cobbitty, Mrs. G. H. Allnut; Camden, Mrs. C. Furner; Cassilis, Mrs. Maria Traill; Crookwell, Miss Olivia Smith; Cooma, Mrs. King; Carlingford, Mrs. H. Cox; Cambewarra, Mrs. Brennan; Cobargo, Mrs. E. Tarlinton; Collector, Mrs. R. Beit; Cessnock, Mrs. M'Donald; Campbelltown, Mrs. J. Kidd, Mrs. J. Loney; Croydon, Mrs. Wilson; Deniliquin, Mrs. H. M'Cullough, Mrs. A. H. Noyes, Mrs. Holt; Dungog, Mrs. M. Day, Mrs. Waller; Dalton, Mrs. H. T. Beresford; Dubbo, Mrs. F. Phillips; Forbes, Mrs. Reymond; Goulburn, Mrs. Ross, Mrs. Oliver, Mrs. Arthur Chisholm, Mrs. Spencer, Mrs. Handcock-Burkitt, Mrs. William Chisholm, Mrs. De Lauret, Mrs. M'Killop, Mrs. E. Gillespie, Mrs. Jessop, Mrs. Craig, Mrs. L. Barber, Mrs. E. Zouch, Mrs. T. M'Killop, Mrs.

Mrs. Emery; Gosford, Mrs. W. F. Powell, Mrs. J. K. Brown; Glebe, Mrs. Munro, Mrs. Graham; Gladesville, Mrs. Lumsdaine; Guildford, Mrs. Gurney; Granville, Mrs. E. B. Docker; Gordon, Mrs. Richardson; Gunning, Mrs. Saxby; Gerringong, Mrs. Heighway; Hay, Mrs. Johnson, Mrs. Lavender; Junee, Mrs. Studds; Kogarah, Mrs. M. Grosvenor; Kempsey, Mrs. Minnet; Kurrajong, Mrs. M. Gray; Katoomba, Miss E. Gittins; Liverpool, Mrs. Tillet; Leichhardt, Mrs. J. J. Dougherty; Lambton, Mrs. Arnott, senr.; Maclean, Mrs. M'Innes; Moss Vale, Mrs. Gale; Maitland, Mrs. J. D. Prentice, Mrs. M. Smith, Miss Annie Wolfe, Mrs. W. G. Lipscombe; Menangle, Mrs. Onslow; Morpeth, Mrs. F. H. Thomas; Murrumburrah, Mrs. G. Barnes, Mrs. Cutcliffe; Mittagong, Miss Burke, Mrs. Beaumont; Mudgee, Mrs. E. J. Willis, Mrs. M. Crossing; Moruya, Mrs. Archibald; Milton, Miss Kendall; Marrickville, Mrs. W. W. Clarke; Marulan, Mrs. M. E. Shaw; Molong, Mrs. Alldis, Mrs. Browne, Mrs. Panton; Minmi, Mrs. M. A. Froome; Merewether, Mrs. Berkeley; Muswellbrook, Miss Luke, Mrs. W. S. Wilson; Newcastle, Mrs. J. Harris, Mrs. Ireland, Mrs. M'Donnell, Mrs. Cuthbertson; Nowra, Mrs. Morton; North Sydney, Mrs. T. O'Sullivan; Newtown, Miss Eve, Mrs. R. Scott, Mrs. J. G. Clegg, Mrs. J. E. Lee, Mrs. Goldsmith, Mrs. Painter, Mrs. Howe; Orange, Mrs. James Dalton; Parramatta, Mrs. Inglis, Mrs. Gunther, Miss Taylor, Miss Duncan; Penrith, Mrs. F. E. Lethbridge, Mrs. Ewans, Mrs. F. Woodriffe; Picton, Mrs. Gibson, Mrs. W. R. Antill, Mrs. Sheppard; Prospect, Mrs. Remington; Qucanbeyan, Mrs. G. P. Smith, Mrs. G. Campbell, Mrs. Willans; Quirindi, Mrs. Mary Patrick; Redfern, Mrs. Boyce; Raymond Terrace, Mrs. J. Richardson; Ryde, Mrs. Collingridge; Richmond, Mrs. Onus, Miss Onus; Rooty Hill, Mrs. Mackay; Rouse Hill, Mrs. M. Pearce; Randwick, Mrs. Hellicar; Sutton Forest, Mrs. A. G. Stoddart; Stroud, Mrs. Rushforth; Stockton, Mrs. S. W. Smith; Summer Hill, Mrs. W. E. Shaw, Mrs. Holland; St. Peters, Mrs. E. D. Madgwick; Stanmore, Mrs. W. Clarke; The Burrier, Mrs. Thompson; Tamworth, Mrs. Middleton, Mrs. Wiseman; Tumut, Mrs. A. M. Brown; Tenterfield, Mrs. Armstrong; Windsor, Mrs. J. B. Johnston, Mrs. Holland, Mrs. Hall, Miss Hall, Mrs. W. Dean, Mrs. Fitzpatrick; Wollongong, Mrs. Elder; Woollahra, Mrs. Newton, Mrs. Gerber; Wallsend, Mrs. Neilson; Waverley, Mrs. Best, Mrs. W. H. Simpson, Miss Walker; Wentworth, Mrs. A. H. Davies, Mrs. T. Wilkinson; Wallerawang, Mrs. Abbott; Wagga Wagga, Mrs. G. Coleman; Windeyer, Mrs. Mallon; Windellama, Mrs. Calthorpe; Wiseman's Ferry, Miss A. Wilson, Miss Laughton; Woodville, Mrs. Graham, Mrs. O. C. Thomas; Wybong Creek, Mrs. Cox; Yarrunga, Mrs. Throsby; Young, Mrs. Byrne, Mrs. Heeley; Yass, Mrs. B. Sheedy, Mrs. H. Faunce.

CHANGES IN THE OFFICIAL STAFF.

In consequence of the investigations of the Public Service Board, certain changes were effected during the year in the official staff and in the arrangement of the offices of the Department.

Almost from the very initiation of the boarding-out system Mrs. S. Maxted has acted as matron of the Department. At first, this lady gave her services without remuneration, and subsequently was appointed as a salaried officer of the institution. In accordance with the provisions of the Public Service Act, the Public Service Board deemed it their duty to retire Mrs. Maxted from this position, much to the regret of every member of the State Children's Relief Board, and despite the fact that urgent representations were made by them, as a body, respecting the valuable nature of the services rendered to the Department by Mrs. Maxted.

Mr.

Mr. A. W. Green, the Secretary to the Board, was—by the same authority—appointed Chief Superintendent of Government Asylums. I have pleasure in stating my appreciation of the services rendered by this officer while occupying the former position.

The arrangement made in connection with the amalgamation of all the various offices connected with the Public Charities Department, and their centralisation at Richmond-terrace, Domain, in view of better management and greater economy, met with the approval of the State Children Relief Board. It is, however, matter for regret that the arrangements in connection with the Shaftesbury Institution (now under dual control) have not yet been placed on a footing satisfactory to the State Children Relief Board, or in the best interests of the community at large.

INSPECTION OF HOMES.

The total number of visits paid by the lady visitors and official inspectors amounted to 8,612, practically the same as that of the preceding year.

The lady visitors made 1,465 inspections, whilst those paid by the officials numbered 7,147. The details of the visits are as follows—Honorary visitors—1890, 1,292; 1891, 1,225; 1892, 1,383; 1893, 1,638; 1894, 1,666; 1895, 1,305; 1896, 2,008; 1897, 1,465. Official inspections—1894, 6,323; 1895, 6,851; 1896, 6,606; 1897, 7,147. The average number of children under supervision for the year ending 5th April, 1897, was 3,226, as against 3,144 of last year.

The total number of visits of inspection was 8,612, or an average of $2\frac{7}{10}$ to each child, as against $2\frac{3}{4}$ in the previous year.

The principle of maintaining, as far as possible, the feelings of family affection, by not separating brothers and sisters, has been adhered to, with the results as shown hereunder:—

1,254 homes with 1 child.					
501	„	„	2 children, including 272 with children of one family.		
250	„	„	3 „ „ 115 „ „		
91	„	„	4 „ „ 34 „ „		
14	„	„	5 „ „ 7 „ „		
3	„	„	6 „ of the same family.		
2	„	„	7 „ „		

2,115 homes, containing 3,472 children (exclusive of 20 absconders, 9 in hospitals, 153 in cottage homes, and 17 in depôt).

It will be seen, therefore, that there are 433 homes with children of one family.

Exclusive of homes containing children of one family, there are:—

1,254 homes with 1 child.			
229	„	„	2 children.
135	„	„	3 „
57	„	„	4 „
7	„	„	5 „

1,682 homes, containing 2,380 children, or an average of 1.41 (last year the average was 1.38).

NURSING CHILDREN.

This very important branch of the work still continues to make satisfactory progress. The superior class of women who are now not only willing, but anxious to nurse the motherless infants of the State, gives practical evidence of the wisdom of the scheme. Delicate and puny from their birth as these unfortunates too frequently are, they need every care and attention which it is possible to bestow upon them,

them, in order to save lives which may in the future become of service to the community. The weekly payments for these children vary from 6s. to 10s., according to circumstances; and it speaks volumes in favour of the characters of the nursing mothers, that upon the cessation of the special payments they do not relinquish their charges, invariably retaining them at the ordinary boarding-out rate of 5s. per week. There can be no reasonable doubt that some hundreds of little ones owe their constitutions, if not their lives, to this admirable system of dealing with these sickly infants, of whom there are now 93 under control, as against 71 in 1896. During the past year a daily average of 96 was maintained at a capitation cost of £22—the total cost of their maintenance being £2,090.

ADOPTED CHILDREN.

The number of children adopted by reputable citizens during the year remains practically unchanged, there being now 40 boys and 48 girls in the Protestant, and 8 girls and 6 boys in the Roman Catholic, division, making a total of 102 in all, as against 101 of the previous year. In addition to the important saving thus effected (viz., an annual sum of £1,500), the children themselves are in better circumstances than would have been possible had they remained burdens upon the State. As only very young children are selected for adoption, these little orphans grow up without missing the mothers' care and love, so essential to their well-being. Their foster-parents, almost without exception, not only rear the children as their own, but assiduously guard against any chance of their discovering their true parentage. Great care is exercised by the Inspectors, in making their periodical visits, not to undeceive the children in this respect.

APPRENTICED CHILDREN.

One of the great advantages of the boarding-out system is that as the children advance in years they are given a means of livelihood by being apprenticed to various trades and callings. Until the extension of the powers of the Board granted by Parliament last year, it was the custom to apprentice children at the age of 12. Their extreme youth and the necessity for their attendance at school were a great drawback to obtaining satisfactory positions for them. The discretionary powers obtained by the Board have, however, enabled them to make more suitable arrangements to the mutual advantage of child and guardian. There are at the present time 860 children under indenture, of whom the girls number 363, all being at domestic service—whilst there are 497 boys engaged in useful occupations and apprenticed to blacksmiths, bootmakers, butchers, builders, carpenters, chemists, coachbuilders, dairymen, dealers, drapers, farmers, gardeners, grooms, grocers, orchardists, plumbers, saddlers, and tailors, &c.

There were discharged during the year 109 boys and 53 girls, a total of 162; whilst during 1896 there were 178 discharges, 172 during 1895, and 148 during 1894.

In this division the total cost of management, estimated at an average of £2 10s. per head, was £2,150.

CHILDREN CLASSED AS UNOFFICIAL.

There are now under the care of the Board 14 children (8 boys and 6 girls), who, for various reasons, are classed as above. The majority of these are over 12 years of age, and are all doing well. They are visited at stated periods by the officials of the Department, though this is the only expense incurred. Great benefit has resulted from the supervision, in this way, of these waifs and strays, of whom, in all, some 64 have thus been brought under the influence of the Board.

THE CENTRAL HOME, PADDINGTON.

A large saving has again been effected in the working of the Paddington Depôt by arranging, where practicable, for the transfer of the children direct from one home to another in the same district without the expense of first transmitting them to the home. That a considerable amount of both time and money has been thus economised, is evidenced by the fact that, whilst the daily average of admissions was 19, the cost of maintenance averaged £9 2s. 9d., as against £9 15s. 1d. last year, the total annual cost for maintenance being £173 12s. 10d.

Except in very rare cases the children do not remain long in this home, which is merely for the convenience of admitting and drafting out to the various homes in which it is deemed advisable to place the children.

COTTAGE HOMES AT MITTAGONG AND PARRAMATTA.

Too much cannot be said in favour of these valuable adjuncts to the boarding-out system. Whilst it is a comparatively easy matter to place out the ordinary children under the care of the State, there must of necessity be among so many a certain number who, by reason of their physical or mental infirmities, are debarred from being provided for in the usual way. The Board solved this serious difficulty by establishing, both at Mittagong and Parramatta, cottage homes, where this particular section of children might be specially treated. Under careful and judicious management, with pure air and wholesome surroundings, combined with sound moral training, many hitherto looked upon as incurable have sufficiently recovered to permit of their transfer to the boarding-out division, whilst others, hopeless invalids for life, have found their lot largely alleviated by the constant care and thought bestowed upon them.

There were 153 children in the homes on the 5th April, 1897, viz., 40 boys and 113 girls, as against 159 at the end of the previous year.

The following is the usual table of particulars :—

	Boys.	Girls.	Total.
Total number of children admitted to Cottage Homes to 5th April, 1897	597	808	1,400
Total number of children discharged from Cottage Homes to 5th April, 1897	557	690	1,247
Number in Homes on 5th April, 1897	40	113	153
In Homes on 5th April, 1896	38	121	159
Admitted during year ended 5th April, 1897	36	101	137
	74	222	296
Discharged during year	34	109	143
In Homes, 5th April, 1897...	40	113	153
Discharged :—			
To relatives	7	8	15
Boarded out...	19	86	105
Died...	3	0	3
Newington Asylum	0	2	2
Deaf and Dumb and Blind Institution	0	4	4
Over age	0	7	7
Boys Home, Newington	4	0	4
Industrial School, Parramatta	0	2	2
Benevolent Asylum	1	0	1
	34	109	143

Appended

Appended will be found a return showing the afflictions from which the children were suffering when admitted :—

Accidents	2	Heart disease	5
Anæmia	2	Hydatids	1
Abscess	6	Knee-pan, injury to	1
Bronchitis	13	Kleptomania	3
Burns	1	Influenza	3
Croup	1	Malformations	8
Chilblains	1	Marasmus	4
Catarrh	7	Necrosis	2
Canker of Mouth	2	Ophthalmia	58
Chorea	3	Paralysis	17
Contraction of sinews	2	" of brain	1
Debility	415	Poisoned finger	2
Dysentery	4	Rheumatism	5
Dentition	1	Ring-worm	27
Disease of ear	44	Scrofula	116
" spine	14	Scabies	13
Dropsy	4	Skin disease	1
Dirty habits	15	Syphilis	1
Diarrhœa	11	Tonsilitis	1
Defective palate	2	Typhoid	1
Deformed	36	Ulcers	5
Epilepsy	15	Urine, incontinence of	8
Eczema	4	Ulcerated throat	1
Fractures	1	Whooping cough	14
Hip disease	18	Weak intellect	34
Children who have passed through the homes as apprentices	128		
Deaf and dumb and blind children admitted for change of air	25		
Half-caste children	9		
Dumb	1		
Healthy children lodged in homes in transit to guardians... ..	3		

The total annual expenditure upon the homes was £3,957 8s. 2d., being £3,557 8s. 2d. for maintenance, management, medical expenses, rents, salaries, &c., and £400 for clothing furnished to the inmates from the depôt. This expenditure includes the proportionate cost of inspection, the capitation cost being £22 14s. 10d.

CHILDREN BOARDED TO THEIR OWN MOTHERS UNDER SECTION X OF THE STATE CHILDREN RELIEF ACT OF 1896.

I now proceed to deal with the working of Section 10 of the State Children Relief Act, which became law in 1896.

The urgent necessity of administering relief to the large number of women left with their young families in a state of destitution, either through the death or desertion of their husbands, claimed for some years the attention of the Board. In view of the necessities of the case, I submitted for the consideration of the Board the provisions contained in the Amended Act, and after mature deliberation and approval, I introduced the Bill dealing with the subject in the Legislative Council, and the Act was passed on 10th September, 1896.

The provisions of this Act gave to the State Children Relief Board power to board-out to deserving widows and deserted wives their own children, in accordance with the original Act of 1881, in all cases in which it was considered that the interests of the children would be best met by the adoption of such a course.

That some such a measure was sorely needed was evidenced by the numerous applications which, immediately upon the Act being brought into operation, were received by the Board. Many of these were from mothers who, in their sorest need, had endured great privations to retain their children, and who now eagerly sought the assistance. The remuneration granted in such instances is at a lower rate than is allowed to ordinary guardians, as, in view of the circumstances of the mother, the regulations as to accommodation and outfit are not as stringent as is usually insisted upon by the Board. This small monetary allowance also, whilst it secures to a certain extent the comfort and well-being of the children of these deserving widows and deserted wives, precludes the possibility of the mothers and elder members of the family relaxing their efforts to supplement the relief from the State.

It

It is unavoidable that, in spite of the thoroughness of the investigation, there should be some cases in which the Inspectors are at first deceived; but the strict supervision exercised ensures the early detection of anything approaching fraud, when the relief is immediately cancelled.

To ensure the best results from the scheme, the greatest care is necessary in making the preliminary inquiries, and the *modus operandi* is as follows:—Upon an applicant seeking relief, a form is given, which must be filled in by herself, and signed by a clergyman and one other approved person. Every detail which may lead to a knowledge of her circumstances must be stated—such as the reason of her destitution; the ages, occupations, and earnings of any of her family; the addresses of all relatives, and whether they are in a position to assist her; what amount of rent is paid; and any other particulars which may bear upon the case. The form is then placed in the hands of an Inspector, with whom rests the responsibility of verifying or disproving the applicant's statements. Should he consider the case one worthy of relief, the recommendation is made accordingly; and, if approved of by the Board at its subsequent meeting, an allowance per child, varying from 1s. 3d. to 5s. per week according to circumstances, is granted.

In order that the several members of the State Children Relief Board may have time to consider the various cases coming under notice, a summary of each is made, and forwarded one week before the date of meeting, which takes place on the last Monday in each month. The ordinary meetings of the Board are held once a month, but since the passing of the Amended Act additional special meetings have been held to deal with this class of cases; and supplementary summaries are made of all cases so as to ensure an early response to the application. The adoption of this course entails a considerable amount of work which cannot well be avoided, as otherwise applicants for relief would, in many instances, be compelled to wait two months, the allowances being payable at the expiration of a month from the date of approval.

During the period ending 5th April, 1897, the State Children Relief Board dealt with 479 cases, with the following results:—

Allowances granted.	Refused.	Postponed.
378	50	51

There are now in receipt of relief the under-mentioned mothers:—

Widows.	Deserted Wives.				Total.
	Deserted Wives.	Husbands Insane.	Husbands in Gaol.	Husbands in Govt. Asylums.	
293	62	14	5	4	378

It was also deemed advisable to increase the rate per week per child in 13 cases, and to reduce the rate in 3 instances.

In all, 1,244 children were admitted to control, 14 of whom have since been discharged from the books. The ages of the children are as under:—

Under 1 year.	1 to 2.	2 to 3.	3 to 4.	4 to 5.	5 to 6.	6 to 7.	7 to 8.	8 to 9.	9 to 10.	10 to 11.	11 to 12.	Over 12.	
37	60	88	90	112	131	126	123	112	136	118	94	3	1,230
Discharges.													
1	2	1	...	2	1	2	1	...	...	2	2	...	14

The children now under control are being paid for at the following rates per week :—

5s.	4s.	3s. 9d.	3s. 6d.	3s.	2s. 6d.	2s.	1s. 6d.	1s. 3d.	Total.
22	15	2	8	388	499	288	4	4	1,230

The children now on books belong to the religions set forth in Schedule.

Church of England.	Roman Catholic.	Presbyterian.	Wesleyan.	Congregational.	Protestant.	Primitive Methodist.	Methodist.	No religion stated.	Baptist.	Salvation Army.	Plymouth Brethren.	English Episcopalian.	Protestant Catholic Apostolic.	Total.
448	410	47	78	12	125	20	5	48	17	7	5	4	4	1,230
Discharged during period to 5/4/97.														
8	5	...	...	...	...	...	...	1	...	...	...	...	...	14

Grand Total 1,244

CONCLUSION.

From the facts and statistics supplied in this Report, it will be perceived that the Department has become one of large and increasing usefulness; that its varied responsibilities are of great importance to the State, and that the duties of the Board—always of a responsible, and not infrequently of an onerous nature—have been considerably added to.

I desire to tender my thanks to the members of the Board for their hearty support, their regular attendance, and the unflinching interest they have taken in all the departments of the work. To the lady visitors who, at very great trouble, have inspected and supervised the boarded-out children in their homes, the country owes a debt of gratitude. The various members of the official staff have, on the whole, given satisfaction in the performance of their duties.

And in conclusion, I have much pleasure in conveying the thanks of the members of the Board to Mr. Critchett Walker, C.M.G., the Principal Under Secretary, and to Mr. Edmund Fosbery, the Inspector-General of Police, for the valuable assistance rendered to the Department during the year.

I have, &c.,

ARTHUR RENWICK,

President.

APPENDIX E.

INSTITUTIONS from which Children treated at Cottage Homes for Sick Children have been received during the year.

Benevolent Asylum, Sydney.	Central Depôt, Paddington.	Little Bay.	Sydney Hospital.	"Sobmon."	Moorecliff Hospital.	Deaf, Dumb, and Blind Institution.	Shaftesbury Receiving House.	Total.
30	16	.....	2	1	.....	.....	13	62

APPENDIX F.

DISTRIBUTION of Children under the control of the State Children Relief Department on 5th April, 1897.

	Boarders.						Apprentices.	Adopted.	Boarders with out Subsidy.	Absented.	Unofficial.	In Hospitals.	In Cottage Homes.	In Depôt.	Total at present under control.	Increase during year.
	10s.	Special, 8s.	Under 3 years old, 7s.	0s.	6s.	Total.										
Boys	8	7	11	18	1,410	1,454	497	46	9	19	8	5	40	7	2,085	...
Girls	4	11	13	21	969	1,018	363	56	15	1	6	4	113	10	1,586	...
Totals ..	12	18	24	39	2,379	2,472	860	102	24	20	14	9	153	17	3,671	215

APPENDIX G.

THE State Children's Relief Branch, in account with the Colonial Treasurer, April 5th, 1891.

Dr.	£	s.	d.	Cr.	£	s.	d.
5 April, 1896—							
To Balance	40	6	1	By Maintenance	£31,830	8	1
„ Deposit from Treasury—				„ Clothing	2,951	1	4
15 July, 1896	5,000	0	0	„ Salaries	4,723	9	9
7 Aug., „	6,000	0	0	„ Medical	494	10	7
21 Oct., „	2,000	0	0	„ Gas	50	3	1
28 „ „	8,000	0	0	„ Books	41	3	5
8 Dec., „	2,000	0	0	„ Incidentals	520	17	11
13 Jan., 1897	10,000	0	0	„ Conveyance	547	7	4
2 April, „	6,000	0	0	„ Travelling	1,528	10	8
18 May, „	1,500	0	0	„ Cottage Homes ..	3,020	8	2
3 June, „	6,160	0	0	„ Depôt	173	12	10
	45,660	0	0	„ Travelling	300	0	0
„ Salaries from Treasury	4,677	9	9	„ Deserted Wives and Widows...	1,670	9	6
„ Accounts paid at Treasury	786	17	4	„ Registration under O.P.A....	169	6	4
				„ Shaftesbury Ref. House	144	16	4
					48,166	5	4
				„ Balance	2,998	7	10
	£51,164	13	2		£51,164	13	2

APPENDIX II.

Dr.	PARENTS' MAINTENANCE ACCOUNTS.			Cr.	£	s.	d.
1896.				1896.			
30 April—To Collections	56	18	11	1 May—By Cash to Treasury	56	18	11
31 May „ „	43	6	6	1 June „ „	43	6	6
30 June „ „	97	6	7	1 July „ „	97	6	7
31 July „ „	81	2	6	1 Aug. „ „	81	2	6
31 Aug. „ „	55	7	6	1 Sept. „ „	55	7	6
30 Sept. „ „	68	0	6	1 Oct. „ „	60	0	6
31 Oct. „ „	66	14	3	1 Nov. „ „	65	14	3
30 Nov. „ „	70	17	8	1 Dec. „ „	70	17	8
31 Dec. „ „	70	5	4	1897.			
1897.				1 Jan. „ „	70	5	4
31 Jan. „ „	92	12	6	1 Feb. „ „	92	12	6
28 Feb. „ „	50	2	6	1 Mar. „ „	50	2	6
31 March „ „	79	16	1	1 April „ „	79	16	1
6 April „ „	7	9	4	6 „ „ „	7	9	4
	£839	0	2		£839	0	2

APPENDIX I.

Father deserted, mother deaf and dumb	2
" " mother supports 2 insane children	268
" unknown, " unknown	1
" " " native of Islands	14
" " " drunkard	1
" " " cripple, with illegitimate family of 6.....	7
" " " simple	7
" helpless, mother dead	8
" " " deserted	5
" " " insane	4
" " " in gaol	11
" " " destitute	1
" drunkard, " bedridden	58
" " " destitute	11
" " " deserted	62
" " " dead	12
" " " in gaol	11
" " " prostitute	32
" " " drunkard	6
" " and cripple, mother drunkard	9
" " mother in hospital	2
" cannot work, blind, mother destitute	2
" " " cripple, mother bad character (illegitimate)	2
" " " " " in gaol	10
" " " " " deserted	3
" " " consumptive, mother destitute	4
" blind, mother dead	3
" cannot work, deformed, mother prostitute	14
" " " destitute, mother ill	10
" " " " " dead	1
" " " broken ankles, mother deserted	7
" " " in asylum, mother deserted	3
" " " " " in asylum	12
" " " destitute " deserted	4
" " " mother destitute	8
" " " ill, mother ill	27
" " " in hospital, mother insane	35
" " " " " destitute	1
" " " invalid, mother doubtful character	7
" " " in hospital, mother unknown	6
" " " paralysed, mother deserted	7
" " " consumptive, mother in asylum	7
" " " in asylum, mother bad repute	7
" " " " " prostitute	11
" " " consumptive, mother dead	1
" " " consumptive, mother has other children	1
" " " one arm, mother drunkard	5
" " " subject to fits, mother dead	2
" " " hip disease, mother dead	36
" " " mother dead	3
" " " " " deserted	32
" " " " " destitute	5
" " " " " bad character	2
" " " in hospital, mother in gaol	5
" " " blind, mother deserted	2
" " " in hospital, mother drunkard	4
" " " consumptive, mother delicate	5
" " " sickly, mother sickly	16
" " " in hospital, mother in hospital	156
" contributes, mother dead	23
" " " deserted	42
" " " drunkard	3
" " " insane	9
" " " in gaol	1
" " " in gaol (illegitimate)	26
" " " prostitute	14
" " " unknown	7
" " " sickly	10
" " " ill-treats child	15
" cannot support, out of work, mother drunkard	124
" " " unemployed, mother deserted	316
" " " " " dead	15
" " " " " ill	72
" " " " " in asylum	1
" " " mother ill	33
" " " " " insane	134
" " " " " cannot support	4
" " " " " dead	10
" " " of dissolute habits, mother prostitute	2
" " " French convict, mother dead	2
" " " has 15 children, mother dead	13
" ill, mother dead	17
" " " destitute	5
" " " in hospital	2
" " " support 2 children	1
" cannot support, has 7 children, mother dead	1
" " " has large family	1
" " " an actor, mother prostitute	1
" " " keeps 2 children, mother insane	3
" " " unemployed, mother in gaol	9
" " " of dissolute habits, mother dead	6
" " " children uncontrollable, mother dead	2
" " " an Indian, mother unknown	10
" at sea, mother in hospital	3
" " " deserted	4
" " " immoral	3
Mother contributes	3

Mother has bad leg	1
" in gaol	3
" in asylum	9
" insane	1
" drunkard	4
" half-caste	1
" " living with man at Narrabri	1
" " in service, another illegitimate child	2
" confined of another illegitimate child	4
" destitute	3
Father-ill treats mother, mother pregnant	2
" " " " deserted	5
" cannot control, mother dead	2
Parents keep a brothel	4
Child from Dublin Orphan Asylum	1
Father attempted to outrage child, mother in hospital	1
Parents acquitted of murder, mother in gaol for sheep-stealing	1
Parents unable to control	92
Father bad character, mother dead	10
" " " bad character	9
" killed child and stabbed wife	3
" neglects child, mother insane	4
" too old to work, mother unknown	2
" in hospital, mother destitute	25
" " " drunkard	5
" " " dead	2
" " " in gaol	1
Foundlings	109
Total	8,387

APPENDIX J.

Mrs. T. O'Sullivan, North Sydney :—

I have much pleasure in endorsing my former letter, in favour of the boarding-out system. The Department seems to have used great discretion in the selection of the homes in my district, and the children, in nearly every instance, seem well cared for, and quite happy and fond of their foster-parents.

Mrs. F. B. Boyce, Redfern :—

I have continually under my notice a large number of the children boarded-out to strangers, and am perfectly satisfied regarding them.

Mrs. Brennan, Cambewarra :—

I have much pleasure in stating the system works well in my district. Most of the boys are on farms, and have good comfortable homes. The boys look well, and always tell me when I visit them that they have no complaints to make.

Mrs. A. M. Brown, Tumut :—

I have visited the homes of State children in Tumut for years, and found it a pleasure, knowing how comfortable they were, and how well the children were looked after. The children are all happy and contented.

Mrs. J. J. Bliss, Armidale :—

There is, in my opinion, little difference between the State children under my observation and those who are under the care of their own parents. Those State children under my supervision in this district are all well cared for, and look quite happy and contented.

Mrs. E. J. Bailey, Hunter's Hill :—

After many years' experience of the system, I have great pleasure in testifying to its efficiency. I have almost invariably found the children well cared for and kindly treated, and have been pleased to see the affection existing between them and their guardians.

Mrs. M. Brown, Gosford :—

Respecting the system of neglected children, I am quite of opinion that it is a good one, notwithstanding some difficulties arising from the characteristics of the children themselves.

E. A. Bayley, Braidwood :—

I can only say that I have found the boarding-out system most satisfactory in all the cases that have come under my supervision. The relations existing between the children and their guardians compare most favourably with those who are under the care of their own parents.

Mrs. J. G. Clegg, Newtown :—

All the children under my supervision are exceedingly well cared for, healthy and happy, both their spiritual and temporal wants being studiously attended to. I have very great pleasure in testifying, as far as my experience extends, to the great success of this beneficent plan of succouring children, and enabling them to become in after years worthy citizens.

Mrs. E. Colthorpe, Windellama :—

The system is very good, as far as my district is concerned, as the children are all in good hands, even better than a great number of the children who have their own parents to care for them.

Mrs. J. Dalton, Orange :—

I have much pleasure in saying that, as far as my experience goes, I find that the boarding out system is very satisfactory.

Mrs. D'Arcy Irvine, Bowral :—

There is great cause for thankfulness that the State provides for these poor children in placing them in happy, comfortable homes.

Mrs. W. M. N. Edmondson, Albury :—

I think, from my experience, that there can be no comparison between putting the children into families, under proper supervision, and herding them in institutions to the detriment of their minds and bodies.

Mrs. M. Ewan, Penrith :—

I have pleasure in saying that the State children under my supervision have the best of homes, and are well treated in every respect. I think the boarding-out system, as far as this district is concerned, an unqualified success.

Miss

Miss E. Eve, Newtown :—

The children under my supervision seem happy, and I believe their guardians do the best they can for them, as I always find them clean and well cared for.

Mrs. H. Goldsmith, Newtown :—

Re the boarding-out system and its results, I am of opinion that the dependent children of the State will compare most favourably in every respect with children of the same class who are not under State supervision, and hundreds who would otherwise be ruined are growing up into respectable men and women. The relations existing between the children and their guardians appear respectful, happy, and free.

Mrs. Gibson, Picton :—

I have great pleasure in expressing my opinion in regard to the well-being of the State children. In the homes which I visit several are better cared for than they would be in the home of their own parents, both as to their personal comfort and outward appearance.

Mrs. and Miss Hall, "Lavalette," Windsor :—

We can only repeat what we have formerly said, that the majority are well cared for, and compare favourably with children whose parents are in a similar position to their guardians.

Mrs. M. Arnott, Newcastle :—

I think the system a splendid one, and it seems to me that the majority of children are quite as happy as those who live with their own parents.

Mrs. E. J. Willis, Mudgee :—

I may say that in Mudgee district those children whom I visited I found healthy, well clothed, and with kindly feelings towards their guardians.

Mrs. T. H. Wilkinson, Wentworth :—

I am pleased to state that, so far as the children under my supervision are concerned, the system of boarding them out has proved very successful. They are well and kindly cared for, are healthy and happy looking, both guardians and children being mutually attached.

Miss Millie Wilson, Wiseman's Ferry :—

All the children who come under my supervision are well kept and very kindly treated, better in some cases than the guardians' own children. I am much pleased with the boarding-out system.

Mrs. D. Willans, Queanbeyan :—

I am pleased to say how very highly I think of the boarding-out system. It is quite a pleasure to see the love that exists between guardians and children.

Miss M. A. C. Walker and Mrs. W. H. Simpson, Warerley :—

We have much pleasure in stating that in our experience the boarding-out system works remarkably well. The affection existing between children and guardians will bear comparison with that between those with their own parents.

Mrs. E. G. Webster, Cootamundra :—

I beg to state that, with very few exceptions, I find the children much better cared for than they would have been in their own homes. As regards the relation existing between guardian and ward, it is more of a paternal nature than otherwise.

Miss Alice Taylor, Parramatta :—

It affords me much pleasure to be able to say that the homes that come under my notice are in every way well managed, and the children appear very contented and happy.

Rev. J. Shaw, Paterson.

Mrs. Shaw and I have watched the growth of the system, with which we have been connected since its inception, and consider that its results have been most successful. There are now in this district those occupying respectable positions and esteemed by their neighbours who were once boarded-out children.

Mrs. B. Sheehy, Yass :—

In all cases that I have visited the children bear testimony to the success of the boarding-out system. They are all well cared for, neatly clothed, have comfortable and suitable accommodation, and seem to be contented and happy. The relations existing between the children and their guardians are of a very cordial nature.

Mrs. R. Scott, Newtown :—

I have much pleasure in stating from my experience that the boarded out system for State children works splendidly. All the children under my supervision have good homes and are well cared for, and, as a rule, a very good feeling prevails between guardians and children; indeed, the latter often compare favourably with those under the care of their own parents.

Miss Olivia Smith, Crookwell :—

Respecting the operation of the boarding-out system in force in this district, I beg to state, briefly, that it seems to me to answer admirably. The children appear to be as well provided for by their guardians as they would be if living under parental care, and are receiving a good education in their several stations of life.

Mrs. Pole, Balmain :—

I have much pleasure in again testifying to the beneficial effects of the boarding-out system in Balmain. The children compare very favourably with those who reside with their own parents.

Mrs. J. Richardson, Raymond Terrace :—

I think the boarding-out system excellent. The children are comfortable and well cared for, and a good feeling exists between children and guardians. The children compare most favourably with those who are under the care of their own parents.

Mrs. G. Onus, Richmond :—

The State children who are in this district appear to be very comfortable and contented in their several homes, in fact as well looked after, if not more so than if they were with their own people.

Maria O'Brien, Braidwood :—

The State children whom I have visited lately look well and happy. There have been no complaints whatever either from the children or their guardians. They are in good health, and kindly treated by their foster-parents.

Mrs. D. Osborn, Bundanoon :—

I have had a few of your children under my supervision the last year or two, and on each of my visits found them well clad, happy, and comfortable. I am still of the opinion that the boarding-out system is far preferable to the barrack one.

Mrs.

Mrs. J. T. Marriott, Bathurst :—

I believe the boarding-out system is a thoroughly humane and sound one, and I am often astonished at the amount of self-denial and attachment shown by the guardians for their charges. The children, I am sure, could not be more tenderly loved and cared for if they were their own.

Miss C. M. Loughton, Wisoman's Ferry :—

I can honestly tell you that the children that come under my supervision are as well cared for by their guardians as their own children, and I believe are better off than ever they were.

Mrs. J. Kidd, Campbelltown :—

I think the boarding-out system works well, as under it the children are well cared for.

Mrs. E. C. Irving, Hunter's Hill :—

I have only a favourable report to give with regard to the system of boarding out the State children ; for, when kindly treated, it gives them the advantage of a home life, which is very essential in the bringing up of children.

Mrs. L. Heighway, Gerringong :—

I am pleased to be able to say that the State children placed in homes in and around Gerringong are well cared for, enjoy good health, and, while learning to help on farms, are not kept from school. They appear to be happy and contented.

Mrs. Heiley, Young :—

I have much pleasure in saying that I think the boarding-out system a very good one, and the five children under my supervision are very happy in their homes.

Public School, Leichhardt West :—

Judging from an experience of sixteen years, during ten of which 117 State children have attended the various schools under my charge, I have no hesitation in stating that the State Children Relief Board does excellent work in training the "waifs and strays" to become useful and honourable citizens.

Public School, Murrumburrnh :—

I have much pleasure in testifying to the success of the boarding-out system of State children, as far as evinced by my own observation ; and I believe that, morally and socially, it is far preferable to the aggregation of such children in homes or asylums.

Public School, Mummel :—

From my experience the boarding-out system is an admirable one affording to the children of the State good homes, where in the majority of cases they are treated in the same consideration as members of the family circle. The State children under my own supervision are quite the equal of the other children in the school.

Public School, Muswellbrook :—

My experience of State school children is that, as a rule, they compare favourably with other children.

Public School, Mittagong :—

The State children enrolled in this school are regular in attendance, clean and tidy in dress, and compare favourably with the others in their general appearance.

Superior Public School, Petersham :—

In reply to your circular of 10th instant, I have the honor to report that from my experience of State children in this school, the system of boarding-out is excellent in every way.

Superior Public (Girls') School, Penrith :—

One child boarded out by the State Children Relief Department attends this school. She appears healthy and happy ; is always cleanly and very comfortably clothed.

Public School, Nowra Hill :—

I beg to certify that the boarding-out State children who attended this school were well clothed and cared. They were punctual, intelligent, and obedient.

Superior Public School, Picton :—

My experience of the boarding-out system extends over about three years. During that time I have had to do with about thirty State children, and I am opinion that the results of the system are on the whole satisfactory.

Superior Public School, Parramatta North :—

In reply to your circular, *re* the working of the boarding-out system, I beg to state that the children come to school very regularly, and are tidily dressed.

Public School, Pitt Town :—

I consider the boarding-out system, as far as the children attending this school are concerned, to be a decided benefit to the children. The children are well cared for as far as I can ascertain, and seem to be quite contented with their lot.

Public School, Robertson :—

From personal observation, extending over a period of ten years, I am of opinion that the boarding-out system in this Colony is an admirable one, and the results extremely satisfactory. The State children I have known have, without exception, compared favourably with the other children brought under my supervision. They have been well fed, well clad, and well cared for.

Public School, Rouse Hill :—

I have had under my observation for a period of about twenty-two months a number of State children as pupils in attendance at my school. The result of my experience is that I find they compare very favourably with the other children in appearance and conduct, and seem contented and well cared for.

Public School, Shaw's Creek :—

I consider the boarding-out system an excellent one, and all the children I have had under my supervision have been well cared for—in most cases more so than the majority of children living with their parents.

Public School, St. Peters :—

From personal observation and from inquiries made amongst the other teachers here I am of opinion that the boarding-out system has proved very satisfactory. The children compare very favourably with the other pupils of the school.

Public School, Thirlmere :—

The State children attending this school are, apparently, as well cared for as are the majority of children of the poorer class.

Public School, North St. Leonards :—

My experience of the boarding-out system is that it is a wise and beneficent scheme for orphan children, and is fulfilling its object for them—the care and comforts of a well-ordered home. The State children attending this school are punctual and regular in their attendance, neat and tidy in appearance, and in all respects compare favourably with the other children attending the school.

Public

Public School, Woonona :—

For the past seven or eight years many State children have attended this school. I find them well attended, cheerful, and happy, and know from personal knowledge that their homes are as comfortable as respectable parents could provide for them. In all respects they compare favourably with other children, and in no way are they ever caused to feel any reflection upon their position.

Public School, Woollahra :—

The State children in this school appear to be well cared for, and compare favourably with other children.

Public School, Wilberforce :—

I have much pleasure in testifying to the good results of the boarding-out system in this place. The children under my notice compare very favourably with the other children of the place, and are clean and respectful.

Superior Public School, Waterloo :—

The children attending this school under the name of "State children," seem well cared for in every respect. They compare favourably with the other children of the school.

Public School, Wattamolla :—

I have been in different parts of the Colony, and from my own observations I have found the results of the boarding-out system very satisfactory.

Public School, Ulladulla :—

As far as the State children under my charge are concerned, the boarding-out system has shown very satisfactory results. The guardians appear to treat them as their own children, and, being regular attenders at school, their progress and general conduct is quite equal to that of other children.

Public School, Terrara :—

Only two State children have attended the schools under my charge, and they compared favorably with others under my supervision.

Public School, Tirranna :—

As far as it has come under my notice the boarding-out system in this district bears encouraging results. The State children enrolled at this school compare quite favourably with any attending in dress, cleanliness, manners, and looks, and they certainly attend with more punctuality and regularity, as the records show.

Public School, South Strathfield :—

There are now six State children attending this school. They are very regular in their attendance, are making satisfactory progress, are well clothed, and compare favourably with the other children under my supervision.

Superior Public School, Lismore :—

From personal observations, I am able to speak highly of the boarding-out system. The two little girls who are boarded out in Lismore come to school regularly; they are always clean, tidy, and well clothed, and appear to be comfortable and happy in their respective homes.

Public School, Lower Mittagong :—

Judging from what I have seen in Mittagong, I have not the slightest hesitation in saying that the boarding-out system is an unqualified success.

Public School, Liverpool :—

I have the honor to inform you that the State children attending this school appear to be well cared for, and are clean and tidy in dress. At school they are well behaved, and make fair progress in their studies. Judging from what I see of their conduct, I consider that they compare favourably with the other pupils of this school.

Public School, Kelso :—

I have the honor to inform you, that the State children attending this school compare favourably with the other pupils in this school; they are always tidy and clean, and from appearances they are well cared for.

Public School, Kingsdale :—

I have the honor to inform you that one State child attends this school, and that he is well-conducted and intelligent; further, that he always appears well cared for and happy.

Superior Public School, Kogarah :—

I have the honor to report that, almost without exception, the State children who come under my notice, appear to be well cared for; they are tidy and fairly regular in attendance at school. I think I may safely state that they compare favourably with other children of the school.

Public School, Kialla :—

During my eight years charge of this school I have had the opportunity of observing nine cases of children under the boarding-out system of your Board. With the exception of two, all these have been favourable to the system. In the exceptional cases, the boys were accustomed to city life and frequently evidenced their longing to return, and though kindly treated were always discontented with their lot, and on one or two occasions ran from home. Both these boys are out of this locality now. My opinion is that the "Sobriou" would have been a better home for them in the first instance. The other cases compared in every respect very favourably with the children under my supervision.

Public School, Ingleburn :—

There are at present about a dozen State children in regular attendance at this school. They all appear happy, well fed, and comfortably clothed.

Public School, Glenhaven :—

All the State children who are attending the school under my charge, are well cared for and appear perfectly contented, and compare very favourably indeed with the other children under my supervision.

Public School, Granville North :—

As far as I am able to judge, the boarding-out system from every point of view is thoroughly successful. The children attending this school are all decently clad and healthy looking, and have every appearance of being properly treated and well cared for. In these respects, and in their general conduct, they compare favourably with other pupils of the school.

Public School, Guildford :—

With reference to the results of the boarding-out system, I have the honor to report—1. My experience with the system dates back some eleven years; 2. I have at present four state children attending this school; 3. the children have always appeared contented and well nourished, and are kept exceptionally clean and tidy, and attend school regularly; and 4. they compare very favourably with the other scholars.

Superior Public School, Goulburn South :—

In reply to yours respecting the results of the boarding-out system, I beg to state that I consider the system the most humane that could possibly have been adopted. I have carefully watched its administration in this city, as I take an interest in the children, and from my personal observations, I feel

feel satisfied that the little ones, in the great majority of cases, are in comfortable homes. I can find no fault with those that attend my school. They are punctual and regular in attendance, bodies and clothing clean, all apparently well nourished and happy, and in every respect compare very favourably with my other pupils.

Public School Gunning :—

There are at present seven State children at this school; they all attend with very fair regularity and punctuality (indeed, three of them seldom miss a day); they are well and cleanly clothed, and appear well fed and happy. They all seem to have a genuine affection for their guardians, and, I am happy to say, the affection is mutual. They all compare very favourably indeed with the other children, there being nothing either in appearance or conduct to distinguish them. Taking the cases that have come under my notice as a guide, I have come to the conclusion that the boarding-out system is a very great blessing to these poor children.

Public School, Granville :—

With reference to the condition of the children boarded out by your Department, I can only repeat what I have stated on previous occasions: That the "State" children under my charge are well fed and clothed, and that any person, not acquainted with their history, would pick them out from among the pupils as children of fairly well-to-do parents.

Public School, Gordon :—

So far as my knowledge of the boarding-out system goes, I have much pleasure in stating that it is productive of much good. The children under my supervision last year were well clothed and nurtured, and seemed quite satisfied with their guardians.

Public School, Forrester :—

The State children under my charge are progressing satisfactorily and compare favourably with the other children attending my school.

Public School, Eastwood :—

The boarded-out children in the school under my charge are always neatly and decently dressed and clean. They appear well nourished, contented, happy, and compare very favourably with the other children in the school.

Public School, Fairy Meadow :—

I consider that the present boarding-out system is working very satisfactorily, and is of immense advantage to the children, who seem far happier and healthier than they could possibly be when crowded together without proper supervision. The children under my charge are well cared for, and will compare favourably with the others under my supervision.

Public School, Ebenezer :—

In answer to your letter of the 8th inst., I desire to state that in most cases the boarding-out system has been a benefit to the children sent out. In a great many instances they find good homes. There have been times when the children have turned out badly, and have been a source of danger to other children. I have seen very little of it in my own school. I have had no trouble with the five now attending.

Public School, Wellombi :—

With regard to your inquiries *re* the boarding-out system, I beg to state that as far as my experience goes the children, in most cases, compare very favourably with the other children under my supervision.

Public School, Taralga :—

I beg to state that my experience of the system is the greater conviction of the benefits bestowed upon many of the youthful population of our Colony. Being provided with comfortable homes and a proper training in various branches, fits them with the means of carrying out these callings, and of conducting themselves advantageously, with credit to those in whose hands they have been placed, and with a usefulness to society; whereas, had they not been taken up by the State, and cared for, they may have become inmates of some of our prisons, thereby bringing disgrace and anxiety upon all connected with them.

Public School, Bowan :—

The boarding-out system works well in this district, and the children are kept clean, and appear to be well cared for. They attend school very regularly.

Public School, Shellharbour :—

Re the boarding-out system, those cases that have come under my notice have firmly impressed me with its infinite superiority over the "Barracks system" of housing the children without any profitable occupation, and with ample chance to communicate evil habits one to another. The children who attended my school at different times were, without exception, tidy and clean, and quite as well conducted as other children under the control of their own parents. It is a natural system, and gives boys in many instances the benefit of a good home.

Public School, Yass :—

I have much pleasure in stating that from my experience of the State children attending my school, I consider the results of the system to be eminently satisfactory. In nearly every case the large number of these children attended with marked regularity, and in this respect they compare most favourably with the other pupils. As a rule they are decently clad and cleanly in habits, and in general demeanour and intelligence are not inferior to the other pupils of the school.

Public School, Rookwood :—

As in former years, it may still be said that the condition of the State Relief children in this district compares favourably with any of the rest, and is superior to several. One guardian does not like her charge to be called by any but the family name. Another is parting with her ward for the child's benefit, both being grieved at the separation.

Public School, Erskineville :—

The conduct of the State children attending this school is in all cases good; their dress is usually neat and tidy, and with regard to attendance at school, all are very regular, giving no cause for complaint.

Public School, Dural :—

I beg to inform you that I have had very little experience of the boarding-out system, as I have only had three State children enrolled during the last few weeks, but so far I can say that they compare very favourably with the other children under my charge.

Public School, Coolac :—

In reply to your letter of the 8th April, 1897, I have the honor to state that, so far as I have observed the working of the boarding-out system in this Colony, the results have been strongly in favour of the system. The children attending the school under my charge have been clean and tidy in their dress, and compare favourably with the other children of the school.

Public School, Corrimal :—

In reply to your request with reference to the boarding-out system, I beg to state that there are six children attending school, and they seem to be well cared for; their attendance is very good, and they compare favourably with the other children. The system seems to work well at this place.

Public

Public School, Cranebrook :—

In this neighbourhood, at least, the boarding-out system seems to work admirably. The children attend school regularly, are neatly dressed; seem well nourished, and, in general appearance and demeanour, compare favourably with the other pupils attending this school.

Superior Public School, Cootamundra :—

Although I have not had any State children under my supervision for some time, yet I am able from past experience to say that I am satisfied that your Institution is rescuing children from beggary and immorality, and giving them an idea of home and comfort.

Public School, Croydon :—

The State children attending this school are well cared for and compare favourably with the other children.

Public School, Campbelltown :—

In reply to your communication of the 8th instant, *re* State children in this district. I know of only one. He attends this school regularly, and is always neatly and comfortably dressed, and has the appearance of being well kept and well nourished by his guardian.

Public School, Bexley :—

In reply to your circular letter of April 8th, I beg to state that the boarded-out children who have come under my notice since my arrival in Sydney appear to be well cared for and treated as well as the members of the family in which they live.

Public School, Cullinga :—

During 1896 I had only one child under the boarding-out system on the rolls of this school. This child is on all occasions very clean and neat, and has the appearance of being well fed and cared for, and compares favourably with other children attending school.

Public School, Brookfield :—

I beg to state I have at present only two State children under my charge. Both are under the same guardianship and present every appearance of being well fed. They attend school in good clothes regularly and punctually. These children are treated by their guardians as their own.

Public School, Albury :—

My experience, so far as it goes, proves that the boarding-out system works very satisfactorily. Amongst the limited number who attend my school, the children are apparently well cared for, and compare favourably with others.

Public School, Annan Grove :—

In reply to your memo. dated 10th inst., I beg to acquaint you that, as far as I know, the boarding-out system is advantageous to the children concerned. With regard to the children under my charge, I must say that they are well cared for, and compare favourably with the other pupils of my school.

Public School, Adamstown :—

I beg to state, in reply to your memorandum, that the State children in attendance at this school are as well dressed and as well behaved as other pupils, and in other respects compare favourably with them.

Public School, Arncliffe :—

Three State children have attended this school recently. They all appear to be fairly treated, well clothed and fed, and, in fact, to be on a footing with the bulk of the pupils of the school in all important respects.

Superior Public School, Annandale :—

I have to state that the children boarded out by your Department in this locality have every appearance of being well looked after. They seem to be well fed, well clothed, and happy. There is nothing to distinguish them from the bulk of the children attending school.

Public School, Baulkham Hills :—

I have the honor to state that I have observed that the boarding-out system appears to work well, and the children compare very favourably with others attending this school, both with regard to cleanliness and general appearance of clothing. At present there is but one attending, who is a well-behaved, modest, little girl.

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

CARPENTERIAN REFORMATORY.
(CORRESPONDENCE RESPECTING.)

Printed under No. 11 Report from Printing Committee, 15 July, 1897.

[Laid upon the Table of the House in response to a Question asked by Mr. Lyne, on the 16th June, 1897.]

Question.

MR. LYNE asked THE MINISTER OF PUBLIC INSTRUCTION,—

- (1.) Is it a fact that the late Superintendent of the Carpenterian Reformatory reported that the Reformatory was overcrowded, and suggested that more room should be given at Brush Farm or elsewhere?
- (2.) Was this course approved; or, if not, was the recommendation ignored?
- (3.) As a consequence, did the Superintendent tender his resignation?
- (4.) Did the Minister, or any other person connected with the Department of Public Instruction, order the discharge of twenty-eight of the lads referred to, and had these twenty-eight the worse record?
- (5.) Was an instruction afterwards given, and by whom, on which these lads were rearrested and placed on the "Sobraon"?
- (6.) By what authority was this action taken?
- (7.) Will he lay upon the Table all instructions and papers connected with the matter and the resignation of the Superintendent?

ANSWER.

MR. GARRARD answered,—

- (1.) Yes.
- (2.) These premises are leased for ten years, at a rental of £500 per annum; the lease has yet seven years to run. To make the place suitable for the requirements of the Colony would need an expenditure on this private property of about £10,000, and the additional cost of resumption, if resumed. The Government, under these circumstances, has not yet decided what action to take.
- (3.) Captain Murray resigned because the Government did not sanction the increased expenditure that he desired on this leasehold property.
- (4.) Eleven boys were discharged on the recommendation of the late Superintendent, and twenty-eight others, which it was desired to send on board the "Sobraon," were also discharged, as it was found that, legally, the action contemplated could not be carried out. The records were, as in the case of most Reformatory boys, not good.
- (5.) No.
- (6.) Answered by No. 5.
- (7.) Yes.

CARPENTERIAN

RETURN asked for by Mr. Creed,

Name of Boy.	Age.	Date of Committal.	Place of Committal.	Offence charged with and committed on.	Time in Institution.	Conduct in Institution.
John Butler	years. 15½	28 Jan., 1896	Goulburn	Indecent exposure	14 months 11 days	Fair only
George Cooling	15½	2 June, 1896	Sydney	Stealing lead, value £1	10 months 6 days	Bad
Thomas Cooper	14½	3 Dec., 1896	„	Stealing ornaments, value 10s. ...	4 months 3 days	Fair only
Douglas Cook	15	9 Feb., 1897	Glebe	Stealing 8s. 6d.	2 months 1 day...	Uncertain.....
William B. Cassidy	14½	16 „, 1897	Paddington ..	Stealing tools, value 4s. ...	1 month 21 days	„
Sydney Davis	14½	18 Mar., 1897	Sydney.....	Stealing 4 pillows and 2 bolsters, value 5s.	1 month 19 days	Good.....
Alfred George	15½	27 Nov., 1896	„	Stealing brass-fittings, value £10	4 months 9 days...	Very bad indeed...
Charles W. H. Hyland ..	14½	19 Mar., 1897	„	Stealing cart and harness, value £12.	20 days.....	Uncertain.....
Edward Harper	12½	27 Jan., 1897	„	Stealing 24 books, value 4s.	4 months.....	Very good
Victor E. Lilley	15	20 „, 1897	Goulburn	Larceny, and illegally using horse	2 months 12 days	Fair, but unsafe ...
William F. Mechan.....	13½	7 Dec., 1896	„	Stealing saddle, value 30s.	6 months 24 days	Fair
James Middleton	15½	17 „, 1896	Temora.....	Illegally using a horse, and steal- ing saddle and bridle.	3 months 18 days	„
Jos. Manders or McNally..	16½	21 Jan., 1897	Sydney	Stealing serviette rings, 2 knives, and buckle, value 15s.	2 months 15 days	Fairly good
Edward Maher	14½	19 Feb., 1897	Narrabri	Stealing whip-cord and spurs, value 6s. 5d.	3 months	Unsafe (absconded)
Thomas McGuire	14½	25 Jan., 1897	Junee	Stealing fruit, value 5s. 6d.	2 months 13 days	Indifferent
William O'Brien	16	24 Dec., 1896	Water Police Court.	Having 45 lb. lead in his pos- session, supposed to be stolen.	3 months 13 days	Good.....
Leslie Owens.....	15½	29 Jan., 1897	Central Police Court.	Stealing whip, value 2s. 6d.	2 months 8 days	„
George Parker	14½	18 Mar., 1897	Central Police Court.	Stealing 4 pillows and 2 bolsters, value 5s.	2 months 8 days	„
Sydney Rootsey	17½	3 May, 1895	Bombala . . .	Breaking and entering, stealing goods, value £1.	1 year 10 months	Good for 18 months, then absconded and sent to goal.
Bernard Redmond	15½	18 Mar., 1897	Central Police Court.	Stealing 4 pillows and 2 bolsters, value 5s.	19 days.....	Uncertain.....
Alfred Smith.....	15½	24 Dec., 1896	Water Police Court.	Having lead in possession, sup- posed to be stolen.	3 months 13 days	Very bad, ab- sconded 3 times.
George T. Stacy	15½	15 Feb., 1897	Goulburn	Stealing purse, containing £1 19s. 3d.	1 month 20 days	Dangerous
Robert Shaw	14½	10 Mar., 1887	Central Police Court.	Stealing purse, £1 12s. 6d.	27 days.....	Uncertain.....
Henry Stewart.....	14½	18 „, 1897	Central Police Court.	Stealing 4 pillows and 2 bolsters, value 5s.	19 days.....	„
Geo. Thomas.....	15½	16 Nov., 1895	Water Police Court.	Stealing lead, value 10s.	1 year 4 months 20 days.	Troublesome, con- tinual absconder.
James Thompson	16½	1 Sept., 1896	Orange	Stealing a rug, trousers, scissors, &c., value £1.	7 months 1 day...	Bad (absconded)...
Henry Thompson, or Arthur H. Wilson.	15	1 Feb., 1897	Central Police Court.	Attempt to steal from person of a woman unknown.	2 months 6 days	Fair
George Harold Willie	14½	17 April, 1896	Ryde.....	Stealing silver charm and locket, value £1.	1 year 2 days.....	Bad (absconded)...

RETURN concerning Eleven Boys whose release

Samuel Hodge	17½	22 Jan., 1895	Wagga	Breaking and entering a place of Divine worship.	1 year 9 months ..	Good
John Higgins.....	16½	14 Oct., 1895	Newtown	Stealing silk handkerchief, value 2s.	1 year 7 months ...	Very good
William White.....	15½	10 „, 1895	Water Police Court.	Stealing watch, value £4	1 year 3 months ...	„
Samuel J. West	16½	23 „, 1895	Central Police Court.	Stealing copper, &c., value 25s.	1 year 3 months ...	„
Henry M. Taylor†	13	„	„	„	„	„
James Brishm	15½	19 Mar., 1896	Water Police Court.	Stealing 4s. 3d.	1 year 20 days.....	Very good
Charles Dixon	16½	17 Apl., 1896	Balmain	Stealing £8.	1 year less 10 days	Good.....
Charles Cox	15	20 „, 1896	Parramatta ...	Stealing £2 0s. 6d.	1 year	Very good
Thomas McDonald	14½	3 Feb., 1896	Bathurst	Cruelty to a horse (castrating)	1 year less 7 days	„
William E. Lane	13½	22 Oct., 1896	Paddington ..	Obtaining £4 by false pretences	5 months 17 days.	„
Percy Dear	11½	18 Jan., 1897	Newtown.....	Breaking, entering, and stealing with others, goods to value of £4 10s.	2 months 19 days	„

* Absconded the night before his release was made known.

† This boy was sent to this Institution from the "Boys' Home," Brush Farm, by the Director of Charitable Institutions, because he was

REFORMATORY.

concerning Boys who were released.

Person into whose charge delivered.	At what place handed over.	In what manner.	By whom handed over.	Nearest Post Town to where each was sent.	Nearest Post Town to where each now is.	Remarks.
Father	Put on train at Strathfield.	In charge of guard.	Officer of Institution	Crookwell..	Crookwell..	Father wrote asking that his son be put on train, and saying he would be met at Goulburn.
Mother	The Institution	Personally	Superintendent	Sydney	Sydney	Boy's brother came and took him away.
Father	"	Through his aunt	"	"	"	Boy's aunt called and took him in charge.
Mother	"	Personally	"	Woollahra..	"	
Father	"	"	"	Sydney	"	
Mother	"	"	"	"	"	
Grandmother	"	"	"	Balmain ..	Balmain ..	
Uncle	Redfern Railway Station.	Handed over to his sister.	Escort from Institution	Junee (old)	Junee (old)	
Mother	Strathfield Railway Station.	Put on train for Goulburn.	Officer of Institution	Goulburn ..	Goulburn ..	Mother wrote asking that the boy be put on this train.
"	Glebe	Handed to his aunt in Glebe by Officer of Institution.	Attendant Bowcher ..	Glebe	Glebe	
Superintendent of N.S.S. "Sobraon."	"Sobraon"	By Officer	"	Sydney	Sydney	A "Sobraon" apprentice; convicted of stealing. Sentenced to Brush Farm. At expiration of sentence to be handed over to the Superintendent of N.S.S. "Sobraon."
Mother	Institution	Personally	Superintendent	"	"	
Sister	Redfern Railway Station.	Put on train for Narrabri.	Attendant Watson	Narrabri ..	Narrabri ..	His sister, Mrs. Jane Richardson, wrote asking that the boy be put on this train.
Father	"	Put on train for Junee.	Attendant Bowcher ..	Junee	Junee	His father wrote asking that the lad be put on this train.
"	Institution	Personally	Superintendent	Sydney	Sydney	
Mother	"	"	"	Surry Hills	"	
"	Glebe	"	Attendant Bowcher ..	Glebe	Glebe	
Father	Redfern Railway Station.	Put on S. train for Cooma.	Attendant Gidley	Bombala ..	Bombala ..	Father wrote asking that the boy be put on this train.
Mother	Institution	Personally	Superintendent	Sydney	Sydney	
Uncle, Mr. Whalan.	"	"	"	"	"	
Mother	"	"	"	Goulburn ..	Goulburn ..	
*	"	"	"	"	"	
Mother	Institution	Personally	Superintendent	Sydney	Sydney	
"	"	"	"	Surry Hills	Surry Hills	
Father	"	"	"	Bathurst ..	Bathurst ..	
Mother	"	"	"	Waterloo ..	Waterloo ..	
"	Strathfield Railway Station.	Put on train for Lithgow.	Escort from Institution	Bowenfels..	Bowenfels..	Mother wrote asking that this might be done.

was recommended by Captain Murray.

Mr. J. J. Taylor, Parramatta North	Mr. Taylor's house...	Personally	Captain Murray	Parramatta .....	.....
Handed to Mr. Basche.	Institution	"	Superintendent	Frederickton	Frederickton	Found a situation on a farm, Macleay River.
Parents .....	.....	.....	Captain Murray	Surry Hills	Surry Hills	By arrangement with his mother, Capt. Murray allowed him to go down home without escort.
Mr. Jenkins, of Tamworth.	Put on the Northern train at Eastwood.	By Attendant Watson.	"	Tamworth ..	Tamworth..	Mr. Jenkins wrote to Capt. Murray, asking that this arrangement be made.
Went to sea on the barque "Unvali," bound for Mauritius.						
Mother	Institution	Personally	Captain Murray	Balmain ..	Balmain	
Father	"	"	Superintendent	Parramatta	Parramatta	
Parents	Strathfield Railway Station.	Put on the train for Tarana.	Officer of Institution	Tarana	Tarana	
Father	Institution	Personally	Captain Murray	Waverley ..	Waverley ..	
"	"	His brother came and took charge of him.	"	Ashfield	Ashfield	

Now at work. Resides with his mother at 193, Goulburn-street. unmanageable there, being an habitual absconder; he is in the Institution still, awaiting arrangements to be made in connection with his discharge.

Minute Paper for the Executive Council.

No. 42.

Department of Public Instruction, Sydney, 22 March, 1897.

Carpenterian Reformatory, Brush Farm, Eastwood.—Discharge of Boys.

I RECOMMEND, for the approval of His Excellency the Governor-in-Council, that the boys whose names are mentioned hereafter be discharged from the Carpenterian Reformatory, Brush Farm, Eastwood, under the provisions of section 4, Act 30 Victoria No. 4:—

Samuel Hodge,	Douglas Cook,	Leslie Owens,
John Higgins,	William B. Cassidy,	George Parker,
William White,	Sydney Davies,	Sydney Rootsey,
Samuel J. West,	Alfred George,	Bernard Redmond,
Henry M. Taylor,	Charles W. H. Hyland,	Alfred Smith,
James Brislin,	Edward Harper,	George T. Stacey,
Charles Dixon,	Victoria E. Lilley,	Robert Shaw,
Charles Cox,	William F. Meehan,	Henry Stewart,
Thomas McDonald,	James Middleton,	George Thomas,
William E. Lane,	Joseph Manders, or	James Thompson,
Percy James Dean,	McNally,	Henry Thompson, or
John Butler,	Edward J. Maher,	Arthur H. Wilson,
George Cooling,	Thomas McGuire,	George Harold Wilie.
Thomas Cooper,	William O'Brien,	

J. H. YOUNG.

The Executive Council approve of the discharge of the boys referred to from the said Reformatory.—
ALEX. C. BUDGE, Clerk of the Council. Min. 97/13, 23/3/97. Confirmed, 30/3/97. Approved.—
HAMPDEN, 23/3/97.

May be discharged at once or to-day.—

Samuel Hodge,	James Brislin,	William Lane,
John Higgins,	Charles Dixon,	Percy James Dean.
William White,	Charles Cox,	
Samuel West,	Thomas McDonald,	
Henry Taylor,		11 in all.

List of boys who require special treatment, which cannot be given at Brush Farm at the present time owing to the want of proper accommodation:—

Butler,	Lilley,	Smith, A.
Cooling,	Meehan,	Stacey,
Cooper,	Middleton,	Shaw,
Cook,	Manders,	Stewart, H.
Cassidy,	Maher,	Thomas, G.
Davis,	McGuire,	Thompson,
Evans,	O'Brien,	Wilson,
George,	Owens,	Willie.
Hyland,	Parker,	
Harper,	Rootsey,	30 in all.
Lessells,	Redmond,	

J. S. MURRAY.

Memorandum to The Superintendent, Carpenterian Reformatory, Brush Farm, Eastwood.

Discharge of Boys.

The necessary Executive authority having been obtained, the following boys should be discharged forthwith:—

Samuel Hodge,	Douglas Cook,	Leslie Owens,
John Higgins,	William B. Cassidy,	George Parker,
William White,	Sydney Davies,	Sydney Rootsey,
Samuel J. West,	Alfred George,	Bernard Redmond,
Henry M. Taylor,	C. W. H. Hyland,	Alfred Smith,
James Brislin,	Edward Harper,	George T. Stacey,
Charles Dixon,	Victor E. Lilley,	Robert Shaw,
Charles Cox,	William F. Meehan,	Henry Stewart,
Thomas McDonald,	James Middleton,	George Thomas,
William E. Lane,	Joseph Manders, or	James Thompson,
Percy James Dean,	McNally,	Henry Thompson, or
John Butler,	Edward J. Maher,	A. H. Wilson,
George Cooling,	Thomas McGuire,	George H. Wilie.
Thomas Cooper,	William O'Brien,	

The boys are simply to be discharged, and no other action is to be taken.

Department of Public Instruction, Sydney, 31st March, 1897.

J. C. MAYNARD,
Under Secretary.

The

The Superintendent, Carpenterian Reformatory, to The Under Secretary of Public Instruction.

Brush Farm, Eastwood, 26 January, 1897.

In my letter of the 12th instant,* I had the honor to report that all the sleeping accommodation at the Reformatory was full. Since that date five boys have been sent here.

I would now respectfully point out that the limit of safety has been passed; and that the pressure has obliged me to put boys to sleep in a cottage from which they can easily abscond.

Since the 31st December, 1896, four boys have absconded: all have been recovered with much trouble and anxiety.

At present there are five boys confined in the cells for safety. Every care is exercised with regard to their health—but four of these boys are dangerous if released—and, before proceeding to put in force Section 12 of the Reformatory Schools Act, I would ask for an instruction in this matter.

In my Report of 1st September, 1896, I stated that the number of boys at Brush Farm this year would probably be 120, and pointed out the necessity for a new dormitory, as the accommodation was then full.

J. S. MURRAY,
Superintendent.

Appendix to Letter of 26th January, 1897.

LIST OF DORMITORIES WITH NUMBER OF BEDS IN EACH.

No. 1, over lavatory and cells	18 beds.
No. 2, ,, workshops	21 ,,
No. 3, ,, messroom	22 ,,
No. 4, ,, at the house.....	14 ,,
No. 5, ,, hospital ward	10 ,,
	85 beds.

Number of boys in residence..... 96
Balance of 11 boys to be provided for in small unsafe rooms in cottage, and in cells.

J. S. MURRAY,
Superintendent.

26th January, 1897.

Submitted.—J.C.M., 29/1/97. Seen by Minister.—J.C.M., 10/2/97.

The Superintendent, Carpenterian Reformatory, to The Under Secretary of Public Instruction.

Brush Farm, Eastwood, 24 February, 1897.

I have the honor to lay before the Minister the following statement:—

I have not been allowed to make the arrangements necessary for the development of the Reformatory, in the direction of safe accommodation for the boys; nor have I been permitted to build workshops for teaching trades—without which the Reformatory must fall short of its purpose—although these wants have been made known for many months past.

On account of this, the safety of the institution is, at the present time, dependent entirely on my own personal effort to keep the boys together; and the impossibility of properly training, educating, and keeping safe 112 criminal boys—with means which are wholly inadequate—is so painfully apparent that no course now remains open but to offer my resignation.

On account of the crowding, and the want of a penal division here, I have been obliged to adopt a course of severity which is repugnant to myself and contrary to my plan and principle for reclaiming the boys.

There are 32 boys without safe sleeping room; and the small improvised workshops carry 14, instead of 50 or 60.

The rate of admissions for the last six months is 112 per annum.

I would place on record the undoubted fact that the success of the Reformatory scheme is proved. For the boys requiring this asylum—and who cannot be sent on board the "Sobraon" under the Act—are being sent in rapidly from all parts of the Colony. But there is no room here.

The Matron's resignation necessarily goes with mine.

I would suggest that the officer appointed to succeed me should reside with us for a few days to become acquainted with the present management.

J. S. MURRAY.

The Public Service Board,—I have seen Captain and Mrs. Murray and explained to them that nothing can be done in the direction he wishes till a new Act has been passed. I think he will recall this resignation, or at any rate not ask to be relieved till after next June.—J.C.M., 11/3/97.

The Superintendent, Carpenterian Reformatory, to The Under Secretary of Public Instruction.

Dear Mr. Maynard,

Brush Farm, 12 March, 1897.

Perhaps you would kindly give us a date for our departure as soon as Mr. Garrard returns.

The sooner it can be arranged the more convenient it will be for our own plans, as our goods and chattels are scattered about, and must be collected.

I could arrange a plan for carrying on, if you would wish to have my help.

Believe me, &c.,

J. S. MURRAY.

Submitted that Captain Murray's resignation be accepted to take effect from 30th instant.—J.C.M., 2/4/97. Approved.—J.G., 2/4/97. Informed.—W.J.D., 2/4/97. Treasury informed.—G.M., 14/4/97. The Public Service Board.—J.C.M., 14/4/97.

The

* No such letter received by Department of Public Instruction, which only took over the Carpenterian Reformatory in December, 1896.

The Superintendent, Carpenterian Reformatory, to The Under Secretary of Public Instruction.

1 April, 1897.

I HAVE the honor to make application for four weeks' leave of absence from this date. I have not been on leave for three years.

I am, &c.,
J. S. MURRAY.

Approved for Minister. Mr. Stayner of the "Sobraon" to act temporarily.—J.C.M., 2/4/97. Captain Murray and Mr. Stayner written to.—W.J.D., 2/4/97.

The Under Secretary of Public Instruction to The Superintendent, Carpenterian Reformatory.

Sir, Department of Public Instruction, Sydney, 2 April, 1897.

Referring to your letter of the 12th instant, I am directed to acquaint you that the Minister of Public Instruction has accepted your resignation as Officer-in-charge of the Carpenterian Reformatory at Brush Farm, to take effect from 30th instant. The Minister has also granted you one month's leave of absence from the 1st instant, and has appointed Mr. F. W. Stayner, of the N.S.S. "Sobraon," to take temporary charge of the institution. He has been instructed to proceed to Brush Farm early to-morrow morning.

It is understood that you will remain at the Reformatory for a few days, so as to initiate Mr. Stayner into the working of the institution.

I have, &c.,
J. C. MAYNARD,
Under Secretary.

Captain J. S. Murray, Carpenterian Reformatory, to The Minister of Public Instruction.

Sir, Eastwood, 1 May, 1897.

After working for nearly two years at this Reformatory, it will be counted but reasonable, I trust, that I should be permitted to give an account of myself and my work, and of the reasons which have compelled me to resign my appointment as Superintendent.

Appointed by the present Government, I took charge on 1st September, 1895, at a salary of £360 per annum, with usual allowances. There were then but few boys—8 in all—and Brush Farm was immediately put in order for the work.

My report for the first year speaks for itself.

There were 70 boys on the roll on 1st September, 1896. At this time I began to feel neglect on the part of those under whose charge we had been placed, and the strain put upon us by increasing numbers, with no leave to expand, became very severe. Remonstrances were made by me personally to the Public Service Board, and the Shaftesbury Institution was suggested, and virtually promised, as a penal division for our relief—as permission to expand at Brush Farm was refused.

Transferred to the Department of Public Instruction early in December, 1896. Distinct orders were received not to expend more on this Reformatory. The work, however, progressed, and excellent cases for the Reformatory coming in rapidly—57 for the half-year ending 1st March. I called attention to the serious position in which I was being placed with the responsibility of keeping safe some thirty or forty boys, for whom there was not sufficient room (the whole number at this time being 118), and receiving no instructions for my guidance, I was compelled to offer my resignation on 24th February, 1897.

The order to release twenty-eight of the worst characters in the Reformatory on 1st April, 1897, came upon me as a shock; and being quite unable to carry such an order out my resignation had to be accepted. I have reason to regret that more confidence had not been placed in me, for it would have been quite easy to relieve the pressure temporarily—if there were no other way—by handing in thirty names of boys who were worthy of having their periods reduced, and such a simple and reasonable course would have had a powerful effect for good.

About the treatment which Mrs. Murray and I have received personally—which is quite a secondary matter when speaking of Reformatory work—I have to complain of having been asked to take this most important work in hand when there was no clear intention of supporting me in the endeavour, and after a very considerable amount of success has been accomplished of forcing me to resign. My salary in the meantime being reduced to £10 per month (less than the carpenter's pay on the "Sobraon"). We have suffered much personally, but it is the breaking up of our twenty months' work, so suddenly, which causes intense pain.

It can safely be affirmed that the Reformatory itself has been a success, and in no small degree, and the work remains on record, for out of 133 boys entered on the books only one can be called a failure.

I am, &c.,
J. S. MURRAY.

Seen.—J.G., 6/5/97. Ackd.—W.E.B., 10/5/97.

The Under Secretary of Public Instruction to Captain J. S. Murray.

Sir, Department of Public Instruction, Sydney, 10 May, 1897.

I am directed by the Minister of Public Instruction to acknowledge the receipt of your letter of the 1st instant, stating your reasons for resigning the position of Superintendent of the Carpenterian Reformatory.

I have, &c.,
J. C. MAYNARD,
Under Secretary.

The

The Under Secretary of Public Instruction to The Superintendent, Carpenterian Reformatory.

Sir, Department of Public Instruction, Sydney, 13 March, 1897.
At the instance of the Public Service Board, I beg to introduce Captain Neitenstein, the Comptroller of Prisons.

Will you kindly afford him every facility in the inquiry which he has been appointed to make.

I have, &c.,

J. GIBSON

(For Under Secretary).

Minute Paper.

Subject:—Carpenterian Reformatory.—Report respecting letters from the Superintendent (Captain Murray), also general condition of the Institution.

Department of Prisons, Sydney, 16 March, 1897.

In compliance with the instructions of the Public Service Board, I visited the Carpenterian Reformatory yesterday for the purpose of inquiring into the various points contained in the attached letters from the Superintendent (Captain Murray), and also of ascertaining the general condition of the institution. I arrived at 9 a.m., and left shortly before 8.30 p.m., after seeing the boys turned in for the night in their various dormitories.

The reformatory is situated amidst pleasant surroundings, and the position is one of great beauty. The principal administrative buildings are nearly 400 feet above sea-level, and the locality is among the healthiest in the Colony. Few institutions of the kind have such wholesome and cheerful natural surroundings.

Not much more can be said in its favour. The buildings are altogether unsuitable. They were never intended for the purpose to which they are being applied; and their structural defects are of so grave a character as to render supervision and security out of the question. From time to time feeble attempts have been made to increase the accommodation and to alter the arrangements, but these alterations and additions have not materially been improvements, and they have simply added to the holes and corners so impossible to supervise. The heterogeneous collection of old buildings and new additions, many of them of a flimsy nature, are scattered about in different directions—in some cases a quarter of a mile apart—and these serious disadvantages in themselves increase the difficulties of the management. The administrative buildings, with the dormitories, school-rooms, recreation-halls, and other necessary portions of a successful institution, should be so constructed, and should be so concentrated, as to be readily capable of access and supervision. But to thoroughly put the Brush Farm establishment in this condition would mean a radical alteration, involving the expenditure of much money. The place is now held upon a ten years' lease, of which three years have expired. The annual rental is £500, and the contract provides that the orchard shall be kept in good order, and that all trees which become useless shall be replaced with others by the lessee. Provision is made for the purchase by the Government during the currency of the lease at the then value of the property. The principal thing, therefore, to be determined is whether the estate is to become the property of the Government. Until this is settled, it would be an unbusiness-like transaction to expend a large sum in alterations in connection with a lease having only seven years to run. This is the main difficulty, and it controls the situation. I, therefore, at once draw attention to it before proceeding to lay before you the results of my inquiry into matters of detail. It might, further, be pointed out that the place is not suited for agricultural work, and the ground can only be utilised as an orchard, and, in a limited direction, for vegetable gardening and some dairy work. These occupations would be healthy, and afford useful training, but they would not be pecuniarily profitable, and any ideas that they would render the institution self-supporting must be abandoned. I am aware that sanguine expectations on this head were indulged in at the inception of this establishment, and that it was officially stated: "It may be taken for granted that the monetary returns from the sale of fruit, vegetables, and general produce will prove a large source of revenue, and the inmates' labour can be so utilised as to reduce the actual cost to the State under this heading to a comparative trifle." Unfortunately, these expectations have not been realised, a return, prepared for me by the Superintendent, showing that the operations on the orchard account, to the 31st December last, had resulted in a debit balance of £82 ls. 3d. on the total transactions since the lease was entered upon. The revenue is principally made up of the estimated value of the jam made by the boys and consumed on the premises, and supplied to other institutions. And, by taking into consideration the estimated value of the jam in stock, the debit is converted into a credit balance of £12 2s. 1d., as at the 31st December last. Taking the most favourable aspect of these transactions, it must be apparent that the probable income, from a practical £ s. d. point of view, need not be seriously taken into consideration.

I arrived at the institution at 9 a.m., entirely without notice, and my observations are founded strictly on an ordinary day's routine. The Superintendent was with me all day, and he afforded me every information. It may not be out of place here to record my impressions of that officer. Captain Murray has a most trying situation, and he accomplishes much good under serious disabilities. He has the sailor's readiness of resource, combined with a refined and benevolent disposition, and I was particularly struck with the strong good feeling that plainly existed between him and the boys. He is constantly with them from "turn out" in the morning at 6 until they are all stowed away in bed at a quarter past 8 or so at night. His efforts are ably seconded by his wife, the Matron, and it is only the personal power of these two people, and the grateful regard which the inmates have for them, which prevent more boys from absconding. The whole place is bounded by public roads, from which they are mostly separated only by low two-rail fences. There is little to prevent a general exodus, if the boys felt so inclined, and that more do not abscond is a testimony to the qualities of the two principal officers. It is to be regretted that Captain Murray has tendered his resignation, which, necessarily, carries his wife's with it. He has a great deal of present trouble to encounter. Of late, the various benches have been committing to his care youths of bad character in unusually large numbers, and the weak resources of the institution are severely strained. There are amongst the new-comers boys of a sullen and bad disposition, and the sudden influx of these determined fellows, and others, has not only overcrowded the institution, but has led to an increase of misconduct, necessitating the infliction of punishment which Captain Murray feels
repugnant

repugnant to his principles and theories. He plainly fears the occurrence of a riot or mutiny, with which he may be unable to properly deal, with his present imperfect appliances. Abscondings or attempts to abscond are not infrequent, and the overcrowding which takes place in the dormitories at night is carried into the miserable apologies for workshops in the day, so that the occupation of these boys cannot be provided for as it should be.

I have carefully gone into this matter, and have inspected the whole of the boys, some of whom certainly would delight in a combined outbreak. I consider, nevertheless, that the danger of an émeute is not imminent, but the present circumstances may very probably lead to such taking place. The overcrowding of the dormitories at night is, however, the most serious thing, and no delay should arise in relieving Brush Farm of at least thirty-four of its inmates, so as to bring the numbers down to manageable proportions. They could be discharged by the Governor-in-Council, and then apprehended under the Industrial Schools Act, and placed on the "Sobraon," where there are already hundreds of youths of similar antecedents and characters, and where there are proper means for humanely but fittingly dealing with them. This might be an evasion of the law, but it would not be without precedent. It would be certainly better to strain legal procedure than to await the occurrence of a grave scandal. As an alternative, the few girls now at Shaftesbury might be housed elsewhere in a place to be proclaimed a Girls' Reformatory. Shaftesbury could then be designated a Male Reformatory, and the boys transferred there. But something must be done at once, and legal intricacies should not be allowed to bar the way to affording relief to an urgent and harassing situation. These boys removed, the immediate tension would be less acute, and there would be breathing time to consider the future.

It is almost impossible to deal satisfactorily with the existing jumble of buildings without entailing considerable outlay. A comprehensive rearrangement, or even complete reconstruction offers the real solution of the difficulty, but this need not be gone into at the present juncture. The Government must first decide the question of ownership. But to meet the requirements of the immediate future some modest expenditure is absolutely necessary in some at least, if not in all, the following directions: Firstly, new workshops are needed for the tailoring, bootmaking, and joinery classes. A long shed, 65 feet by 20 feet, divided into three compartments for each trade, should not be expensive. Secondly, a messroom should be constructed for the attendants who now use the boys' library room. Thirdly, a long dormitory should take the place of a fragile and dangerous portion of the existing sleeping apartments. This dormitory should be well lighted both by night and by day, and should have modern methods available for ensuring supervision. Fourthly, a rearrangement, involving little outlay, should be carried out in connection with the hospital accommodation. Fifthly, the present defective water supply should be supplemented by arrangement with the Water and Sewerage Board; and sixthly, some attention should be paid to the quarters occupied by the officials. Besides the foregoing, are two most important matters, which require carrying out at once. The improvement of the sanitary arrangements, and the establishment of a special quarter where new-comers might serve a probationary detention until they become amenable to discipline, and which might also be held *in terrorem* over would-be offenders. Further, a rearrangement of the staff is strongly urged.

The necessity for the foregoing, as it presented itself to me, will perhaps be gathered from the following account of my visit to the establishment. The staff is composed of two divisions. In the first division is a superintendent, a matron, a clerk, 3 attendants, 1 orchardist, 1 schoolmaster, 1 farm overseer, and 1 joiner (a new appointment, commencing next week). This gives 10 officers, besides whom there is a second division, comprising a number of old men and women drawn from the different asylums, who work with, instruct, and, in cases, supervise the boys in various ways. These people are virtually in the positions of subordinate officers, and provided the greatest possible care is exercised in their selection, moral harm may not arise by reason of the seeming incongruity of their appearance in such a place. They board and lodge on the premises, and receive small rates of daily pay, ranging from 3d. to 1s., and in special cases to a little more. The shoemaker instructor, for example, gets £2 monthly. This arrangement provides for a large number of supernumerary officers at small rates of pay, and at the present time 18 are so employed. I do not view with favour this plan, especially as some of these persons are entrusted with duties involving serious responsibilities, but the Superintendent assures me that no harm has arisen to the establishment up to the present. On visiting the school, 48 boys were found to be present under the charge of Mr. Chopin (classification 2B). The schoolmaster informed me that 93 out of 114—the total number of inmates on the books—were on the school roll, and that these were divided into two parts, who attended alternately mornings and afternoons. They are graded into three classes, according to qualifications, and the first class is divided into an upper and a lower division. So far as possible, the ordinary curriculum of the Public School system is carried out, but I much regretted to find that singing was not taught. It would also appear that singing is not in vogue to any extent in any part of the institution, and that a drum and fife band has fallen into disuse. I strongly recommend the cultivation of music and singing in the reformatory, and a rearrangement of the staff should include the engagement of an officer competent to teach wind instruments in addition to performing general duties. A lesson on dictation was proceeding, and the results showed 70 misspellings amongst 18 boys. The order was good. The dress was not uniform, and about half had no boots. The teacher gave a good account of the boys' conduct. He appeared to be a capable man, and he does not reside on the premises. A resident teacher would be preferable, who could help to supervise the boys in their hours of recreation. Such a person might act as *locum tenens* for the Superintendent on occasions. At present there is no recognised second in command. A rearrangement of the staff should provide for this.

The various workshops were inspected, and I was impressed by their general unsuitability, excepting in the case of the carpenter's shop. The indoor trades, besides carpentry, are bootmaking, tailoring, and tinsmithing, and nearly all the needs of the establishment in the named directions are supplied. The three last-named trades are taught in hovels under the direction of some of the ex-asylum inmates, and very fair specimens of work are turned out. Some of the lads show considerable proficiency, and they generally exhibited interest in their work. Probably boots for the Industrial School for Girls, and also for the Girls' Reformatory, could be made here at a profit. The tailors cannot cope with the requirements of the Farm, and the clothes supply is falling behind in consequence. As a matter of fact, some of the boys are not clothed properly, and this matter needs attention. A fair supply should be purchased and issued to the Superintendent, so as to give him a fair start. Thereafter he would, no doubt, be able to provide for future wants by the boys' labour. Good order was maintained.

In connection with the orchard, the fruit is principally made into jam, and this industry is the principal productive occupation. The jam factory is small, but well up to requirements, and various jams, marmalades, preserves, &c., are prepared of first-rate quality and appearance. The Officer-in-charge, who is also the Orchardist (Shirdin), shows much interest in his work, and carefully teaches the lads told off to him.

At my request, a parade of all available boys was held on the recreation ground. Effort was made to turn out the parade dressed properly, but the clothes difficulty could not be surmounted, and the garments were a mixed collection. Numbers of the boys were without flannel shirts as there was none in stock. Some wore smart hats set off by a red band, and others simple white linen Glengarry-shaped caps. I suggest that cabbage-tree hats might be made and worn by the boys. They would cost almost nothing, and would look much better than the ugly shapeless white caps. Drill was confined to "attention," "standing at ease," and marching two deep—all done badly. I suggest that a more systematic drill practice be introduced. In going round the ranks the boys appeared to be generally healthy, although here and there appeared traces of past skin and eye disease. Captain Murray told me that he was much troubled by boys being received with ringworm and sore eyes.

The recreation ground is a fine spacious place, well turfed, but its gymnastic appliances could be materially improved at little cost. There are only two horizontal bars composed of gas barrels fixed on wooden posts.

The isolation hospital is situated a long distance away from the main buildings—probably a quarter of a mile off. There were six cases of bad eyes and four cases of ringworm. Dr. Violette visits twice weekly. This hospital forms part of a ramshackle collection of tumble-down shanties, which also provide sleeping quarters for a number of the aged persons engaged from the asylum.

Across the main road a piece of ground is leased from Mr. King for some four years. It comprises 24 acres, and is principally used for the dairy work and for the horses. Several boys were engaged at milking and attending to the cows under the supervision of an old woman. At night time thirty boys march from the Reformatory, over a quarter of a mile away, and sleep in an improvised dormitory, which offers no protection against escape. Three of the officers also live in close proximity. It must add to the general insecurity to have the staff of officers so split up at night and so divided from each other. The main buildings are left in a very unprotected condition (as I shall show later on) through this separation.

I inspected the kitchens, dining hall, and sculleries, which were all in fair condition. Captain Murray tells me he has no trouble with the food contractors. The provisions, including vegetables grown on the lands, were of first-class quality, and were abundant. There can be no doubt about the lads being well fed. Plenty of fruit, fresh vegetables, bread and jam, and good quality meat with occasional puddings and custards, with tea, eggs and smoked fish, make up a varied and healthy dietary scale. The kitchen arrangements are under the care of some old women, and the dining hall is controlled by one of the old men employed. The mess utensils were in good order.

The sanitary arrangements need immediate attention. There are in the main establishment four closets and one urinal, besides two closets and one urinal elsewhere. They are of a primitive condition, and somewhat offensive. There are three plunge baths, and the boys use them once weekly. This is altogether insufficient in a climate like this, and when the boys are engaged on dirty work, but water cannot be spared. The fact is, the water supply is dependent on rain caught on the roofs and stored in tanks. This is not enough to meet the wants of some 150 people, boys and adults, besides providing for animals, laundry purposes, cooking, cleaning, etc. Water has, therefore, to be purchased at much inconvenience, and at a cost of seven shillings and sixpence per thousand gallons. Most certainly arrangements should be made with the Water and Sewerage Board for a constant and ample supply of water. Should fire occur amongst the scattered, badly-constructed dwellings, the consequences would be disastrous. There is no fire engine, no fire extinguishers—only a few buckets of water available for emergencies. I cannot too strongly insist upon the great urgency of installing a satisfactory water supply.

I inspected the dormitories on two occasions, when the rooms were untenanted and after the inmates had retired to rest. The bedding was ample and fairly clean. Spring mattresses were used, and I saw no trace of vermin. The beds are close together, but this cannot be avoided. Classification has been carried out to some extent, but the night arrangements are perhaps the most unsatisfactory features of the entire establishment. At 8.30 p.m. all boys are in bed, with one exception, who remains up until 11 as a sort of watchman assistant. On one landing there were a number of lads in the main dormitory. At right angles to this, connected with strong doors with padlocks and bolts, were smaller dormitories. In one was five or six boys, in another only two. These doors were locked and bolted. In several other dormitories somewhat similar sleeping arrangements obtained. In some cases the apartments were lighted by a kerosene lamp fastened to a hoop in the middle of the ceiling. In others, kerosene lamps were fixed to the wall. Windows, when not barred, were screwed up so as only to open a certain distance. In every case the outer doors are locked, and the boys are left to their own devices for the night, excepting in one dormitory, where an old man attendant sleeps in the same room. Supervision of the whole of the sleeping places is handed over to the night watchman, Samuel Fisher, who is paid 1s. per diem and rations, &c. He is an aged person, who is responsible all through the night.

I am told that immorality is entirely absent from the institution, and that only one case has ever occurred. I suggest, however, that, if the present dormitories have to be retained, better arrangements are needed for the night watch. I need not point out in what direction: it must be sufficiently obvious. Mechanical checks in the form of detector clocks should also be placed about the premises. The whole sleeping quarters are now badly off in protection from fire. Flimsy buildings, kerosene lamps, locks and bolts, mischievous boys, imperfect supervision, and insufficient water supply form a combination which may some day lead to a terrible disaster.

Two boys were undergoing cellular treatment for absconding, or attempting to abscond. A properly constructed penal division is an urgent want. Boys should not be sent to gaol for misconduct in the Reformatory. At present one of the two boys referred to has just served four weeks in Parramatta Gaol for absconding from Brush Farm. He is now back in the institution. Much better for all concerned if he could have been dealt with at Brush Farm. I think all institutions of a reformatory kind should be able to deal in a punitive way with offences, other than by calling in the aid of the prison authorities. The present enclosed playground might easily be converted into the probationary division at little cost; the unenclosed playground, with a shelter-shed, would be ample for out-door recreation.

After work the boys assembled in the playing fields, and thoroughly enjoyed playing in various games. After tea short prayers were read. Then from 6:45 to 8 the boys divided into four groups. One lot played and otherwise amused themselves about the front of the Superintendent's quarters; another lot amused themselves, under the supervision of Mrs. Murray, with draughts, dominoes, and so forth; a third quietly read in the library, which contains a fair collection of books and a large assortment of papers, such as the *Graphic*, *Sydney Mail*, *London News*, &c.; while a fourth party, twenty-eight in number, assembled in the Superintendent's quarters, where Captain Murray, after comfortably seating them in chairs around him, read a book to them. I saw with great gratification this part of the daily routine. One intelligent young lad told me the same thing went on every night. He said that they all liked the Captain and his wife, and that the boys who gave them trouble ought to be ashamed of themselves. There can be no doubt about Captain Murray's special fitness for dealing with boys. He likes them and they like him. Few people would get so much good out of the material he has to work upon as he does. At present he is somewhat unstrung by the constant strain, but the remedial measures herein proposed would largely smooth away existing difficulties.

The other officers appeared quiet well-disposed men. Their hours are somewhat long, and their pay (£5 monthly clear of deductions) is somewhat low. The Superintendent gave them all good characters, with one exception, the farm overseer (Tuck), who is stated to be averse to doing anything outside his special duties. In rearranging the staff every officer should be engaged on the distinct understanding that he assists in the general supervision of the boys outside his special duties.

I have not thought it necessary to enter into the principles underlying the methods pursued at Brush Farm. There is no mark system, and there are no rules specially in operation. Nowhere did I see a code of regulations exhibited for the guidance of officers or boys. The Superintendent explained that, as the institution is of comparatively recent establishment, it has been deemed expedient to allow of some further experience being gained before framing permanent rules. I think though it would be advisable to draw out a workable code of rules and regulations, and to have them approved by the Governor-in-Council, as laid down in section 3 of the Act. Complications may possibly arise in the future, and the absence of authorised and clearly laid down rules may prove a great source of inconvenience.

FREDK. W. NEITENSTEIN,
Comptroller-General of Prisons.

The Under Secretary of Public Instruction, &c.

Appendix A.

ROUTINE of daily duties at Brush Farm, with the Rules now in force.

Boys are turned out at 5:30 a.m. in summer, and 6:30 a.m. in winter.
The boys muster from the several dormitories, and wash themselves thoroughly, under the eye of attendants.
Stable and cow boys, washhouse, messroom, and kitchen boys go to their work at once. About 6:45 (in summer) a party of about twenty-five boys go to work in the orchard for an hour (weather permitting), gather fruit, &c., and the boys making jam begin their work for the day. (N.B.—Jam is made all through the year.)
General cleaning up of garden and grounds, yards, closets, &c., is done at this time.
7:50—Bugle sounds "Fall-in," and all boys are mustered, inspected, and go to breakfast at 8 a.m.
Between 7 and 8 a.m. all sick boys are attended to by Mrs. Murray.
Superintendent examines the whole establishment about 6 a.m. daily.
After breakfast—Boys are sent to their various occupations, trades, jam-making, orchard work, &c., for the day.
Boys for school (thirty) at 9 a.m.
At noon, bell rings for "Knock-off."
Boys muster, wash, and go into dinner at half-past 12.
1 to 1:30, boys play and amuse themselves. 1:30, afternoon school begins. Boys who have been in school in the morning go to work in the afternoon, and *vice versa*. Some boys who are very backward, and whose time in the Reformatory is short, are at school all day. Bell rings for "Knock-off" at 4:30 p.m. Bugle sounds for muster and tea at 5 p.m. At 5:30 boys are taken to the playing-field.
6:45 (in summer) boys muster for prayers.
At 7 p.m. the whole number is divided into four squads. One party in the library for reading; another in messroom playing games, in charge of Matron; about twenty in reading-room, with Superintendent; remainder with attendant on duty in exercise yard.
At 8 p.m. bugle sounds "Last Post," and all to bed.

Dormitories.

No. 1. Senior boys in open room, with an inner room in their charge.
No. 2. Over workshops; senior boy in charge.
No. 3. Over messroom; in charge of a trustworthy man.
No. 4. At the Home; one of the attendants sleeps there—with a respectable woman in charge during the day (¼ mile from headquarters).
No. 5. Hospital; in Superintendent's house.
At 8:30 reports are made, and night watchman takes duty until the morning, visiting all parts from time to time during the night.
Clothes are changed twice a week, and more frequently when necessary.
On Saturday, boys are bathed, have hair cut, &c.
Music lessons and drilling.
Play all the afternoon. Twelve boys are sent to Newington to swim.
On Sunday, after usual cleaning up, all boys put on clean clothes—uniform.
Breakfast is slightly different on Sunday—smoked fish or eggs for breakfast.
At 8:45, parade for inspection by Superintendent.
At 9 a.m., Protestant boys have Sunday School in Library by Superintendent, and elder boys take junior classes. Catholic boys have catechism at same time. At 11 a.m. service is held for Roman Catholics by Father Power, excepting on second Sunday of the month, when all boys are marched down to chapel at Erimington.
Protestant boys are taken for a walk on Sunday forenoon; Catholics at 2 p.m., if convenient, in charge of an attendant.
There is Church Service for Protestants every Sunday afternoon at 2:30, by Rev. H. Britten, Incumbent of Ryde Parish Church, on alternate Sundays, and Superintendent at other times.
Boys walk about in playing-field after tea, and write letters.
Visitors are allowed on Sunday afternoon.
Reading in the evening as usual.

Appendix C.

Name.	Situation.	Rate of pay.	Name.	Situation.	Rate of pay.
1ST DIVISION.					
Captain J. S. Murray ...	Superintendent ...	£210, less £120 for quarters.	James Shirden	Orchardist	£104.
Mrs. Murray	Matron	£100.	Albert Tuck	Farin overseer	£100, less £45.
Mr. Chopin	Schoolmaster	Paid by Public Instruction Department.	Fred Endall	Foreman carpenter	7s. 2d. per day.
Edward Bowcher	Attendant	£100, less £45.	Kate Critchley	Superintendent's servant ..	2s. ,,
A. T. Gidley	"	£100, less £40.	Robert Colquhoun	Clerk	£110, less £45.
James Watson	"	£100, less £40.	Frederick Poole	Joiner	Will join next week ; 7s. 2d. per day.
2ND DIVISION.					
Men—			Women (<i>continual</i>)—		
James Daily*	Shoemaker	£2 per month.	Mary A. Giffen* ...	Wardrobe woman ..	6d. per day.
George Jackson°	Tinsmith	1s. per day.	Cath. Cowie°	Milkwoman	6d. ,,
Phillip Schiller*	Painter	8d. ,,	Jane Thompson° ..	Wardswoman	3d. ,,
Samuel Fisher°	Night watchman ..	1s. ,,	Boys earning pay—		
William White°	Wardsman	6d. ,,	John Sinnott	Shoemaker	2s. 6d. bonus. (monthly).
James Keddie°	Ploughman	6d. ,,	Sydney Deacon	"	"
William McCarthy* ..	Labourer	3d. ,,	Samuel West	Coachman	"
Arch Campbell*	Wardsman	3d. ,,	Claude Skinner	Tailor	1s. 6d. bonus.
Women—			Alexander Halling ..	Driver	2s. 6d. ,,
Anne McMullen*	Machinist	1s. ,,	Robert Johnson	Laundry boy	2s. ,,
Rebecca Pankhurst* ..	Needlewoman	6d. ,,	Alfred Windon	Assistant night-watchman and tinsmith.	6d. per day.
Annie Brice°	"	4d. ,,	Charles Dixon	Jam maker	2s. 6d. bonus.
Annie O'Shea°	Cook	6d. ,,	George Cooling	Stoker	1s. 6d. ,,
Eliz. Daveran*	"	6d. ,,			
Frances Graham*	"	6d. ,,			
Mary Quinn*	Laundress	9d. ,,			

* Quarters, clothes, rations, fuel, and light.

Submitted.—Mr. Garrard contemplates introducing a Bill to abolish the distinction between Reformatories and Industrial Schools. If this passes, defects in the administration of the Carpenterian and Shaftesbury Reformatories can easily be put right, but in the meantime it is necessary to reduce the attendance at the Carpenterian Reformatory at once. As pointed out by Captain Neitenstein, the accommodation even for about 70 inmates is very unsuitable, but for the present number, 113, it is most insecure. He recommends (page 5 of Report) that about 23 of the most troublesome be transferred to the "Sobraon," and that 11 of the good-conduct boys be discharged. In the mode of transfer suggested there may be a slight infringement of the spirit of the "Reformatory Schools Act," but transfers have been made before in this manner, and at present there appears to be no other way of reducing the number at the Reformatory.—J.C.M., 17/3/97.

Captain Neitenstein's proposal may be carried out.—J.H.Y., 19/3/97.

1897.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

COAST HOSPITAL, LITTLE BAY.

(REPORT FOR 1895.)

Printed under No. 25 Report from Printing Committee, 8 December, 1897.

The Chief Medical Officer of the Government to The Principal Under Secretary.

Sir,

Sydney, 25th November, 1897.

I have the honour to submit, for the information of the Chief Secretary, the Annual Report on the working of the Coast Hospital at Little Bay for the year 1895, with appendices containing the usual returns.

The following general statement shows the number of patients under treatment during the year, with results :—

Remaining in hospital on 31st December, 1894	...	...	...	...	164
Admitted during the year	...	...	...	...	2,451
Total	...	...	...	...	2,615
Discharged well or convalescent...	...	...	...	...	1,824
" relieved	...	...	...	...	482
" unrelieved	...	...	...	...	52
Died	...	...	...	...	82
Total	...	...	...	...	2,440
Remaining in hospital on 31st December, 1895	...	...	...	...	175
Average number resident daily throughout the year	...	...	...	...	176.3
Mean residence of each patient in days...	...	...	...	...	24.6
Rate of mortality over all cases...	...	...	...	...	3.7

The number of patients admitted during 1895 shows an increase of 393 over the previous year. The average daily number resident throughout the year was 176.3, as against 176.4 for the year 1894, and the residence in hospital of each patient was shortened from 27.6 days in 1894 to 24.6 in 1895. The average rate of mortality was 3.7—slightly lower than that in 1894.

RETURN No. 1.—Showing the channels through which the Patients admitted during the year reached the Hospital.

	Hospital Admission Depot.	Medical Adviser's Office.	Medical Superintendent.	Total
Number of patients.....	1,999	363	89	2,451

From the following returns relating to typhoid fever, it will be seen that 96 cases were admitted, being 47 less than in 1894, and that the mortality from this disease was 6.25 per cent. as against 8.3 per cent. in the preceding year.

RETURN No. 2.—Showing the number of cases of Typhoid Fever, distributed under sex and age, and the death at each age, which were admitted during 1895.
(Average stay in Hospital, 33.2 days; mortality, per cent., 6.2.)

	0-5.		5-10.		10-15.		15-20.		20-30.		30-40.		40-50.		50-60.		60-70.		Total.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.			
Admissions	3	1	10	8	9	4	10	7	21	10	8	2	2	1	...	...	...	...	96
Deaths .....	...	...	1	...	...	...	...	...	3	...	1	...	...	1	...	...	...	...	6

RETURN No. 3.—Showing the number of persons suffering from Typhoid Fever who were removed to the Coast Hospital for treatment from each district during the twelve months ending 31st December, 1895, and the deaths occurring therein during the same period.

District.	Admissions.	Deaths.	District.	Admissions.	Deaths.
METROPOLIS—			SUBURBS— <i>continued.</i>		
Sydney.....	22	1	Randwick	3	.....
SUBURBS—			Eastern { Waverley	2	.....
North- { Balmain	8	.....	{ Woollahra	1	.....
Western { Glebe	1	.....	Western { Petersham	3	.....
{ Leichhardt	5	1	and { Five Dock	2	.....
{ Erskineville.....	9	.....	Southern. { Ryde	1	.....
West { Newtown.....	8	2	{ Parramatta	1	.....
Central. { St. Peter's	2	.....	Manly	1	.....
{ Camperdown	2	1	Not fixed address	3	.....
{ Alexandria	8	.....		
East { Botany	5	1	Total	96	6
Central. { Botany, North	2	.....		
{ Redfern	5	.....		
{ Waterloo	2	.....		

Return No. 4 deals with infectious cases admitted during the year, showing the form of disease, and the localities from which the cases were received. 60 cases of scarlet fever were admitted, with no fatal cases, as against 118 cases and 9 deaths in 1894. Only 1 case of measles was admitted, as against 7 in the previous year. There were 45 cases of diphtheria with 1 death, and 5 cases of erysipelas, none proving fatal.

RETURN No. 4.—Showing localities, whence and how many cases of Infectious Fevers, &c., were admitted in 1895.

Locality.	Scarlet Fever.		Diphtheria.		Measles.		Erysipelas.		Whooping-cough.		Chicken-pox.	
	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.
Sydney	11	...	2	...	1	...	14	...	19	1	6	...
Glebe	14	...	38	...	...	...	4	...	1	...	...	...
Camperdown	2	...	...	...	...	...	9	...	...	...	...	...
Marrickville	10	...	...	...	...	...	1	...	...	...	...	...
Paddington.....	3	...	...	...	...	...	2	...	2	...	...	...
Randwick	5	...	...	...	...	...	1	...	...	...	...	...
Waverley	5	...	...	...	...	...	1	...	...	...	...	...
Not fixed address .....	...	...	...	...	...	...	4	...	1	...	1	...
Woollahra	1	...	1	...	...	...	2	...	1	...	...	...
Newtown	1	...	...	...	...	...	1	...	...	...	2	...
North Sydney	2	...	...	...	...	...	1	...	...	...	...	...
Petersham	1	...	...	...	...	...	2	...	...	...	...	...
Redfern .....	...	...	...	...	...	...	2	...	...	...	1	...
Balmain	1	...	1	...	...	...	...	...	...	...	...	...
Botany .....	...	...	1	1	...	...	...	...	...	...	...	...
Erskineville .....	...	...	1	...	...	...	1	...	...	...	...	...
Darlington	2	...	...	...	...	...	...	...	...	...	...	...
Leichhardt .....	...	...	...	...	...	...	2	...	...	...	...	...
Waterloo.....	...	...	1	...	...	...	1	...	...	...	...	...
Alexandria .....	...	...	...	...	...	...	...	1	...	...	...	...
Annandale .....	...	...	...	...	...	...	1	...	...	...	...	...
Auburn .....	...	...	...	...	...	...	1	...	...	...	...	...
Burwood	1	...	...	...	...	...	...	...	...	...	...	...
Granville .....	...	...	...	...	...	...	1	...	...	...	...	...
North Botany	1	...	...	...	...	...	...	...	...	...	...	...
Total	60	...	45	1	1	...	51	...	25	1	10	...
Mortality	0.00 %	...	2.2 %	...	0.00 %	...	0.00 %	...	4 %	...	0.00 %	...

RETURN No. 5.—Showing the general cases, distributed under sex and age, and the deaths at each age during the year 1895.

(Average stay in hospital, 23.4 days; mortality, per cent., 3.3.)

	0-5.		6-10.		10-15.		15-20.		20-30.		30-40.		40-50.		50-60.		60-70.		70-80.		80-90.		90-100.		Total.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Admissions..	28	18	14	12	17	25	60	79	374	218	383	154	316	98	183	65	66	27	14	10	2	...	...	2,163	
Deaths	4	...	...	...	...	2	2	...	7	5	5	3	15	1	8	6	3	4	3	2	...	2	...	...	72

APPENDIX A.

RETURN of the Number of Persons under Treatment, the Order of Disease for which they were treated, and the Number of Deaths in each Order during the year 1895.

COAST HOSPITAL.	Discharged during the Year.				Remaining in on 31st December, 1895.	Total.	COAST HOSPITAL.	Discharged during the Year.				Remaining in on 31st December, 1895.	Total.
	Cured.	Relieved.	Unrelieved.	Died.				Cured.	Relieved.	Unrelieved.	Died.		
CLASS 1.—SPECIFIC FEBRILE OR ZYMOTIC DISEASES.						CLASS 6.—LOCAL DISEASES—continued.							
<i>Order 1.—Miasmatic Diseases.</i>						<i>Order 4.—Diseases of the Respiratory System.</i>							
Chicken Pox	10				10	Laryngitis	1			1	1	3	
Measles	1				1	Croup	1					1	
Scarlet Fever	53				7	Other Diseases of Larynx and Trachea	5					5	
Relapsing Fever	1				1	Asthma, Emphysema	1	10		1	1	13	
Influenza	26				26	Bronchitis	71	15	2	2	6	96	
Whooping Cough	24			1	25	Pneumonia	25			6	1	32	
Diphtheria	49			1	45	Pleurisy	16	3			3	22	
Typhoid, Enteric Fever	79			6	11	Phthisis Pulmonalis	55	12	9	5		81	
Febricula	12				12	<i>Order 5.—Diseases of the Digestive System.</i>							
Beriberi	1	5		2	3	Stomatitis	1					1	
Leprosy	1	2			3	Sore Throat, Quinsy	18	1				19	
<i>Order 2.—Diarrhœal Diseases.</i>						Dyspepsia	2					2	
Diarrhœa	19			1	4	Hæmatemesis	1					1	
Dysentery	1	1		1	3	Gastritis	18	3				21	
<i>Order 3.—Malarial Diseases.</i>						Other diseases of Stomach	1					1	
Intermittent Fever (Ague)	17				17	Ulceration of Intestine				1		1	
<i>Order 4.—Septic Diseases.</i>						Fistula	11	4	1		2	18	
Erysipelas	41				10	Piles	6	1	3		2	12	
Pyæmia, Septicæmia				3	3	Peritonitis				1		1	
<i>Order 6.—Venereal Diseases.</i>						Ascites	1					1	
Syphilis	141	25	1		16	Cirrhosis of Liver		2				2	
Gonorrhœa	147	16			6	Hepatitis	5	4			1	10	
Stricture of Urethra	31	25	1	1	2	Jaundice	2				1	3	
Total, Class 1	644	73	4	16	63	Hydrocele	4					4	
CLASS 2.—PARASITIC DISEASES.						<i>Order 6.—Diseases of the Lymphatic System and Ductless Glands.</i>							
Others from vegetable parasites	1				1	Addison's Disease				1		1	
Total, Class 2	1				1	<i>Order 7.—Disease of Urinary System.</i>							
CLASS 3.—DIETETIC DISEASES.						Nephritis	2	8	1	4	2	17	
Intemperance { a. Chronic Alcoholism	17	1		2	3	Bright's Disease (Nephria)	1	7	1	1		10	
{ b. Delirium Tremens	46	1			47	Calculus		1				1	
{ c. Opium Smoking		2			2	Disease of Bladder	1					1	
Total, Class 3	63	4		2	3	Disease of Prostate			1			1	
CLASS 4.—CONSTITUTIONAL DISEASES.						<i>Order 8.—Disease of the Organs of Generation.</i>							
Rheumatic Fever, Rheumatism of Heart	136	12		2	5	Disease of Uterus and Vagina	23	8			1	32	
Rheumatism, Chronic	16	46	6		11	Disorders of Menstruation	4					4	
Gout	11	13			24	Perineal Abscess	4					4	
Cancer, Malignant Disease	1	4	2	4	1	Diseases of Testes, Penis, Scrotum, &c.	5	1			1	7	
Tubercular Meningitis (Acute Hydrocephalus.)				1	1	<i>Order 9.—Diseases of Parturition.</i>							
Purpura, Hæmorrhagic Diathesis	1	1			2	Abortion, Miscarriage	2					2	
Anæmia Chlorosis, Leucocythæmia	53	15		3	8	Other Accidents of Childbirth	2					2	
Diabetes Mellitus		6			1	<i>Order 10.—Diseases of the Organs of Locomotion.</i>							
Hysteria	4	5	1		10	Caries, Necrosis	16	3			1	20	
Death from Chloroform				1	1	Arthritis, Ostitis, Periostitis	10	1				11	
Total, Class 4	222	102	9	11	26	Morbus Coxæ	1	6	1		4	12	
CLASS 5.—DEVELOPMENTAL DISEASES.						<i>Order 11.—Diseases of the Integumentary System.</i>							
Neuralgia	1				1	Carbuncle	5	1				6	
Other Congenital Defects				1	1	Phlegmon, Cellulitis	14	2				16	
Total Class 5	1			1	2	Ulcer	89	15			5	109	
CLASS 6.—LOCAL DISEASES.						Eczema	23	5			4	32	
<i>Order 1.—Diseases of the Nervous System.</i>						Scabies	16					16	
Inflammation of Brain or its Membranes				3	3	Psoriasis	6	3				9	
Apoplexy		3		3	6	Zerpes Zoster	5	2				7	
Softening of Brain			2		2	Total, Class 6	465	265	35	50	63	878	
Hemiplegia, Brain Paralysis			3		3	CLASS 7.—VIOLENCE.							
Insanity			2		2	Fractures	8	1			1	10	
Chorea	5	1			2	Dislocations	1					1	
Epilepsy		16			16	Cuts, &c.	21	1				22	
Paraplegia, Diseases of Spinal Cord		20	2	1	2	Coutusions	25				1	26	
Peripheral Neuritis	2	1			4	Burns, Scalds	9					9	
<i>Order 2.—Diseases of the Organs of Special Sense.</i>						Sprains	19	7			2	28	
Diseases of the Eye	21	6			3	Bursitis	9	2				11	
<i>Order 3.—Diseases of the Circulatory System.</i>						Suicide				1		1	
Valvular Disease		38	3	6	5	Total, Class 7	92	11		1	4	108	
Hypertrophy of the Heart		11			11	CLASS 8.—ILL-DEFINED AND NOT-SPECIFIED CAUSES.							
Angina Pectoris				1	1	Debility, Atrophy, Inanition	87	22	2		8	119	
Aneurism				2	1	Mortification	1			1		2	
Senile Gangrene				1	2	Tumour	7				1	8	
Varicose Veins	19	6			4	Abscess	42	3	1		5	51	
Senile Decay			1	6	4	Not Specified	199	2	1		2	204	
Total, Class 8						Total, Class 8	336	27	4	1	16	384	

SUMMARY.

	Discharged during the Year.				Remaining in on 31 December, 1895.	Total.
	Cured.	Relieved.	Unrelieved.	Died.		
Total, Class 1.—Specific, Febrile, or Zymotic Diseases	644	73	4	16	63	800
" 2.—Parasitic Diseases	1					1
" 3.—Dietetic Diseases	63	4		2	3	72
" 4.—Constitutional Diseases	222	102	9	11	26	370
" 5.—Developmental Diseases	1			1		2
" 6.—Local Diseases	465	265	35	50	63	878
" 7.—Violence	92	11		1	4	108
" 8.—Ill-defined and not-specified causes	336	27	4	1	16	384
Grand Total...	1,824	482	52	82	175	2,615

APPENDIX B.

SHOWING the names, &c., of all Patients who died at the Coast Hospital during the year 1895.

No	Name	Date of Admission.	How admitted.	Age.	Disease.	Complications.	Date of Death.	No. of days in Hospital.	Cemetery No
2066	Elizabeth Rogan	1894. 14 Dec.	Med. Adv.	yrs. 90	Senile decay		1895. 2 Jan.	19	Removed.
6	Harriet Lord	1895. 2 Jan.	"	40	Enteric fever	Peritonitis	8 "	6	661
61	Minnie Parker	10 "	"	14	Acute rheumatism	Ulcerative endocarditis.	13 "	3	Removed.
10	Edwin Walker	3 " 1894.	H. Ad. Dept.	48	Membranous tracheitis and laryngitis.	Asthenia	15 "	12	662
2144	Patrick Dunn	28 Dec. 1895.	"	48	Self inflicted wound of throat.	Hæmorrhage	16 "	19	663
118	Alice Vickery	19 Jan.	Med. Supt.	4	Diphtheria		23 "	4	Removed.
144	Mary Gallagher	23 "	Med. Adv.	12	Acute peritonitis		27 "	4	Removed.
248	Archie Murray	7 Feb.	"	38	Abscess of liver	Phthisis	7 Feb.	4 hours	664
227	James Lacey	5 "	H. Ad. Dept.	44	Pneumonia		9 "	4	665
221	Robert King	4 "	Med. Adv.	37	Enteric fever	Intestinal hæmorrhage.	9 "	5	666
116	William McNulty	19 Jan.	H. Ad. Dept.	42	Endocarditis	Syncope	19 "	31	667
43	Thomas Preston	8 "	"	40	Cerebral meningitis.		20 "	43	668
289	Thomas Young	13 Feb.	Med. Adv.	29	Enteric fever		21 "	8	Removed.
237	George Phillips	6 "	H. Ad. Dept.	29	Suppurating inguinal and femoral glands.	Septicæmia	21 "	15	669
174	Walter Thomas Wilson	29 Jan.	"	wks. 7	Chronic diarrhoea	Asthenia	22 "	24	670
279	Thomas Blain	12 Feb.	"	47	Atheroma of aorta	General anasarca.	23 "	11	671
242	William James Cowley	6 "	Med. Adv.	27	Gangrene of lung		25 "	19	672
261	Johanna Shivel	8 "	"	56	Cerebral hæmorrhage		3 March.	23	Removed.
433	Catherine Payne	8 March.	H. Ad. Dept.	28	Chronic alcoholism	Serous apoplexy	17 "	9	673
421	Caroline Henderson	6 "	Med. Adv.	62	Fatty degeneration of heart.	Syncope	18 "	12	Removed.
447	Sydney Rolfe	9 "	Med. Supt.	6½	Enteric fever	Perforation and acute peritonitis.	20 "	11	Removed.
268	Elizabeth Richards	11 Feb.	H. Ad. Dept.	33	Chronic alcoholism.	Fatty disease of heart and pulmonary collapse.	24 "	41	674
398	Aaron Masters	4 March.	"	57	Chronic Bright's disease.	Cystitis	27 "	23	Removed.
605	John Martin	1 April	"	54	Fatty heart	Syncope	3 April	2	675
696	Herbert Filby	16 "	"	12	Pertussis	Pneumonia	17 "	14 hours	676
684	Frederick Abbott	11 "	Med. Adv.	28	Enteric fever	Fatty disease of heart.	20 "	9	Removed.
725	John Campbell	18 "	H. Ad. Dept.	42	Phthisis		11 May	23	677
911	John Smith	19 May	Med. Adv.	41	Unknown	Pyæmia	20 "	23 hours	Removed.
631	Thomas Kettle	4 April	H. Ad. Dept.	37	General tuberculosis	Asthenia	1 June	58	679
988	Mary Loosemore	29 May	Med. Adv.	60	Fatty disease of heart	Cirrhosis of liver.	1 "	3	Removed.
781	Frederick William Sassen.	25 April	"	53	Cardiac hypertrophy	General anasarca and asthenia.	2 "	38	678
947	George Score	25 May	H. Ad. Dept.	43	Aneurism of aorta	Hæmorrhage	2 "	8	680
1052	Mary McCallum	6 June	Med. Adv.	21	Septicæmia	Pneumonia	8 June	2	Removed.
1050	Jane Morgan	6 "	"	70	Senile decay	Bronchitis	8 "	2	681
663	Antoni Quinginet	8 April	H. Ad. Dept.	55	Cirrhosis of kidney	Asthenia	10 "	63	Removed.
984	John Foster	29 May	"	21	Heart disease	Syncope	13 "	15	"
1058	Toy Hmg	8 June	Med. Adv.	35	Beriberi		14 "	6	"
786	Nicholas Shelford	26 April	"	61	Sarcoma	Syncope	30 "	65	682
1157	William Egan	25 June	H. Ad. Dept.	19	Lenkarmia	Asthenia and pulmonary collapse.	1 July	6	Removed.
1102	George Wilson	17 "	"	48	Pneumonia	Asthenia	3 "	16	683
1224	Lauc Wilson	3 July	Med. Adv.	76	Senile decay	Anasarca	7 "	4	Removed.
1094	Harriet Peirson	14 June	"	43	Diabetes	Asthenia	12 "	28	684
1218	Annie Harris	2 July	"	25	Anæmia	Asthenia and pulmonary collapse.	12 "	10	Removed.

No.	Name.	Date of Admission.	How admitted.	Age.	Disease.	Complications.	Date of Death.	No. of days in Hospital.	Cemetery No.
		1895.		yrs.			1895.		
1300	Joseph Ross	15 July	H. Ad. Dept.	55	Asthma	Asthonia	17 July	2	685
451	Mary Dillon	11 Mar.	"	23	Pernicious anaemia	"	23 "	134	686
1347	Mary Gardiner	23 July	Med. Adv.	22	Pneumonia	Apoplexy	27 "	4	Removed.
1407	Mary Ann Cassidy	1 Aug.	"	85	Senile decay	Anasarca	4 Aug.	3	687
1402	Charles Oldham or Newton.	1 "	H. Ad. Dept.	71	Chronic valvular disease.	Peritonitis and pleurisy.	5 "	4	Removed.
1226	William Simms	3 July	Med. Adv.	14	Broncho-pneumonia	Asthonia	7 "	35	688
1386	Francis Simpson	30 "	H. Ad. Dept.	76	Senile decay	Syncope	10 "	11	689
1316	Cut Lie	18 "	"	39	Berberi	Anasarca and asphyxia.	19 "	32	690
1464	Mary Anderson	10 Aug.	Med. Adv.	53	Meningitis	Asthonia	22 "	12	Removed.
1474	Elsie Gray	13 "	H. Ad. Dept.	31	Phthisis	Tubercular meningitis.	23 "	10	"
1548	Mary Harnett	23 "	Med. Adv.	54	Chronic nephritis	Asthonia and gangrene of leg.	29 "	6	691
1564	Henry Dovitt	26 "	H. Ad. Dept.	25	Pneumonia	Pleurisy	30 "	4	692
1468	Harry Keylor	12 "	"	36	Thoracic aneurism	Hæmorrhage	2 Sept.	21	693
1648	Thomas Deane	6 Sept.	Med. Adv.	50	Stricture	Extravasation of urine.	9 "	3	694
1647	Hannah Murphy	6 "	"	66	Asthonia	Fatty disease of heart.	11 "	5	Removed.
1602	Richard Lawrence	31 Aug.	H. Ad. Dept.	47	Pyo-nephrosis	Asthonia	13 "	13	695
1690	Charles Ford	12 Sept.	"	65	Pneumonia	Syncope	16 "	4	696
1726	James Lacey	17 "	"	37	Pneumonia	"	19 "	2	697
1734	James O'Connor	18 "	"	25	Administration of chloroform.	Asphyxia	19 "	1	Removed by Police.
1712	Louisa Pedley	15 "	Med. Supt.	51	Acute rheumatism	Pleurisy	23 "	8	Removed.
1628	David Turner	3 "	H. Ad. Dept.	56	Spinal disease	Asthonia	26 "	23	698
1787	Dennis Kelly	26 Sept.	H. Ad. Dept.	45	Perforation of in- testines.	Peritonitis	26 Sept.	9 hours	699
1747	William Butler	19 "	"	46	Phthisis	Asthonia	29 "	10	700
1884	John Ramage	10 Oct.	"	29	"	Acute tubercu- losis and serous apoplexy.	15 Oct.	5	701
1813	James Cornford	30 Sept.	Med. Adv.	19	"	Asphyxia	16 "	16	702
1939	Henry Rousell	17 Oct.	H. Ad. Dept.	56	Acute pharyngitis and bronchitis.	Cardiac failure.	20 "	3	Removed.
1010	John Candy	31 May	"	42	Tuberculosis of lungs	Tuberculosis of intestines.	25 "	147	703
1542	Margaret Long	23 Aug.	"	59	Cancer of stomach	Asthonia	30 "	68	704
1713	Ellen Spear	16 Sept.	"	60	Apoplexy	Coma	30 "	44	705
1908	Gladys McMullin	14 Oct.	"	10 mths	Marasmus	Asthonia	31 "	17	706
1827	Timothy O'Rourke*	2 "	"	71	Senile decay	Pleurisy	9 Nov.	38	707
2048	Thomas Wilkinson	3 Nov.	Med. Supt.	63	Acute alcoholism	Pneumonia	10 "	7	Removed.
1942	Florinda Shannon or Howland	17 Oct.	H. Ad. Dept.	50 mths	Malignant disease of spleen.	Asthonia	12 "	26	708
1985	John Brown	24 "	"	4	Chronic diarrhoea	"	15 "	22	709
2117	Charles Downey	13 Nov.	Med. Adv.	27	Chronic general tu- berculosis.	"	16 "	3	710
2162	Edward Crowne	18 "	"	28	Enteric fever	Peritonitis	25 "	7	Removed.
2237	Henry Baine	28 "	H. Ad. Dept.	54	Chronic nephritis	Apoplexy	29 "	12 hours	711
2224	Stanley Buckingham	26 "	Med. Supt.	33	Tubercular meningitis	"	8 Dec.	12	Removed.
2201	Benjamin Fallon	22 "	"	47	Cerebral tumour	Asthonia	12 "	20	"

* This patient was also suffering from tubercular leprosy.

1897.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

MUDGEE HOSPITAL.

(REPORT OF THE ROYAL COMMISSION APPOINTED TO INQUIRE INTO CHARGES PREFERRED AGAINST THE MEDICAL ATTENDANT AND MATRON OF, IN CONNECTION WITH THE TREATMENT OF MARY BEATTIE, NOW DECEASED.)

Presented to Parliament by Command.

Printed under No. 18 Report from Printing Committee, 7 October, 1897.

REPORT.

To His Excellency Henry Robert, Viscount Hampden, Governor and Commander-in-Chief of the Colony of New South Wales and its Dependencies.

MAY IT PLEASE YOUR EXCELLENCY:—

In accordance with Your Excellency's commands, conveyed to me by letters patent, dated the 3rd day of September, 1897, I have made a diligent and full inquiry into all charges that have been preferred against Dr. Harvey Nickoll, Medical Attendant, and Miss Ethel McEwen, Matron of the Mudgee Hospital, in the Colony of New South Wales, in connection with the treatment in, and the discharge from, such institution of one Mary Beattie (since deceased).

The inquiry, open to the public, was commenced at the Court-house, Mudgee, on Tuesday, the 21st day of September instant, and concluded on Thursday, the 23rd instant.

Mr. Gannon, barrister-at-law, appeared on behalf of Miss McEwen. Mr. Thompson, of Bathurst, and Mr. Mccares, of Mudgee, solicitors of the Supreme Court, represented the relatives of the deceased and Dr. Nickoll respectively.

Representatives of the Press were permitted to record the proceedings.

Thirty witnesses, as hereinafter detailed, were examined, viz. :—

William Trafford	...	...	Pipeclay	...	...	Labourer.
William Beattie	...	...	do	...	...	Miner.
Ada Sparrow...	...	...	Mudgee	...	...	Domestic servant.
Esther Kurtz	...	...	Pipeclay	...	...	Widow.
Ethel McEwen	...	...	Mudgee	...	...	Matron, Mudgee Hospital.
Harvey Nickoll	...	...	do	...	...	Duly-qualified medical practitioner.
Robert Beith...	...	...	do	...	do	do
Charles Edward Lester	...	...	do	...	do	do
Sarah Jane Salsbury	...	...	do	...	...	Nurse and midwife.
Thos. Robt. Curnew Campbell	...	...	do	...	...	Archdeacon of the Anglican Church.
Frederick John Bird	...	...	do	...	...	Storekeeper.
George Stewart	...	...	do	...	...	Member of the Hospital Committee.
Rose Lyons	...	...	do	...	...	Assistant at Hospital, June last.
Joseph Milton Cox	...	...	do	...	...	Secretary of the Hospital.
Kate Anderson	...	...	do	...	...	Nurse at the Hospital.
Flora Day	...	...	do	...	...	Married woman.
John Rice	...	...	Abbotsford	...	...	Miner.

Thomas Sheridan	Mudgee	Maintenance man.
Henry Edw. Alex. Wells	do	Agent.
Sarah Rowell	do	Member of the Salvation Army.
Charles D. Meares	do	Solicitor.
James Harvey	do	Sergeant of Police.
Fred. Wm. Dolman	do	Constable of Police.
John Cotter	do	Gaoler.
Walter Sherry	do	Member of the Hospital Committee.
Richard Squibb	do	Wardsman of the Hospital.
Edwin Richards	do	Editor of the <i>Mudgee Guardian</i> .
William Joseph Cohen	do	Proprietor of a boot factory.
Mary Ann Daly	do	Married woman.
George Hazeltine	do	Blacksmith.

The following is the outline of the subject:—On the 18th June last, one Mary Beattie, married woman, aged about 36 years, was admitted to the Mudgee Hospital, suffering from diarrhoea, where she remained until the 1st July, when her stepfather, William Trafford, called for and drove her (Mary Beattie) in a spring-cart to the residence of her husband at Pipeclay, a distance of about 5 miles from Mudgee. Mary Beattie suffering considerably on the road home, gradually became worse, and died the same evening about 9 o'clock p.m.

A Coroner's inquest was held on the 3rd July, and the Jury found "That the said Mary Beattie, at Pipeclay, near Mudgee, in the said Colony, on the 1st day of July, 1897, died from collapse due to hemorrhage attending premature labour, which was brought about by getting into and journeying in a spring-cart a distance of about 6 miles upon the same day, and which journey was undertaken a short time after recovery from an attack of diarrhoea." *Rider*:—"We suggest that it would be to the interests of all concerned for patients, especially in the condition of the deceased, to be thoroughly examined immediately prior to their discharge from the Hospital."

In view of the evidence given by witnesses William Trafford and William Beattie, supplemented by representations made to the Government by certain residents of Mudgee, it was deemed expedient to hold an inquiry; hence the Royal Commission.

TREATMENT IN HOSPITAL.

Allegations in connection with the treatment in the Hospital are confined to statements said by Trafford and Beattie to have been made to them by deceased.

William Trafford, in his evidence, states that when he saw the deceased at the Hospital on the 26th June, she said: "If I got out of bed I could not stand. I have the same pains as when I came in. I have told the doctor; but he doesn't take any notice of what I say."

When Trafford, Beattie, and the deceased were going home to Pipeclay, on the 1st July, the deceased is alleged to have stated, "I am bad, and worse than when I went into the Hospital. They have turned me out of the hospital to die. If you (Beattie) don't get some work very soon my children will starve. I have to leave all my poor children behind. The doctor never sounded or examined me when in the Hospital. The matron called me dirty names. The matron made me get out of bed to go to a closet covered with zinc, and when I sat on it it made me shiver. The matron treated me badly. I asked for a hot bath, and she told me I would have to go home and get one; that anything was good enough for me. The doctor ordered me medicine, but I did not get it at the proper times. I could not get a drink at all, except from one of the patients, Ada Sparrow. I said to the matron, 'I want to go to the closet,' and she complained that I was a regular nuisance; I had to go on my hands and knees to it. The matron pulled the clothes off me while I was in bed. I was at the hospital a day and a half before I saw the doctor."

Ethel McEwen, the matron, deposes as to deceased coming to the Hospital in a very weak state on the 18th June; that Dr. Nickoll saw her about two hours after admission and next day examined her with a stethoscope, and ordered her a different medicine to that which she had been taking; that the deceased never complained of pains in her back; that her temperature was taken several times, and was always normal.

Neglect and inattention are denied absolutely, as also are the allegations of ill-treatment said to have been made by deceased.

Dr.

Dr. Harvey Nickoll states that he knew all about the deceased from the Benevolent Society, Mudgec, and had prescribed for her prior to her admission to the Hospital on the 18th June; that he examined her very carefully on the 18th, also on the 19th June, finding no temperature, and subsequently found, on examination, that she had a slight mitral murmur; that he saw the deceased daily, except on the 27th June, and visited the Hospital after she had left, on 1st July; that deceased suffered from ordinary and not inflammatory or acute diarrhoea, and was prescribed for accordingly; that the diarrhoea was cured, and she had to be treated for constipation; that deceased never complained of her treatment, except as to being refused hot tea, which he objected to; and that on the 28th June deceased appeared fit to leave the hospital.

Ada Sparrow, a patient in ward with deceased for nine days, never heard her complain of her treatment in Hospital, although they conversed together daily. She says that the Matron and nurse were always kind to deceased, who had no cause for complaint, as she got what she wanted. Witness spoke in grateful terms of her own stay at the Hospital, praising the staff generally.

Sarah Jane Salsbury, nurse and midwife, states that she had a prescription from Dr. Nickoll for deceased on the morning of the 18th June; that she visited the Hospital on the 22nd June, but that deceased made no complaint as to her treatment except being refused hot tea.

Rose Lyons, assistant at the Hospital, states deceased had no necessity to get out of bed when suffering from diarrhoea, as pans were at the bedside. Deceased was suffering from constipation after diarrhoea was cured. When she commenced to get up she always dressed herself without assistance, and used to sit about the verandah, and appeared to improve daily. At no time did the deceased ever complain to me of her treatment in the Hospital, and I saw more of her than anyone else. Patients never had occasion to go out to the closets in the yard instead of being attended to in the wards. The diarrhoea lasted for three or four days, after which she suffered from constipation. She never complained to me of diarrhoea after the first three or four days.

Flora Day, a patient in the Hospital till the 22nd June, states:—Deceased was treated by Dr. Nickoll about two hours after her admission. Never saw her get out of bed to go to the closet; there was no necessity to do so. Deceased used to get out of bed against the Matron's orders; heard the Matron scold her for doing so. The officials treated me and the others in the same manner, and were very kind.

Sarah Rowell, a member of the Salvation Army, "saw deceased four times at the Hospital; our conversations were about herself and her health. She never complained of her treatment or pains."

DISCHARGE FROM HOSPITAL.

William Trafford states:—About 1 p.m., on 1st July, I went to Hospital in pursuance of letter from the Matron (*Exhibit "A"*); the deceased came down stairs and walked towards the cart; I ran towards her, as she seemed ready to drop. I put my hands round deceased and put her foot on the step of the cart when helping her to get into it. The Matron and nurse were present, but would not give me any assistance. I placed her on the seat of the cart, and she said, "Father, I believe I am dying." Before getting into the cart I stooped down to tie deceased's bootlaces, and something like blood and slime fell on my hand. I saw another drop fall on my hand. Ada Sparrow was on the balcony and a nurse on the verandah, and I believe I saw the Matron in the corridor. Deceased seemed to be tottering as she came out of the Hospital along the corridor to the steps. I looked and thought I saw the Matron and the nurse. I believe I saw the Matron. I cried out to the Matron, "You and the doctor ought to be ashamed of yourselves for turning a woman out of the Hospital in her state." I say I believe I saw the Matron jeering. (At the Coroner's inquest Trafford stated "the Matron stood at the door jeering.")

Later in his examination the witness says: "I did not complain when the Matron brought her from upstairs. Deceased did not say anything to my knowledge about being unfit to leave the Hospital, nor did I say anything about her unfitness to leave in the presence of the Matron. I was not aware that there was anything the matter with the deceased in regard to labour. I cannot say I saw the Matron when I was lifting deceased into the cart. The Matron was not at the door jeering. I don't think the Matron was close enough to hear deceased say, 'Father, I am not fit to leave the Hospital.'" Trafford

Trafford left the Hospital in the cart with deceased, and almost immediately William Beattie (husband of deceased) joined them. They subsequently went to Mr. Bird, Mr. Stewart, and the Venerable Archdeacon Campbell, members of the Hospital Committee, who saw deceased and interviewed Trafford, who does not appear to have made a direct application to them for the readmission of deceased to the Hospital. Trafford did not mention to these gentlemen one word about blood falling on his hand at the Hospital, because "he did not think it important," and the appearance of deceased did not in their opinion necessitate her receiving immediate medical treatment.

Trafford appeared to have a very bitter animus against Dr. Nickoll, and that seemed to control his conduct. Two of the Committee suggested that deceased be conveyed to the Gaol Hospital by Trafford as she was destitute.

Ada Sparrow remembers the Matron coming to the deceased on 1st July, and saying, "Your father is ready to take you away." Deceased appeared unwilling to go, but left the ward with the Matron. Witness then went on to the balcony where she could see the cart and the steps, but could not see anyone or what occurred on the verandah below.

Witness continues: "Deceased, on the steps, said to her father, "I am not able to go"; she seemed in a very weak state; I could not say if Trafford helped the deceased into the cart or not; she appeared to get up quite easy. If Trafford had stooped to tie the laces of deceased's boots I must have seen him, but I did not." Again: "I adhere to the statement that I made before, about the woman getting into the cart without difficulty, being correct; the cart was only within a few yards of me, and I could see all that took place; I never saw Trafford assist her at all; she took hold of the iron railing of the cart with her right hand and helped herself up."

Ethel McEwen, Matron, states:—"I wrote letter (*Exhibit "A"*) to Trafford by direction of Dr. Nickoll. Deceased appeared reluctant to leave the Hospital on account of her coming confinement. I walked downstairs with deceased, but did not put my hand on her as she did not require assistance. I left deceased at the table in the corridor or hall, and did not see Trafford, whom I avoided, and never spoke one word to, because he had previously been rude to me. I went into the sitting-room off hall, and spoke to Nurse Anderson. I did not see deceased get into the cart. I did not see Trafford with deceased leave the Hospital, nor did I hear anything said by them. Deceased never said that she was unable to leave the Hospital that I heard. I told her to be sure and see Mrs. Salsbury before she left town, as I knew Mrs. Salsbury was engaged for her confinement. She was absolutely fit to leave the Hospital."

Dr. Harvey Nickoll states:—"I instructed the Matron to notify the intended discharge of the deceased from Hospital, considering her fit to leave. I knew of arrangements for the confinement of deceased in August, and had promised the Secretary of the Benevolent Society to attend deceased and gave the order with that knowledge. Cases of pregnancy are not admitted at the Hospital except when accompanied by other ailments, when there is sometimes no alternative but to admit them. I knew deceased was pregnant, but I did not know about the arrangements made for her being taken away by Trafford. Getting into the cart and travelling might have accelerated the confinement. If the Committee had sent deceased back to the Hospital she would have been readmitted. I was present when Dr. Lester performed the *post-mortem* examination. In my opinion, death was caused by the separation of the placenta from the uterus. I think there is no connection between the diarrhoea and the labour."

Dr. Robert Beith states:—"I was present at the *post-mortem* examination, and consider that Mrs. Beattie died from shock of premature confinement. The journey in the cart caused the premature confinement, owing to the acceleration of labour. I could not say if deceased had entirely recovered from diarrhoea at the *post-mortem*. I consider that hemorrhage was brought about by miscarriage; shock appeared to be the greatest cause of death."

Dr. Charles Edward Lester states:—"I made a *post-mortem* examination on deceased on 3rd July last. I attribute the cause of death to collapse from hemorrhage and shock."

Sarah Jane Salsbury states:—"I told Trafford on the 18th and 22nd June to bring deceased to my house when she came out of the Hospital, as I had made arrangements for her confinement; and I also told the deceased to be sure and come
to

to me, as I had made arrangements through the Benevolent Society for her confinement, and she replied 'Very well.' (Corroborated by Minute Book of Society, *Exhibit H*). After the death of Mrs. Beattie, Trafford complained to me about the Hospital, and I said, 'Why did you not bring the deceased to me?' Trafford replied, 'I think I must have been mad; I did not know what I was doing.'"

Kate Anderson, nurse, states:—"I saw deceased leave the Hospital on the 1st July. She put one foot on the step of the cart and caught hold of the railing of the cart to help herself up. Trafford could not have assisted deceased into the cart without my seeing him, and I did not. I did not notice Trafford do up deceased's boots. I did not see deceased in the Hospital, as I was in the isolated ward."

Flora Day, patient in the Hospital, states:—"I heard witness Salsbury tell deceased to come to her place when she (deceased) came out of the Hospital."

John Rice, patient in the Hospital, states:—"I saw deceased get into the cart. Trafford did not assist her, except by putting his hand behind her. Deceased looked bad and walked slowly. Trafford did not stoop down to do up boots of deceased. He could not have done so without my seeing him; neither did I see Trafford wipe anything off his hand."

John Cotter, Gaoler, Mudgee, produces a record of criminal convictions of one John Rogers and other *aliases* who is identical with William Trafford.

Richard Squibb, wardsman, states:—"I saw deceased leave the Hospital. She was walking unassisted and easily. Trafford did not help her into the cart. I did not see Trafford bend down as if to do up deceased's boots. I was present on purpose to see if I might be of any assistance."

A great portion of the evidence is hearsay and irrelevant. I deemed it advisable, however, to have recorded any statement that might assist me in coming to a determination in the matter.

Trafford, a most unsatisfactory witness, by reason of his contradictory statements, fencing replies to questions, and demeanour generally, proved himself unworthy of credence in essentials, and I treat his evidence accordingly.

The deceased, eight months pregnant, was, in my opinion, according to the evidence, fit to be discharged from the Hospital, after being cured of diarrhoea, the complaint for which she was admitted and treated.

Leaving the Hospital at 1 o'clock p.m., in a spring-cart, Trafford and Beattie take the unfortunate woman 6 miles on a bush road, portion of it not cleared, to her home at Pipeclay, arriving at 5 o'clock p.m., or later, and at 9 o'clock p.m. death ensues from collapse, due to hemorrhage attending premature labour. (This house, which is only a hovel in the true sense of the word, I personally inspected, travelling over the road referred to in the evidence.)

Had Trafford gone as directed to the residence of Mrs. Salsbury, in Mudgee, with deceased, or had he sought medical advice, as common sense would suggest to most persons, and as Mr. Bird did suggest, it is probable that Mrs. Beattie might not have died. Attributing the symptoms to her late sickness, ignorant of the commencement of labour, and, doubtless, actuated by vindictive feelings towards Dr. Nickoll, the Hospital Medical Officer, he said, "I will take her home at the doctor's risk," and did so, with the fatal result.

The suggestion of the Venerable Archdeacon Campbell and Mr. Stewart, members of the Hospital Committee, to take the unfortunate woman to the gaol was, I feel sure, made with the best intentions, and with the one object of assisting a destitute woman; but a moment's consideration must convince all persons that gaols are for prisoners only, under remand or convicted, and cannot be utilised as benevolent asylums.

I am of opinion that the deceased, when a patient in the Hospital, received necessary attention and care from Dr. Nickoll, the Matron, and other members of the staff, and that the charges are accordingly not substantiated.

The members of the Committee and others examined express every confidence in Dr. Nickoll, as also in the Matron, Miss McEwen, who holds credentials from many of the leading medical practitioners in Sydney.

Given under my hand and seal at Sydney, in the Colony of New South Wales, this 13th day of September, 1897.

MILTON S. LOVE,
Police Magistrate,
Commissioner.

Court-house, Mudgee, 21 September, 1897.

Before Milton Sydney Love, Police Magistrate, Commissioner.

INQUIRY into charges made against Dr. Harvey Nickoll and Ethel McEwen, Matron of the Mudgee Hospital, in connection with the treatment in and discharge from such Institution of one Mary Beattie (since deceased).

Mr. Gannon (barrister-at-law) for Miss McEwen.

Mr. Thompson (solicitor) for the relatives of the deceased.

Mr. Meares (solicitor) for Dr. Nickoll.

Tuesday, 21 September, 1897.—Court sat 11 o'clock a.m.

This deponent, *William Trafford*, on his oath, saith as follows:—I am a labourer, and reside at Pipeclay, near Mudgee.

Mr. Thompson: Marie Beattie was my stepdaughter, and prior to her death was living at Buckaroo, near Mudgee; she was taken to the hospital on the 18th of June; I took her to the hospital from Mrs. Salsbury's place; I got an order from Mr. Willis for admission to the hospital; I saw Miss McEwen at the hospital; I assisted her upstairs as she was in a very weak condition, and the matron would not help her [*statement withdrawn*]; I explained that she was suffering from diarrhoea and violent pains in the back, and I told the doctor that; before we brought her to the hospital she complained of pains as though she were about to be confined; I went to see her on the 26th June; I saw the matron, and said I had come to see Mrs. Beattie; she said she was ready to go out of the hospital, and that I could take her away as soon as I liked; I went upstairs and saw Mrs. Beattie, who was lying in a bed near the fire; she was in a very weak condition; I told her the matron had said she was ready to leave the hospital, and she answered that if she got out of bed she could not stand; she said "I have the same pains as when I came in"; I said, "Why don't you tell the doctor about the pains?" she said, "I have, but he doesn't take any notice of what I say"; I said, "I don't consider you are fit to leave the hospital, and I won't take you out"; I went downstairs and asked the matron if she really meant Mrs. Beattie to leave the hospital; she said, "Yes; she may be a little weak; but if you take her home, she will soon be strong"; I said, "Woman is in a very weak state, and I don't think she is fit to leave the hospital," and I said, "I won't take her out"; she said, "Then she will be put out"; no one was present but myself; I said, "I will report you to the Committee"; she said, "You can report me," and walked away; I then left; on the following Monday I took her two sons in to see their mother; the ages of the boys are 10 and 12, I think; as Neal came away from the hospital the matron came running down from the hospital; I went down to see Mr. Sherry after leaving the hospital; he is one of the Committee; I reported the matter to him; I said, "The matron wants me to take Mrs. Beattie out of the hospital"; I said, "I feel sure she is not fit to leave it"; I said, "I wish you would go up and see her, and ask her how she is"; Pipeclay is 5 miles from Mudgee; Mrs. Beattie came down, and walked towards the cart; I ran towards her, as she seemed ready to drop; she said, "I am not in a fit state to leave the hospital"; Ada Sparrow was on the balcony above where I and deceased were.

Exhibit A.

Commissioner: The matron was in the corridor about 8 or 10 yards away; I stood down to tie deceased's boots, and as I stooped down I felt something fall on my hand; it turned out to be like blood and slime; I put her foot on the step of the cart, and assisted her up as I could; I then saw another drop which fell on my hand; the matron and nurse were present, but would not give me any assistance; I placed her on the seat in the cart; she said, "Father, I believe I am dying"; I said, "Don't talk like that, mother will be home to-morrow, and she will look after you"; when I saw she was so bad, I said, "I have made a mistake in taking you out of the hospital, but I will take you up to the Committee and get you readmitted"; I left the hospital about 1 p.m.; I met the husband near the railway; he said, "You look very bad, my dear," to his wife; she said, "I am bad, and worse than when I went into the hospital"; she said to her husband, "They have turned me out of the hospital to die; if you don't get some work very soon my children will starve"; she said, "I shall have to leave all my poor children behind"; I heard her say to her husband, "The doctor never examined me when in the hospital"; I heard her say that the matron called her dirty names; "the matron made me get out of bed and go to a closet covered with zinc, and when I sat on it, it made me shiver"; I said to her husband, "We will go down and see if we cannot get her back into the hospital"; I said, "This letter I have got tells me to take her home from the hospital"; I said, "The doctor knows that I shall have to take her 5 miles on the road"; I went to see Mr. Bird, one of the Committee; I explained to him the state of the deceased; he said, "I cannot interfere"; I said, "Come out and have a look at her"; he was reluctant, but came out to the cart; I said, "Ask that woman how she feels"; I said, "This is one of the Committee; tell him how you feel"; her husband was present; she said to Mr. Bird, "I am very bad indeed, and am much worse than when I went into the hospital"; he said, "She looks bad"; "Well," I said, "if you can't interfere, I will see Archdeacon Campbell"; I drove round to his place; I said to the Archdeacon, "This woman is very bad, and I have seen one of the Committee"; I said, "She was turned out of the hospital; I have a letter, and it tells me to take her home"; I said, "This woman is not fit to go home"; I said to him, "Dr. Nickoll is a very careless man"; he said, "How do you know?" I said, "Through his wilful neglect he blinded my son"; he went away, and came back with Mr. Stewart, another member of the Committee; they went away, and consulted together; they returned, and one of them said, "We recommend you to give deceased over to the care of Mrs. Citter, the matron of the prison"; I said, "What is the hospital for?" he said, "She is destitute"; I said, "Because she is destitute you want to put her in prison"; I said, "While I have a shelter she shall never go to prison, and if you cannot interfere I will do as the doctor told me to do—I will take her home at the doctor's risk, as his letter tells me I must take her home, or he will send her out and make me pay expenses"; I drove to Mack's store; the Archdeacon gave me an order to get a few things for the children, and when I came out of the store I saw a woman standing near the cart; she was speaking to deceased; she was Mrs. Joseph Kurtz; I spoke to her, and heard deceased speak to her; I heard her say, "I must go home, as they have turned me out of the hospital"; I heard her say, "The doctor never examined or sounded me when in the hospital"; after that I started for home, and as I turned Church-street the deceased fainted; this was about 3 o'clock; she said, "Oh, father, give me a drink"; I went into the "Imperial Hotel," and got some brandy and water; I gave her some, and she threw the rest away; I took her husband in the cart and went home, and he had to hold her in his arms all the way; we arrived at Buckaroo at about 5; we travelled slowly and carefully; I was driving; we kept on the right road,

Exhibit A.

road, and it was a good one; she complained all the way of the pains, and I heard her say to her husband, "I feel as if I were bleeding to death"; when we got home we carried her from the cart into the hut; I said, "I hope you will be better to-morrow, and mother will take care of you"; I then went to my own place, about a mile away; about 9 in the night the boys came down and said, "Mother is dying"; and I went there and found that she was dead; she died about 9; I then reported the matter to the police; she was in bed when I went up at 9 o'clock; deceased was about 35; before she went to the hospital she had the pains spoken of, and then the diarrhœa came on.

Mr. Gannon: I am in my 75th year; I object to answer question *re* my past life; on the 18th I took Mrs. Beattie to the hospital in a cart; she was suffering with diarrhœa; Mrs. Salsbury said she would keep her for a week, to see how she got on; I know she had two months to go before she would be confined; I took her to Mrs. Salsbury because Mrs. Stacy had instructed her to come out to look after deceased in case she was confined; I don't know anything about Mrs. Salsbury; I remember when the foundation stone of the hospital was laid; it was on the 22nd June; I saw Mrs. Salsbury, and she said she had seen deceased; I knew on the night of the 18th June that Mrs. Salsbury was to confine deceased; I don't know when the arrangement was made that Mrs. Salsbury was to confine deceased; I was angry at the time, having to take the woman home; I felt that she had been badly treated; I never said that I wouldn't take her home because I had nothing to eat in the house; I drove home by the Buckarro-road; I know two or three Kurtzs living near me; I don't know if there is a married woman living at Mrs. Kurtz's; I don't know if there are any married people about the place; how do I know if the deceased was bleeding when I was taking her home in the cart? I didn't pass the house of any woman as I was going home that I know of; and I didn't look for any woman to help her, as the doctor said she was all right; I don't remember saying that the matron was insolent to me; she was always respectful to me, and I to her; she was indignant when I said I wouldn't take the woman out of the hospital; I said at the inquest that I took hold of the deceased's foot in assisting her into the cart; the horse in the cart was a quiet one; I put my hands round deceased in helping her into the cart; I believe it was the right hand on which the blood fell as I assisted her up; I don't think there was any blood on the other hand; I could not tell you what clothes I had on at the time; I wiped the blood off my hands, but could not tell on what I wiped them; I did not tell the Archdeacon or any other gentleman that any blood had fallen from the woman on to my hands; I did not think it important. [*Depositions taken at the Coroner's Court handed to the witness, who is asked if he could swear to his handwriting—that is, his signature. Witness believes signature to be his.*] I remember giving evidence in the Coroner's Court; at the hospital I saw a woman on the balcony and a nurse on the verandah, and believe I saw the matron in the corridor, but I don't know what she was doing there. [*Court adjourned till 2 o'clock. Examination continued.*] I said the woman seemed to be tottering as she came out of the hospital along the corridor towards the steps; this was the first time I took hold of her; I assisted deceased towards the cart, but won't swear that I did not leave hold of her till she got to the cart; I took time in assisting her, as she was in a weak state; I could not say whether she could stand without my aid or not, but before she got into the cart I bent down to do up the laces of her boots, which were blucher boots; she did not ask me to do up her boots; I don't know whether I put my hands in front of her legs or behind; I don't know how far I put my hands up her clothes; the blood fell on my hands as I was doing up her boots; I might have wiped my hands on her dress; I don't know what coloured stockings she had on; I don't know whether she had stockings on or not; I told you she had stockings on; I withdraw my other statement: I now say she had stockings on; when I had my hand on her boot a drop of blood fell on my hand, and I wiped my hands on the woman's dress, and when I got into the cart I drove away; I was not interested in her being in the hospital for her confinement; I said she was going to Mrs. Salsbury's for her confinement; I never thought of her confinement when the blood fell on my hand; I would have taken her to Mrs. Salsbury's if I had thought her confinement was approaching; I looked into the hospital when she was in the cart, and I thought I saw a nurse and the matron; I believe I saw her; I said to the matron, "You and the doctor ought to be ashamed of yourselves for turning a woman out of the hospital in her state"; I was in the cart at the time; I cried this out aloud while in front of the hospital; I don't know who heard me, but shouted it out loud enough for anybody to hear it; I say I believed the matron was jeering; it appeared that her face was jeering; I can't explain her face, but it seemed to be indignant; I should rather think I did know what indignant was; I didn't hear her say anything. [*Explanation of indignation and sneering.*] It was just after 1 o'clock that I left the hospital, and I got home before dark; don't remember if it was dusk or starlight; I could not say exactly what hour it was I got home; if I had started from the hospital as I should have done, I should have been home by 3 o'clock, but I am not sure what time it was that I did get back; I don't remember if her husband suggested that she should go to Mrs. Salsbury's; Mrs. Beattie said before she went to the hospital her confinement would take place in August; she did not tell me what she was suffering, only that she had pains; she (matron) said that they would bundle her out if I didn't come for her; she said that the matron made her go to the closet on her hands and knees, and that on one occasion the matron tore the bed-clothes off her; I heard her tell her husband something similar to this; I forgot the names she told me the matron called her; but I believe they were dirty names; I couldn't say whether I have any note of the names the matron called her; the Commissioner may read the notes; I don't remember if I told the gentlemen of the Committee if she had diarrhœa, nor did I mention that she was bleeding; I don't know the date of the letter I wrote to the hospital; the notes I have are in my handwriting, but I will not let you see them; I have them in my pocket; they were written at my own place; I don't know who was at the place at the time; I don't remember anyone coming to my place about this case; I am not aware that I went to anyone's place about it, but will not swear; I don't remember speaking to anyone about the case at my house; I decline to answer the question whether I instructed Mr. Thompson to appear for me in this case; I couldn't say if I knew that Mrs. Salsbury was a midwife, and that it was in that capacity that Mrs. Beattie was going to her house; I know that Mrs. Beattie was going there for her confinement; I knew that Mrs. Salsbury was engaged to attend on Mrs. Beattie in her confinement; I remember that provisions were taken out in the cart, and were brought back to Mrs. Salsbury's place; Mrs. Salsbury said to me that I would have to take the deceased to the hospital before she had been at her house long, and I said to her, "You are soon tired of her; you said you would keep her for a week"; she made use of an awful expression; she said she was "— from head to foot"; it shocked me frightfully; it made me dislike to take her back, but that wasn't the cause; I took deceased to hospital, with Mrs. Salsbury, and we both went upstairs with the matron; I don't remember Mrs. Salsbury saying, "Be sure

Exhibit "A."

to

to bring her back to my place when she comes out of the hospital"; she said, "Bring her back when the time comes"; I knew Dr. Nickoll pretty well, but I did not go to the doctor about deceased saying that he would not go and see her; from the day she went to the hospital I never went to Dr. Nickoll about the ill-treatment she complained of; I knew there were other doctors in the town besides Dr. Nickoll; I believe there are Drs. Beith and Lester; I know where they live; they live not far from Mr. Marks'; I never thought of going to see them; she was then under a doctor; I went to nobody I had no occasion to; there are three or four roads to my place; the road I went by was not rough at the time; there is a fence on both sides for some distance; I should have been going a mile farther if I had taken the main Maitland Road; Mrs. Smith is across the creek, and she is about half a mile from us; there is Mrs. Andrew Kurtz also near; it never occurred to me to go to either of these women; deceased's husband was there, and I had nothing more to do with it; when I left her she was seated on a box, when on the road (down) I didn't examine her when we got home with regard to the bleeding; she had nothing to eat or drink before I left; "You're a mean dog [*in answer to question whether he was in gaol the last thirty years*]; I won't answer the question."

Mr. Thompson: I have no interest in the inquiry at all; I am a very poor man, and have no means; the matron never said anything to me about deceased going to Mrs. Salsbury's, and never heard the deceased say anything about it either; Mrs. Salsbury was very eager to get remuneration; the road I went by was the one usually used, but couldn't say whether others went by it.

Commissioner: I did not complain when the matron brought her from upstairs; she did not say anything to my knowledge about being unfit to leave the hospital in the presence of the matron, nor did I say anything about her unfitness to leave; I did not ask the Archdeacon or the others to allow her to re-enter the hospital; I was not aware that there was anything the matter with Mrs. Beattie in regard to labour; I (my memory is defective a little) I can't say I saw the matron when I was lifting Mrs. Beattie into the cart; the matron was not at the door when she was jeering; I have heard the deposition read as to the matron standing at the door jeering on the 1st July; I don't think the matron was close enough to hear when deceased said, "Father, I am not fit to leave the hospital"; I can't give any reason for not complaining; I did complain to Mr. Sherry; I am not a subscriber to the Mudgee Hospital; I did not make any demand for her readmission; when Mrs. Beattie said in the corridor, "I am dying," I don't think the matron was near enough to hear it.

Taken and sworn at Mudgee, this 21st day of }
September, 1897, before me,—

WILLIAM TRAFFORD.

M. S. LOVE, P.M., Commissioner.

This deponent, *William Beattie*, on his oath, saith as follows:—I am a miner, and reside at Pipeclay.

Mr. Thompson: Deceased, Mary Beattie, was my wife, about 35 or 36, and native of Sydney; I did not know that she was taken to the hospital; the first time I knew she had been in the hospital was when I met her with Wm. Trafford in the cart; I said, "You look bad," and she said, "Yes, and worse than when I went into the hospital," and that she was turned out to die; she said the matron treated her badly; that she asked for a hot bath, and the matron told her she would have to go home and get one; the matron said that anything was good enough for her; she said that the doctor ordered her medicine, but that she did not get it at the proper time; she said the doctor had never examined her while she was in the hospital; she said she couldn't get a drink at all, except from one of patients, by name Ada Sparrow; she said to the matron she wished to go to the water-closet, and that she (the matron) had complained that she (deceased) was a regular nuisance, and that she had to go on her hands and knees there; he saw Mr. Bird, but he said the doctor would deal with it, as he had nothing to do with it; I then went to Archdeacon Campbell's place; on the way home my wife complained that she was bleeding to death; she did not say what was the matter with her; I did not see any blood; I did not know what was the matter with her; I arrived at Pipeclay about sundown; Trafford drove the cart, and went by the best road; when we got to the hut we took her from the cart and placed her on a box; great care was used; I remained with my wife all the time, and Trafford went to take the horse out; I did not notice that my wife was getting worse when we took her out of the cart; I never went for any assistance; there were women about three-quarters of a mile away; she died about 9; after sitting on the box my wife said she could not sit up any longer, so I put her on the bed, from which she did not rise till her death; I thought the matter was diarrhoea.

Mr. Gannon: As soon as I met my wife at the railway station she complained of her treatment; I did not hear Trafford speak to Mr. Bird about this alleged cruelty in the hospital; she told us of her treatment on the way home; I was there when they called on Archdeacon Campbell; I received provisions from him; I knew she was in the family-way before I went away; I did not know when her confinement was expected; I don't know anything about Mrs. Salsbury; I did not know whether any arrangements had been made for the confinement of my wife; I did not know what was the matter with her when she was bleeding in the cart; Trafford said there was no good seeing another doctor when she had just come from a doctor; we never went to a doctor, nor did we go to Mrs. Salsbury's place; the road by which we went was not a rough one; there are others, but one is as near to women as the other; Trafford did not go for any female assistance; she was about the same when we got home as when she left the hospital; Trafford was helping my wife when I was away; I had nothing to support her with myself; I have seen nobody about this case, and nobody has been near my place nor anywhere else about it; I am not a native of this country; I am a native of Scotland; I heard her say, "My God, I am dying, and am turned out of the hospital"; I didn't believe it, though if I had I probably should have had her seen to in town.

Mr. Meares: I saw Mrs. Salsbury about a week after the death of my wife; I did not hear her say to Trafford, "What could you have been so foolish for as to take her home, and not bring her here as arranged," nor did she ask me any questions at all; the first time I saw the blood was when she was in bed.

Commissioner: I did not hear Mr. Bird recommend Mr. Trafford to go back to the doctor of the hospital.

Taken and sworn at Mudgee, this 21st day of }
September, 1897, before me,—

WILLIAM BEATTIE.

M. S. LOVE, P.M., Commissioner.

This

This deponent, *Ada Sparrow*, on her oath, saith as follows:—I am a domestic servant, and reside at Mudgee.

Mr. Thompson: I was a patient in the hospital, and while there remember seeing Mrs. Beattie there; she was a week there before me; she complained of pains in her back, and was suffering from diarrhœa; she did not tell me that she was suffering from anything else; she said, "I can't get any milk" to me on one occasion; I remember Trafford coming to the hospital, and I heard her say to her father that she was not able to go; I was only present; she was just getting strong enough to walk about then; on the day she left the matron came up and said, "Your father is waiting to take you away"; she did not appear to go willingly; the matron took her by the arm, and they went downstairs; I then went on the balcony, and saw Trafford's cart below; deceased, while standing on the steps, said to her father, "I am not able to go"; I heard her say this distinctly; she seemed in a very weak state when going towards her father; I do not know where the matron was when deceased met her father; I could not say whether Trafford helped deceased into the cart or not; she appeared to get up quite easily; deceased had proper attention at the hospital; I never heard her make any complaints to her father or anyone else that she had not been properly treated; I saw the doctor visit deceased, but never saw him examine her.

Mr. Gannon: When I went to hospital I heard that deceased was getting better; I was in the same room with deceased, and know that doctor's instruction were carried out; Miss McEwen and nurse were always kind to deceased, and treated her as they did me; she had no cause for complaint; she always got what she wanted; she got warm milk when she wanted it; there is no truth that the matron called her bad names; when deceased left hospital she had recovered from diarrhœa, but complained from pains in the back; I remember her being ordered an opening medicine, as she was suffering from constipation; the doctor and matron seemed to take an interest in the welfare of the patients in the hospital one and all; I never saw the clothes pulled off her while I was there, and she never complained to me of the same, nor of having to go on her hands and knees to the closet; I never heard the matron tell Mr. Trafford that the deceased would have to be bundled out, as the hospital was no place for her; she never complained to me that the doctor or matron had been unkind to her; I never knew that the matron refused to give her a drink; I remember the matron saying one day that her father was waiting for her in a kindly way; at the time of the departure of the deceased if Trafford had bent down to do up the boots of deceased I must have seen him, but I did not; I have seen deceased in hospital on verandah moving an easy chair about without assistance; I heard deceased singing "Jesu, lover of my soul," on one occasion; I never saw anyone on the verandah at the time of the departure of deceased; I could not see the wardman or the nurse, but I could not have seen them if they had been standing near the door at the time; at 11 o'clock on the morning of her departure a cup of cocoa was taken up to her by Miss Lyons; she also had some beef-tea on the same morning; she seemed very much better then than when I first saw her; deceased used to dress herself, and I was always present; she had the usual clothes of a female; she had every kindness from the doctor, matron, and the nurse.

Mr. Thompson: I did not hear her say in the presence of the matron that she was unable to go, but she said so to me; I have never spoken to anyone of the case since the inquest; I have seen Mrs. Salsbury twice since then.

Mr. Gannon: I adhere to the statement I made to-day about the woman getting into the cart without difficulty being correct.

Commissioner: I saw deceased daily in the hospital; I never heard her say that she did not get proper attention from the matron; I spoke to her daily, but at no time did she make any complaint either of the doctor or the matron; the cart in which the deceased left was only within a few yards of me, and I could see everything that took place; I never saw Trafford assist her at all; she took hold of the iron-railing of the cart with her right hand and helped herself up; Dr. Nickoll used to come round and inspect the patients at 12 and 1; deceased appeared to me to get into the cart without the assistance of Trafford; I was in the hospital for nine days, but never once heard a complaint against the doctor, matron, or the nurse.

Mr. Thompson: I never heard the matron say, "We don't want the woman here, she only wants to be confined here"; she said to me she may want to have her confinement here, and that nothing like that was permitted there.

Sworn at Mudgee, this 21st day of September, }
in the year 1897, before me,— }

ADA SPARROW.

M. S. LOVE, P.M., Commissioner.

[Tuesday, 21st September, 1897, 6 p.m., Court adjourned to 8 o'clock p.m.]

21st September, Tuesday, 8 o'clock—Court sat.

This deponent, *Mrs. Esther Kurtz*, on her oath, saith as follows:—

Mr. Thompson: I am a widow, and reside at Pipeclay; my place is about 2 miles from Mrs. Beattie's; I remember seeing deceased in Mudgee, at Marks' place, about the time of her death; she was in a cart by herself at the time I spoke to her; she seemed sick, but not sick enough to die; I asked if she were better, that she was going home, but she said she was worse; she said she was turned out of the hospital; I asked if she had anyone to look after her, and she said only a girl of 13; she said, "The doctor has never sounded me since I have been in the hospital"; this is all I know with regard to the matter.

Mr. Gannon: I am not a friend of deceased; I don't know what she was like before she went into the hospital; I know her stepfather; deceased complained of no other pains except those in her back; I know the road out to her place, and that it is a bad one, but I don't think it was rough enough to cause her any injury; I heard that labour pains had come on on Saturday night.

Mr. Meares: Nobody else was in the cart when I saw her but she, sitting cramped up.

Mr. Thompson: I could see by her state that she was pregnant.

Taken and sworn at Mudgee, this 21st day }
of September, before me,— }

ESTHER KURTZ.

M. S. LOVE, P.M., Commissioner.

This deponent, *Ethel McEwen*, on her oath, saith as follows:—I am matron of the Mudgee Hospital, and reside at Mudgee; I have been a nurse for five years, and received my training at Prince Alfred's Hospital, Sydney, and received a certificate of competency about January twelve months ago; I was appointed to the Mudgee Hospital on the 6th October, last year, and should say I have had about 100 cases under my care since that time; the medical staff was composed of Dr. Nickoll, whose custom it was to attend almost daily; in any emergency he would attend at once; before the 18th I never saw Trafford or deceased; about 3 in the afternoon of the 18th she was brought to the hospital by Trafford; I took charge of her, and gave her a bed in the women's ward; at the time she was suffering from diarrhoea; she was in a very weak state when she came, and had to be lifted out of the cart and helped upstairs; Dr. Nickoll attended about two hours after her admission; I attended to her till the doctor arrived; she was bathed and put to bed; I treated this case as my experience dictated; I gave her no medicine before the doctor arrived; she was properly treated by the whole staff; Dr. Nickoll came on the second day, and examined her with a stethoscope, and ordered her a new medicine; it is a lie that the doctor never came till the next day, as also it is a lie that he never examined; the doctor said that deceased must remain in bed; she remained there, and everything was given to her that was required, and the doctor's orders rigidly carried out; deceased was in bed for eight days, according to doctor's orders; I had to forbid deceased on some occasions to keep in bed, but she said she thought it would do her good to get up; she never made any complaint to me, and during the eight days the doctor saw her every day, and his orders were carried out; after eight days the doctor said deceased might get up on the couch by the fire; at this time she was recovering from the attack of diarrhoea; it was about four days after admission that the symptoms seemed to disappear; when the doctor, on the day that she got up, he said she would be able to go in a week; on the 26th I saw Trafford, and at that time she was completely recovered from the diarrhoea; Trafford came about 2 in the afternoon; he saw me at the door, and asked me how Mrs. Beattie was; I said she was better, and would be able to go out in a week; Trafford went up to see her, and when he came down he said that deceased wasn't fit to go out in a week, and that she (the matron) ought to be ashamed of herself to allow her to go out when there was not a crust of bread in the house; it is not my duty to allow persons to remain in the hospital when the doctor says they are cured; it is not the duty of the hospital to act as a benevolent society; on the 28th there was no symptom in deceased's state to warrant her remaining at the hospital; cases of pregnancy are not allowed to be received at the hospital; I knew that Mrs. Salsbury had been engaged for the confinement of the deceased; on the day she left, in my opinion, she was absolutely fit to go out; I knew that the confinement of deceased would be in about a month or six weeks; deceased in her convalescence used to move about without assistance, and was supplied with everything that she required and that was allowed by the hospital; when Trafford came I was coming from the kitchen through the hall; as matron of the hospital, I did everything in my power to attend to her, but when she had recovered from the diarrhoea it was my duty to see that she was removed to some other place for her confinement; when I went upstairs I said to Mrs. Beattie—I told her that her father was waiting for her; she then made reference to her confinement, and on that account she seemed to be reluctant to leave the hospital; up to the time I went up to her on Thursday she never complained of pains in her back, and I am not aware that any such pains existed, and suppose that if there had been such she would have mentioned them; before she left I asked her if she would have any more beef tea, and she appeared to wish to avoid seeing Trafford for she went away into the lavatory; I did not put my hand on her when going away; she required no assistance; I walked downstairs with her and left her at the hall table, and did not see Trafford at the time, and up to that time she had made no complaint to me *re* her treatment, except in the case of the hot tea, which would have been highly injurious to her in her state of health; I avoided seeing Trafford because I did not wish him to be rude to me again as he had been before; at this time Ada Sparrow was upstairs having her dinner; I walked into the sitting-room when leaving Mrs. Beattie, and never spoke one word to Trafford; I spoke to Nurse Anderson in the sitting-room; Wardsman Squibb was in the hall at the time; I did not see deceased getting into the cart, and there is no particle of truth in the statement that I was jeering at them; there is no truth that I ever pulled bedclothes off deceased, or that I said that she would have to be bundled out of the hospital, nor is there any truth in the statement that I compelled her to go on her hands and knees to the closet; I never at any time did anything insulting either to Trafford or Mrs. Beattie; there is not a fragment of foundation for any of the charges; in my career I have never had any charge of neglect preferred against me; I gave special orders that she should have warm milk, nor did I deny her anything at any time that was allowed by the hospital; Trafford did not pass the steps to help the deceased, as far as I know; had I known that the woman was bleeding, on my own responsibility I would have readmitted her to the hospital; the facts I swore at the inquest are correct, and I repeat the same now; I never heard anything about the woman bleeding from anyone; severe diarrhoea may conduce to miscarriage; I deny the charges of cruelty or inattention, and I carried out the orders of the doctor, who at all times behaved as a gentleman should do.

Mr. Thompson: I knew she was in a far advanced state of pregnancy; it was no part of my duty to inquire into that; there was no necessity for the doctor to make any further examination than he did; she never complained to me of any pains in her back; when Trafford came to take her away she never said anything about being unable to go out, but only made reference to her confinement; Ada Sparrow was not present at the time; the statement made by Ada Sparrow saying that I said deceased only wished to stay at the hospital for her confinement is not true; had Mrs. Beattie said she was not fit to leave the hospital, I should not have allowed her to go, but I told her to be sure to go and see Mrs. Salsbury before she went out of town; in urgent cases patients are admitted to the hospital without the doctor's order; this has been the practice with me; I should have to follow the doctor's instructions in all cases, even against my own judgment; I only said in my letter that she was to go out in the coach and not to go to Mrs. Salsbury because I understood that she was to be confined there; I knew if Mrs. Beattie was to go to Mrs. Salsbury's place she was to get £1 a week, but if she (Mrs. Salsbury) went out to Mrs. Beattie's she was to get 10s.; and I understood that her confinement was to take place in about six weeks; Dr. Nickoll saw deceased on the 30th June.

Commissioner: Mr. Sherry and Mr. Tuckerman were the Visiting Committee at the time; I can't say how many times they were there in June; as a rule, they go through the female wards; I don't remember if they went through the ward in which deceased was; there is no register of complaints; I did not see deceased and Trafford departing from the hospital, nor did I hear anything that was said by them; Mrs. Beattie never said that she was unfit to leave the hospital; deceased was a destitute patient, and was admitted on the recommendation of Mr. Willis, who is a Member. *Mr.*

Mr. Gannon : I have heard her complain of shortness of breath, and the doctor examined her at once; it makes no difference to me if patients pay or not; there were no symptoms of shortness of breath when she left.

Sworn at Mudgee, this 21st day of September, }
in the year 1897, before me,—

ETHEL McEWEN.

M. S. LOVE, P.M., Commissioner.

[Tuesday, 21st September, 10 o'clock p.m., Court adjourned till 9:30 a.m., 22nd September.]

Wednesday, 22nd September—Court sat 9:30 a.m.

This deponent, *Dr. Harvey Nickoll*, on his oath, saith as follows.—I am a duly qualified medical practitioner, and reside at Mudgee, and am Government medical officer for the Mudgee Hospital, which position I have held for over eight years.

Mr. Meares : Mrs. Salsbury called on me on the 18th, and said she had been out to see Mrs. Beattie, and found that she was suffering from diarrhœa, and not from labour pains; I had been asked previously by the Benevolent Society to attend to the woman in her confinement, so I knew all about her case before she came to the hospital; on the 18th I gave Mrs. Salsbury some medicine for deceased, as I told her I could not see her that morning, as I had a case to attend to in the hospital; I then gave an order for her admission to the hospital, where I treated her for diarrhœa; on the 19th I was very careful to examine deceased, as I thought she had a temperature, but upon examination I found that she had none; I examined her in every way that I thought her case required; on the 20th I prescribed for her medicine to be taken every three hours; after that I saw her every day, except the 27th, till the day before her discharge; deceased was in bed for seven days; after the diarrhœa was cured she suffered from constipation, for which she was treated; I don't remember the day on which I said deceased was fit to leave the hospital, but I remember instructing the matron to write to Trafford; I always discharge patients, and the matron receives her instructions from me; I saw deceased frequently when convalescent, and never heard her complain of anything except having warm tea, which I told her at the time was quite unsuitable for her in her state; I was up in the ward every day and Ada Sparrow was there; deceased had every opportunity to complain, but did not do so.

Exhibit C.

Prescription,
19th—D.
20th—E.

Mr. Gannon : I have been in the hospital over eight years; I have been in the Sheffield Infirmary and the Royal Infirmary, Edinburgh, after which I came out here, and practised in Victoria; and with the exception of four years my experience has been in hospitals; I was at the hospital when Miss McEwen was appointed at the hospital as matron on account of her special requirements; I know she is an excellent matron, and has always treated the patients in the hospital with unflinching kindness, even as far as buying clothes for them with her own money; I have known her to work for eighteen hours at a spell voluntarily; I have known her to keep a child with ophthalmia in her own room in order that it might receive special care; cases of pregnancy are not allowed at the hospital, but when accompanied by other ailments there is sometimes no alternative but to admit them; twice a week visitors are allowed to come and see the hospital, and relatives may come in at any time; if the deceased had been bleeding at the time she left the hospital I would not have dreamt of allowing her to go; I never knew there was anything the matter with her except her pregnancy when she left the hospital; I never heard that the matron had been unkind to deceased; it is quite false that I did not examine her while in the hospital; after two or three days when deceased was in the hospital, I examined her heart, and found that she had a slight mitral murmur.

Mr. Thompson : On the first day I was very careful to examine deceased; deceased was suffering from flatulency, as women do when they are in an advanced state of pregnancy; death of deceased was caused by separation of the placenta from the uterus; it was my impression that the confinement of deceased would take place in August; I knew that arrangements had been made for her lying-in, and was asked by the Secretary of the Benevolent Society to attend the woman during her confinement; I did not know that deceased was destitute; deceased, while in the hospital, never suffered from inflammatory diarrhœa, nor was it calculated to bring on premature labour; I think there is no connection between the diarrhœa and the labour; my opinion is that the labour pains started after the deceased left the hospital; before that time there was no pain complained of suggesting her approaching confinement; I knew that deceased was on the list of the Benevolent Society, and that she was supplied with provisions; I never discharge a patient from the hospital except I know that he has somewhere to go, and making due inquiries; I knew that arrangements had been made for the confinement of deceased, and gave an order for her discharge with that knowledge; Mrs. Salsbury had stated that arrangements had been made for her to lie-in at her house; I consider that deceased at the time she was discharged was quite in a fit state to go out; cases of pregnancy have been occasionally brought to the hospital, but it has only been when the patient has been suffering from another illness; urgent cases are admitted without an order of admission; I think it is a matter for the Committee themselves if they say they have no power to order the readmission of patients without reference to me.

Mr. Gannon : I cannot account for the separation of the placenta, nor do I think that it is possible to tell the cause of it; it is abnormal that the placenta should be separated before expulsion of the fetus; travelling in a cart undoubtedly would have been detrimental to her case; I think if she had been attended at her confinement she would have been alive now.

Commissioner : I saw deceased every day except the 27th; I saw her the day before she was discharged; on the 28th I saw her, and she appeared quite fit to leave the hospital; I saw nothing in her condition to make me alter the order for her discharge; I was at the hospital on the 1st July, but heard no reference made to her discharge; I know nothing about the arrangements that had been made for her being taken away; I think that getting into the cart, or travelling in the same, might have accelerated deceased's confinement; premature labour is often caused by lifting heavy weights, or other similar actions—walking downstairs, &c.; patients who are destitute are not prevented from entering the hospital; the admission of destitute sick is in accordance with Crown regulations; Trafford never made any complaint to me; if the Committee had sent deceased back to hospital she certainly would have been readmitted; Committee go round the wards at various times, and the patients have every opportunity to make complaints.

Mr. Gannon : I knew deceased came in a cart to town on the 18th instant pregnant and with diarrhœa, and thought when she was cured of diarrhœa she might easily return as she came; the road by which deceased went home was a bad one, and not fit for a sick person to travel over.

Commissioner :

Exhibit F.

Commissioner : I am aware of rule 6, which states that certain diseases are not to be admitted—among others, infectious diseases; copy of circular, dated 1st December, 1891, from the Board of Health to the Hospital Committee is with the Hospital Committee, amongst other things notifying that infectious diseases must be admitted; there is an isolated house, built for the reception of infectious diseases, in accordance with the Board of Health's circular; and cases of this kind have been admitted.

Mr. Meares : I do not know that a sub-committee was appointed to consider the reconstruction of new rules, in accordance with the said circular.

Mr. Thompson : I have made a record of visits, in accord with rule 7, but I have not made a record of examination on patients; on the 1st of July I was not at the hospital till late in the afternoon, after the deceased had left, nor did I see her that day.

Sworn at Mudgee, this 22nd day of September, }
in the year 1897, before me,—

HARVEY NICKOLL.

M. S. LOVE, P.M., Commissioner.

This deponent, *Dr. Robert Beith*, on his oath, saith as follows:—

Commissioner : I am a duly qualified medical practitioner, and reside at Mudgee; I was present at the *post-mortem* examination of Mary Beattie, on the 3rd July; I consider that she died from the shock of the premature confinement; I heard the evidence taken in the Coroner's Court; I knew nothing of deceased prior to *post-mortem*.

Mr. Gannon : I have been sometimes to the hospital professionally, and I consider that it is carried on properly, and it appeared to me that the matron was well qualified for her duty.

Mr. Thompson : I only go to the hospital for consultations, and I have no right to see the patients; I was at the *post-mortem* which was held to discover the cause of death, which was put down to shock with hemorrhage owing to premature confinement; we considered that the journey in the cart had caused the premature confinement owing to the acceleration of labour; I don't see why deceased should not have been discharged from the hospital after recovering from diarrhoea, even though she were pregnant; I could not say if the deceased had entirely recovered from diarrhoea at the *post-mortem*; I think it is a general rule to examine patients before they leave the hospital.

Mr. Gannon : Prescriptions given by Dr. Nickoll are, I consider, quite correct for the case; I think that it would not have been dangerous for the deceased after having been cured of diarrhoea to return on the 1st of July.

Commissioner : I consider it possible for the labour to have been brought on by Mrs. Beattie getting up into the cart.

Mr. Meares : I would not have thought it necessary to have a vagina examination before deceased left the hospital if she had been cured of the diarrhoea for seven or eight days.

Mr. Thompson : If the pains complained of had disappeared for some days there would have been no necessity to make any further examination.

Sworn at Mudgee, this 22nd day of September, }
in the year 1897, before me,—

ROBERT BEITH.

M. S. LOVE, P.M., Commissioner.

This deponent, *Dr. Charles Edward Lester*, on his oath, saith as follows:—I am a duly qualified medical practitioner, and reside at Mudgee; on the 3rd July I made a *post-mortem* on deceased; the result of it was this: the woman appeared to be about 40, no external marks of violence, and the usual *post-mortem* rigidity was present; there was a large clot of blood protruding from the vagina; the skin of the abdomen showed that the deceased had borne children, and she was at present within a few weeks of her confinement; I opened the chest; there was a small amount of fluid in the right pleural cavity, otherwise the lungs were healthy; there was a small clot of blood on the right side of the heart; the left was empty; I opened the abdominal cavity, and found recent signs of diarrhoea; the mouth of the womb was fully dilated; all the fluid had escaped; all the other organs examined were practically healthy; I attribute the cause of death to collapse from hemorrhage and shock.

Mr. Thompson : I found there were no fæces in the bowels of the deceased; the serous membrane and subserous tissue was thickened, and showed injected zones of blood-vessels; there was a small amount of mucous about the sæcum and the rectum; it would be possible for a person to say whether diarrhoea had continued up to time of death from the *post-mortem*; the signs I saw at the *post-mortem* showed that diarrhoea might have occurred within two or three days previous; the signs were of acute diarrhoea; diarrhoea would have been very depressing to the vital powers of the patient in a state of pregnancy, and it would predispose to premature labour, and might have caused the labour of deceased without her getting into a cart as she did; it is an anxious time for a person pregnant, and with diarrhoea, and it would make the doctor very careful about discharging the patient; diarrhoea and labour-pains would not have caused death if deceased had had proper medical attention; I cannot say from the *post-mortem* if the woman was in a fit state to be discharged from the hospital, but I consider that death could have been averted if she had been taken to a lying-in hospital, or a medical man attending her.

Mr. Gannon : Her life could have been saved if a medical man had been sent for; I think that the prescription of Dr. Nickoll was correct for a simple form of diarrhoea; I saw that the symptoms at the *post-mortem* were consistent with the enema and castor oil; I never meet with Dr. Nickoll for consultation now.

Mr. Meares : I did examine the small intestine externally; in inflammatory diarrhoea I should expect a patient to have a temperature, and if the matron and doctor said there was no temperature I should believe that the diarrhoea was not acute, and that Dr. Nickoll's prescription was correct for a simple form; I think that if deceased had recovered from diarrhoea for seven or eight days, and had, on the other hand, been treated for constipation she would have been fit to leave the hospital; if there was no diarrhoea, and no temperature and constipation, I think that the woman would be able to leave the hospital; I have seen similar cases of diarrhoea; it is possible to diagnose a case of diarrhoea from the examination of the rectum that I made, but it is not possible to say how long the diarrhoea may have ceased; there may not have been diarrhoea for a week before death.

Sworn at Mudgee, this 22nd day of September, }
in the year 1897, before me,—

CHAS. E. LESTER.

M. S. LOVE, P.M., Commissioner.

This

This deponent, *Miss Ethel McEwen*, recalled on her oath, saith as follows:—I know Mrs. Beattie's temperature was taken in the hospital, but I don't remember how many times; at all times it was normal; in the faces of deceased there was no signs of mucous or blood at any time; I asked the girl assisting me to report if there was, but she never did so.

Mr. Thompson: I do not know if a register is kept by the Board of Health for persons qualified to act as nurses, and as far as I know my name is not registered with the Board of Health; my certificate was obtained from the Prince Alfred Hospital.

Sworn at Mudgee, this 22nd day of September, }
in the year 1897, before me,— }

ETHEL McEWEN.

M. S. LOVE, P.M., Commissioner.

[1 p.m., 22nd September, Court adjourned till 2.15.]

Wednesday, 22nd September—Court sat 2.15.

This deponent, *Mrs. Sarah Jane Salsbury*, on her oath, saith as follows:—I am a nurse and midwife, and reside at Mudgee, and have acted in that capacity for twenty-five years; I know Mrs. Stacey; I saw her on the 17th June, and she asked me to go out and see Mrs. Beattie; I said I would go out, but would not be able to stop with the woman; I went out; Mrs. Beattie was suffering from diarrhoea, so I brought her into town in a cart, Trafford driving; she stopped at my place for the night; in the morning of the 18th I saw doctor, and he gave me a prescription for deceased, and later on in the day I took her to the hospital with Trafford; when deceased came out of the hospital I told Trafford he could bring deceased back to my house, and that I would look after her; I saw Trafford on the 22nd June, and he said he had not seen deceased since she had been in the hospital, and I then said to him not to forget to bring her to my place when she came out of the hospital, as I had made other arrangements; I also saw deceased in the hospital, and I told her to be sure to come to me when she left the hospital; I told her that I had made all the necessary arrangements for her confinement through the Benevolent Society; she said, "Very well"; deceased seemed much better on that day; I was at the hospital for two hours, and the only complaint of hers was that she would like some hot tea, but no other complaint was made; I saw her in bed, and that the proper arrangements were made for her for the diarrhoea, and that there was no necessity for her to get out of bed; I did not see her after that in the hospital; on the Thursday I went up to see her; I arrived at about 2.30, and saw the matron, and asked for Mrs. Beattie, and she said, "Oh, Mrs. Beattie has gone; hasn't she gone to your place?" I said, "No, not when I left"; the matron seemed surprised; she said, "Surely she's gone there; I told her to be sure to go there"; I said "It is funny; I told Trafford to do so"; I then returned home, but Mrs. Beattie was not there; I went round some of the streets to see if I could see Trafford or deceased, but could not see them; Trafford brought the provisions, which he obtained at Marks' through the Benevolent Society, to my house; Trafford came and made a complaint to me of the treatment of deceased, and I said to him, "Why did you not bring her to me?" he said, "I think I must have been mad"; I said to him that I had noticed in his evidence that he had said Mrs. Beattie had to crawl on her hands and knees to the closet, and that he had noticed a drop of blood fall on his hand when he was helping deceased into the cart; I said, "Did you know then that you should have brought the woman to my place then—you said you understood all about a woman in that condition?" he said he did not know what he was doing; Beattie said, when he heard this, "Good God, if I had known this I would have brought her to your place"; Beattie said he did not notice any pains when she was going out in the cart; and he said that the first time he had noticed blood was about half an hour before she died; he said she used the chamber, and that he had remarked to her that there was a lot of blood there, and she said, "I must be going to be ill"; I said, "It is funny you did not get a woman for her"; he said he did not know what to do; I said, "There was a woman with her the night before she had gone to the hospital—why could you not get that woman again?"

Mr. Gannon: It is not true that I made use of filthy language to deceased, and that that was the reason for Trafford not taking her back to my place when she left the hospital; it appeared to me that she was treated very well at the hospital.

Mr. Thompson: I did not know the matron had written to Trafford till after the account of the death appeared in the paper; I know that the matron told Trafford to bring deceased to my place.

Commissioner: The arrangement with the Benevolent Society for deceased's confinement was, that I was to be paid £1 to attend her for a fortnight, and that Dr. Nickoll would attend to her if it were necessary, and that she was to be taken to my house; notwithstanding that her confinement was not to take place till August, I was to make arrangements for her to stay in Mudgee till her time was approaching.

Mr. Thompson: Deceased was suffering from acute diarrhoea when she came to my place in the first, and that was why I sent her to the hospital, and I thought that this might bring on premature confinement.

Commissioner: I saw deceased twice at hospital, and she never complained to me of her treatment.

Sworn at Mudgee, this 22nd day of September, }
in the year 1897, before me,— }

S. J. SALSURY.

M. S. LOVE, P.M., Commissioner.

This deponent, the *Venerable Archdeacon Thomas Robert Curnew Campbell*, on his oath, saith as follows:—

Mr. Gannon: I am the Archdeacon of the Anglican Church, and reside at Mudgee; I am one of the Committee of the hospital, and have been so for three and a half years, and have taken an interest in the proceedings of the hospital since here; from my own observation, the present matron is an admirable one; she was selected from a number of candidates on account of her good credentials; she has always treated the patients kindly, and I have never heard any complaint against her; patients can always complain to the Committee, but never have; I have never heard to the contrary that Dr. Nickoll had performed his duty in an efficient way; I heard that deceased had suffered from diarrhoea in the hospital; I saw deceased and Trafford on the 1st July, and he asked me if I did not think deceased looked ill in the cart; I said I did so; Trafford never mentioned that he had blood on his hand from deceased; I supplied provisions to deceased; Trafford said to me that deceased's expected illness was looked for in the course of

a few weeks; I knew from that that she was in an advanced state of pregnancy; I supplied her with what I could, and she was taken home; I have still every confidence in the doctor and the matron, in spite of the allegations of Trafford.

Mr. Thompson: I heard that deceased was suffering from diarrhœa at the hospital; when I saw her she looked very ill, and I recommended Trafford to take her to the gaol infirmary, where she would be taken care of by Mrs. Cotter, who was a very kind woman; I did not know that I had power to send her back to the hospital as a simple committeeman, and I told Trafford this.

Commissioner: Trafford never asked to have deceased readmitted to the hospital; I thought the gaol infirmary would be a resting-place for deceased, and neither she or Trafford made any objection, except that he said that deceased's mother might object; Trafford appeared to have a very bitter animus against Dr. Nickoll, and that seemed to me to control his conduct; it did not strike me that they would have no right to receive deceased at the gaol infirmary (my legal knowledge is not very great); from deceased's appearance she did not seem to require immediate medical assistance; I did not suggest that deceased should return to hospital; if I had thought she required immediate assistance I should have had her sent back on my own responsibility; deceased never made any complaint to me; if I saw a case of this kind I should at once write an order for admission to the hospital, and send patient there; I think Trafford wrote a long letter to the Committee after death of deceased, but don't remember if any action was taken on it.

Mr. Gannon: Had I thought deceased required immediate medical treatment I should have ordered her back to the hospital myself.

Mr. Thompson: Trafford never urged that deceased should be taken back to hospital; I did not see how I could send back deceased to hospital, when she had just been discharged on medical authority; I thought that, if Trafford would not do as I suggested, the best thing that could be done was to take her to her own home.

Sworn at Mudgee, this 22nd day of September, }
in the year 1897, before me,— }

T. R. CURNEW CAMPBELL.

M. S. LOVE, P.M., Commissioner.

This deponent, *Frederick John Bird*, on his oath, saith as follows:—I am a storekeeper and reside at Mudgee, and am a member of the Hospital Committee; I saw Trafford on the 1st July; he asked me if I were on the Committee, he asked me to come and see the woman he had outside to see if she were in a fit state to leave the hospital; I said, "It is no use me going to see her, what does the doctor say?" he said the doctor says she is fit to leave; after a little I looked at her, and he asked if she were in pain; she said she was in great pain about the chest; he said, "Does she look fit to leave the hospital?" I said, "She does look bad"; but she always looked unhealthy, and did not look any worse than before; I have seen deceased twice before she went to the hospital; on the 1st, when I saw deceased, she complained of the pains mentioned; Trafford never asked me as a committeeman to send her back to the hospital, but I said it was no good for me to send her back when the doctor had discharged her.

Mr. Gannon: I advised Trafford to take deceased to see a doctor.

Mr. Thompson: When deceased was sitting in the cart she was sitting up quite straight.

Commissioner: When I told Trafford to take deceased back to the doctor, I meant Dr. Nickoll; he answered, "If I go to the doctor there will be a row"; I said, "Shouldn't there be a row if there was anything wrong"; I said, "You are the man to make the row if there is anything wrong with the woman."

Sworn at Mudgee, this 22nd day of September, }
in the year 1897, before me,— }

FRED. J. BIRD.

M. S. LOVE, P.M. Commissioner.

This deponent, *George Stewart*, on his oath, saith as follows:—

Commissioner: I am a member of the Committee of the Mudgee Hospital, and reside at Mudgee; on the 1st July, I saw deceased and Trafford in a cart in the street in Mudgee; Trafford spoke to me and abused Dr. Nickoll, and asked me if I thought she was fit to leave the hospital, to which I made no reply; deceased looked ill and in a destitute condition, but she did not look ill enough to require immediate attention; Trafford did not say anything about her readmission to the hospital to me as far as I recollect; Trafford said deceased was not fit to go home as he had practically nothing in the house for her; I suggested that I recommend the matter to the police, and let her go to the gaol, which was the only place that occurred to me; I knew of no arrangement that had been made with the Benevolent Society, and nothing was said about it, nor was there anything said about blood on Trafford's hand.

Mr. Thompson: Deceased looked very ill when I saw her, but I never formed an impression as to her returning to the hospital; I thought that the letter I read dealt with the matter.

Mr. Gannon: I suggested the gaol infirmary at the time because I never thought of the Benevolent Society.

Mr. Meares: She did not appear to require immediate attendance.

Commissioner: Trafford said that he would take deceased home at doctor's risk.

Mr. Gannon: Trafford seemed very bitter against Dr. Nickoll.

Mr. Thompson: Trafford seemed to have other causes of complaint against the doctor besides the discharge of deceased.

Commissioner: I would not suggest at the present any patient be taken to the gaol—I would recommend the Benevolent Society.

Sworn at Mudgee, this 22nd day of September, }
in the year 1897, before me,— }

G. STEWART.

M. S. LOVE, P.M., Commissioner.

The letter from
the matron of
the Hospital.
A.

This

This deponent, *Rose Lyons*, on her oath, saith as follows:—

Mr. Meares: I was an assistant at the Mudgee Hospital in June last, and reside at Mudgee; I was at hospital when deceased came to hospital, where I assisted generally under the direction of Miss McEwen; deceased was in bed for three or four days with diarrhoea, and bed-pans and other necessaries were supplied her, so that there was no necessity for her to get out of bed; the diarrhoea lasted about three or four days; after that she did not suffer from diarrhoea, but did so from constipation, for which she was treated; she never complained to me after the first three or four days of diarrhoea; after she commenced to get up she always dressed herself and had no assistance; in the day-time she used to sit about on the verandah and elsewhere, and appeared to improve daily; on the morning she left I took deceased her breakfast, but I don't know if she had anything after that till she left; at no time did deceased ever complain to me of her treatment in the hospital, and I saw more of her than anyone else.

Mr. Thompson: I did not give evidence at the inquest; I was not called; deceased complained to me on the morning she had the injection that the oil had not worked, and I told the matron.

Mr. Gannon: I acted under the instructions of the matron, and deceased was always treated kindly.

Commissioner: I saw the deceased on the morning of her departure, and she seemed quite well; I saw her several times that morning, but she never made any complaint; patients never had occasion to get out to the closets in the yard instead of being attended to in the wards.

Sworn at Mudgee, this 22nd day of September, }
in the year 1897, before me,— }

R. LYONS.

M. S. LOVE, P.M., Commissioner.

This deponent, *Joseph Milton Cox*, on his oath, saith as follows:—I am Secretary of the Mudgee Hospital, and reside at Mudgee.

Commissioner: I received a letter of complaint from Trafford on the 6th July, but no action was taken on it at the time; a special meeting of the Committee was arranged for the 13th July, which was held; on the meeting of the 6th I was ordered to apply for copies of the depositions taken at the inquest for the meeting of the 13th [*Action by resolution was taken for inquiry*]; the doctor was not present at the meeting, and no report was made either by him or the matron. I remember the circular from the Board of Health, 1st December, 1891; since the receipt of that circular a house has been built for the reception of infectious diseases, and the old by-law of the hospital stating that infectious diseases would not be admitted has not been amended.

Exhibit G.

Mr. Gannon: I have had long experience in connection with the hospital, and have always found that the doctor and the matron have performed their duty faithfully, and no complaint has ever reached me against them; the depositions of the inquest were not obtained before the letter was sent to the Chief Under Secretary; communications were made with the Justice Department and the Board of Health and the Principal Under Secretary asking for investigation into the charges against the hospital; in my communications I never sent any cuttings from the local papers; the Committee have always been anxious to have the whole matter sifted to the bottom; as a result of my letters to the Board of Health I received a communication notifying the appointment of a Commission of Inquiry.

Letters produced.

Mr. Thompson: Committee have taken some steps to amend the rule in accordance with model rules of the Board of Health.

Exhibit G. Letter of Trafford to hospital.

Sworn at Mudgee, this 22nd day of September, }
in the year 1897, before me,— }

JOSEPH M. COX.

M. S. LOVE, P.M., Commissioner.

This deponent, *Kate Anderson*, on her oath, saith as follows:—I am a nurse at the Mudgee Hospital, and reside at Mudgee; I remember Mrs. Beattie in the hospital, but was never in attendance on her; I saw her as she left the hospital on the 1st July; I saw Trafford with her; as deceased walked down the stairs of hospital I heard Trafford abusing the matron; I also heard him ask deceased if she were in bed, and she said no; when she got to the cart she put one foot on the step, and took hold of the railing to help herself up; when Miss McEwen left the door she came into the sitting-room.

Mr. Meares: After deceased had got into the cart Trafford got in at the other side; I never saw Trafford assist deceased into cart, and he could not have done so without my seeing him; deceased appeared to have no difficulty in walking; I did not notice Trafford do up deceased's boots.

Mr. Gannon: Trafford was behind deceased when she got into the cart, and the matron was in the sitting-room, and it is an absolute lie that she was jeering at him.

Mr. Thompson: The first time I saw deceased was when she came downstairs to go away; I heard Trafford ask her if she was in bed when the matron went up to bring her down; after deceased came to the door she did not sit down at all; I never heard Trafford tell the matron deceased was not able to leave the hospital; I did not look as the deceased was actually getting into the cart; the last time I saw Trafford was when he was on the third step of the hospital, and deceased had her foot on the iron step of the cart; after that I did not see them, and could not say whether Trafford helped deceased into the cart; I did not see deceased in hospital at all; I was in the isolated ward; I heard Sergeant Harving ask me if I had anything to do with the deceased while she was in the hospital.

Commissioner: I was about 3 yards from Trafford and deceased when she got into the cart; Trafford appeared to be excited and angry; he said he would take deceased to Dr. Lester and see if she were fit to leave the hospital; he said, "I will make it hot for you" (speaking to the matron); he said Miss McEwen was not fit to look after pigs, let alone Christians; I think the matron could have heard this, as the sitting-room window was open; Trafford could not see the matron, but the words he used I think were addressed to her; I did not hear deceased say, "Father, I am not in a fit state to leave the hospital"; I have never heard any complaint of the treatment of deceased while in the hospital.

Mr. Thompson: I did not see Ada Sparrow, but was closer to deceased than she could have been.

Sworn at Mudgee, this 22nd day of September, }
in the year 1897, before me,— }

K. ANDERSON.

M. S. LOVE, P.M., Commissioner.

This

This deponent, *Flora Day*, on her oath, saith as follows:—I am a married woman and reside at Mudgee; I was in the hospital at the time deceased was there, but not when she left, as I went on the 22nd of June.

Mr. Meares: I was at the hospital when deceased was first admitted; she was treated by the doctor the afternoon she was admitted, about a couple of hours after her arrival; the doctor attended to deceased every day; she never at any time made any complaint to me of her treatment; she never had to get out of bed to go to the closet—proper arrangements were made that she should not have to do so; deceased used to get out of bed against the matron's orders, and I have heard the matron scolding her for it, and she promised not to get out any more; I saw Mrs. Salsbury coming to see her on the first Sunday she came into the hospital and on the following Tuesday, and I heard Mrs. Salsbury tell her to go to her place when she came out of the hospital; I was at the hospital for a month, but never heard any complaints made; I was well treated, and the matron and nurse were very kind to me and treated the others in the same manner, as did also the doctor.

Mr. Thompson: I never saw the doctor examine deceased; I did not take notice of anything that took place between the matron and deceased or the doctor and the deceased, but I heard what Mrs. Salsbury said to her; deceased and Mrs. Salsbury were conversing for about ten minutes; I heard Mrs. Salsbury say, "Come to my place," and the deceased say, "Very well"; I have not seen Mrs. Salsbury since, except to-day and yesterday.

Mr. Gannon: I did not see doctor examine deceased, because examinations are made privately, the bed being surrounded by a screen.

Sworn at Mudgee, this 22nd day of September, }
in the year 1897, before me,—

FLORA DAY.

M. S. LOVE, P.M., Commissioner.

This deponent, *John Rice*, on his oath, saith as follows:—I am a miner and reside at Abbotsford; I was at the hospital when deceased left; I was on the verandah; I was about 15 feet away and had a full view of everything; I saw Mrs. Beattie get up into the cart; Trafford was near the cart, but did not assist her except by putting his hand behind her as she got up into the cart; I did not see the matron; I heard Trafford saying, "You ought to be ashamed of yourself," looking towards the door, and said, "You're all a lot of pigs," and "You're not fit to look after pigs," and when he was going away he said, "I will show you up, all of you, in the papers"; had Mrs. Beattie said anything I could have heard it; deceased looked bad at the time; she walked slowly; when she got into cart she stood up till Trafford got in and told her to sit down; I never saw Trafford stoop down to do deceased's boots up; he could not have done it without my seeing him.

Mr. Thompson: After deceased had got into cart he, Trafford, stood near horse; I have never been interrogated about the evidence I have to give in this matter; I never heard Trafford say anything to deceased; I was close to them at the time; I saw Nurse Anderson at the same time, but she seemed farther away from them than I was; deceased seemed very weak when she got into cart; I never saw Trafford appear to wipe off anything from his hand after deceased had got into cart; I must have seen this if it had been the case; the patients at the hospital while I was there were always treated kindly by the matron and the doctor, as far as I know.

Sworn at Mudgee, this 22nd day of September, }
in the year 1897, before me,—

JOHN RICE.

M. S. LOVE, P.M., Commissioner.

This deponent, *Thomas Sheridan*, on his oath, saith as follows:—

Mr. Thompson: I am a maintenance man, and reside at Mudgee, and am employed on the Cassilis road; I know the road leading to Trafford's house which was taken by the cart driven by Trafford. The cart was going very slowly when I saw deceased, and Trafford and Beattie, who seemed to be supporting deceased at the time; the track by which they went was a bushtrack, and is what I should call a very fair one, and the pace at which the cart was travelling was about as slow as possibly could be.

Mr. Meares: I had been on the road at the time for some period making repairs; I had never been as far as Trafford's place along the road, but have been within a mile or so; I do not know the exact time at which I was there; I am not prepared to say the exact track the deceased took.

Mr. Gannon: I don't know for what reason I was brought here to give evidence; I don't remember speaking to Mr. Richards with reference to this matter; I was here yesterday at the Court; I don't remember the time at which I saw deceased and the others driving out; I don't remember what coloured horse was in the cart; I don't know where Beattie lives; the track near Beattie's house I do not know; I occasionally contribute to the *Mudgee Guardian*, but I have never discussed the matter with that paper.

Mr. Thompson: I also write for the *Western Post*; I have no interest in this case whatever.

Sworn at Mudgee, this 22nd day of September, }
in the year 1897, before me,—

THOMAS SHERIDAN.

M. S. LOVE, P.M., Commissioner.

This deponent, *Henry Edward Alexander Wells*, on his oath, saith as follows:—I am an agent, and reside at Mudgee; I know Trafford's place and the track well; it was a good track at the time deceased was going out to Trafford's house; the road is a chain wide where it is fenced.

Sworn at Mudgee, this 22nd day of September, }
in the year 1897, before me,—

H. E. A. WELLS.

M. S. LOVE, P.M., Commissioner.

This deponent, *Sarah Rowell*, on her oath, saith as follows:—I am a member of the Salvation Army, and reside at Mudgee. I visited the Mudgee Hospital, in June, when Mrs. Beattie was there; I saw her for two Sundays; I saw her about four days before she left hospital; the second time I saw her I spoke to her, but she never complained to me of her treatment in the hospital.

Mr.

Mr. Thompson : On the second time I saw deceased I sang and prayed with her, but never spoke about hospital matters; but our conversation was about herself and her health, and she never made any complaint, or said that she was suffering from any pains.

Mr. Gannon : Deceased was in a peaceful frame of mind when I saw her last; I never at any time said to the matron that I thought deceased was too ill to leave the hospital.

Sworn at Mudgee, this 22nd day of September, } SARAH ROWELL.
in the year 1897, before me,— }

M. S. LOVE, P.M., Commissioner.

This deponent, *Charles D. Meares*, on his oath, saith as follows:—I am a solicitor, and reside at Mudgee; the minutes produced are the records of the Benevolent Society of Mudgee, in the handwriting of Mrs. Stacey, and are proceedings of meetings held on the 29th June and 13th July. Exhibit

Sworn at Mudgee, this 22nd day of September, } CHAS. D. MEARES.
in the year 1897, before me,— }

M. S. LOVE, P.M., Commissioner.

This deponent, *James Harvey*, on his oath, saith as follows:—

Mr. Thompson : I am a sergeant of police, and reside at Mudgee; I remember going to hospital on the 3rd July; I saw the matron and spoke to her *re* death of deceased; I asked her if there were any convalescent patients in the ward in which Mrs. Beattie had been; she said there had been one, Ada Sparrow; I asked her what nurses had been in attendance on Mrs. Beattie; she said, "I attended to her"; I said, "What about Miss Anderson, was she in the ward?" she replied, "No; she was tending to the contagious ward"; I then saw Miss Anderson, matron not being present; I asked her if she had been attending Mrs. Beattie; she said no; I asked her if she saw Mrs. Beattie leaving the hospital; she said, "No, I was at the contagious ward, I did not see anything of them"; I told the matron I wanted these persons to attend the inquest.

Mr. Gannon : That was all the conversation I had; I was with Constable Dolman at the time.

Sworn at Mudgee, this 22nd day of September, } JAS. HARVEY.
in the year 1897, before me,— }

M. S. LOVE, P.M., Commissioner.

This deponent, *Frederick William Dolman*, on his oath, saith as follows:—I am a constable of police, and reside at Mudgee; I went with Constable Harvey to the hospital on the 2nd July, and heard what Harvey said to matron; he said to matron, "Who was attending deceased?" she said "I was"; the sergeant then said, "What about Miss Anderson?" she said, "She knows nothing about it, she was at the contagious wards"; the sergeant then went to see Miss Anderson; I did not go with him.

Sworn at Mudgee, this 22nd day of September, } F. W. DOLMAN.
in the year 1897, before me,— }

M. S. LOVE, P.M., Commissioner.

[22nd September, 1897, 6.15, Court adjourned till 10 on 23rd instant.]

Thursday, 23rd September, 10 o'clock.

This deponent, *John Cotter*, on his oath, saith as follows:—

Mr. Gannon : I am a gaoler, and reside at Mudgee; I have been there for nearly seven years; I remember seeing William Trafford in the gaol under the name of John Rogers and other aliases; the last sentence he had was fourteen years' penal servitude, for receiving stolen property, and has received various sentences in other Colonies. Exhibit I.

Mr. Thompson : As far as I know, there has been nothing against William Trafford since his discharge from the gaol in 1892; he has been living about Mudgee since that time.

Mr. Gannon : Had it not been for the commutation of the sentence by the Governor, he would have been in gaol till last year.

Sworn at Mudgee, this 23rd day of September, } JOHN COTTER.
in the year 1897, before me,— }

M. S. LOVE, P.M., Commissioner.

Mr. Gannon : *Ethel McEwen* recalled: I produce my nurse's certificate from the Prince Alfred Hospital, and credentials from medical men; and the hospital had these papers before them when I was appointed.

Mr. Thompson : Deceased was getting solid food from the time of her recovery from diarrhoea till her discharge.

Sworn at Mudgee, this 23rd day of September, } ETHEL McEWEN.
in the year 1897, before me,— }

M. S. LOVE, P.M., Commissioner.

This deponent, *Walter Sherry*, on his oath, saith as follows:—I am a member of the hospital Committee, and reside at Mudgee.

Commissioner : I was one of the visiting Committee in June last; I visited the hospital on the 16th, 20th, 22nd, 27th, and 28th June; I was not in the female ward in that month; I did not see deceased there at all; I did not hear anything *re* her treatment in the hospital; any patient could complain if they so desired; when I go to the hospital I tell the patients who I am, and ask if they have any complaints to make; I constantly visit the hospital; I have never heard any complaint against the doctor or matron, and we could not have a better matron than we have; I know nothing of this case.

Mr. Gannon : On my visits I have always heard the patients speak well of their treatment in the hospital, and have never had any complaints.

Mr. Thompson : About the 26th I saw Trafford, and he asked me to go to the hospital, and see if deceased was fit to leave ; I went up on the following day, but did not see deceased ; I saw matron, and she gave a satisfactory reply ; I have every confidence in the matron.

Sworn at Mudgee, this 23rd day of September, }
in the year 1897, before me,—

WALTER SHERRY.

M. S. LOVE, P. M., Commissioner.

This deponent, *Richard Squibb*, on his oath, saith as follows :—I am a wardsman of the Mudgee Hospital, and reside at Mudgee, and have been so for about eight months.

Mr. Meares : I saw deceased as she was leaving hospital ; she was walking unassisted, and seemed quite well ; I was going to the kitchen at the time ; when I returned deceased was at the door ; Miss McEwen was in the sitting-room ; Trafford took deceased down to the cart, where she put her hands on the iron railings of the cart to get up, when I heard Trafford say to her, "Be quick, quick, so that we may get away from this murdering shop" ; after deceased had got into cart Trafford went round horse's head and got in at the other side, and before driving away sang out, "You are not fit to look after pigs, let alone Christians ;" deceased appeared to me to be able to walk easily by herself ; Trafford did not help her to get into the cart ; I did not see Trafford bend down to do up deceased's shoes, and if he had done so I must have seen him do it ; I was just inside the front door at the time ; I did not hear Trafford say anything to deceased, except as he met her at the doorway, when he said, "Were you in bed ;" twice she replied, "No."

Mr. Thompson : I don't remember any other patients leaving at the time of deceased's departure ; I remember deceased's departure, because the matron told me that Trafford had abused her on one occasion, and I went on purpose to see deceased go, to see if I might be of any assistance ; I thought it possible she might require assistance ; it is my duty to see the male patients leave the hospital, but I have nothing to do with the females ; I am certain that Trafford did not do anything to deceased's boots ; deceased did not sit down on the steps ; I did not see Ada Sparrow at the time ; deceased did not say to Trafford, "Oh, father, I am not able to leave," to my knowledge ; I did not give evidence at the inquest ; Last Monday week was the first time that I spoke of what I had seen at the deceased's departure from the hospital.

Mr. Meares : I saw Mr. Rowell two weeks after the inquest, and I told him that what had been said was all a lot of lies by Trafford ; I saw deceased enter hospital, and assisted her out of the cart.

Mr. Thompson : I understood that deceased was suffering from pregnancy when she left the hospital.

Sworn at Mudgee, this 23rd day of September, }
in the year 1897, before me,—

R. W. SQUIBB.

M. S. LOVE, P.M., Commissioner.

Sarah Jane Salisbury recalled —

Mr. Gannon : On the 17th June, I went out to deceased's house with Trafford, and then I had to leave the cart about 100 yards from the house, and I and Mrs. Trafford had to assist Mrs. Beattie to the cart down a deep creek and up a good rise, and we assisted her into the cart when bedding had been prepared for her ; the place we left was what you would call a humpy, there was nothing in it except six children who had no one to look after them ; I asked Trafford why he did not take deceased to his home, he said that his wife was away ; all the road from there to Mudgee was very bad at the time ; there had been rain about the beginning of June, but the roads were dry at the time.

Mr. Thompson : I heard Trafford say that there was another road by Abernethy's to this place ; I have been out on that road, and I know it is impossible to drive to deceased's house by that way ; I never said it was not a wonder they wanted to get rid of Mrs. Beattie on account of her dirty condition ; the reason of the deceased's dirty condition was from the fact that she was suffering from diarrhoea ; when I first saw her she said she had been suffering for a week ; she appeared then in a very bad way ; I don't think there was anything for her at her house, and she was in an exceedingly low state when I saw her.

Sworn at Mudgee, this 23rd day of September, }
before me, in the year 1897.—

S. J. SALSBURY.

M. S. LOVE, P.M., Commissioner.

[One o'clock—Court adjourned till 2 o'clock.]

[Two o'clock—Court sat.]

This deponent, *Edwin Richards*, on his oath, saith as follows :—I am editor of the *Mudgee Guardian*, and reside at Mudgee.

Mr. Gannon : I have been in the employment of the paper for about eight years ; I have only control over the literary department ; the paper belongs to Charles Knight ; I produced extracts of the paper referring to the hospital case to the Principal Under Secretary in the presence of Mr. Jones, M.P. ; I knew that the hospital had requested that the Board of Health do make an inquiry ; the reason I went to Sydney was to see the authorities about the case ; I did not think that the Board of Health was the proper body to investigate this matter, and that was why I saw the authorities ; when I saw the Principal Under Secretary, I asked him if he had received any papers from the Mudgee Hospital, and he said he had not ; I gave him the articles in my paper to read ; I did nothing else beside that in Sydney to influence the case ; Mr. Thompson was retained by the *Mudgee Guardian* in the case ; I did not go out of my way to obtain evidence ; I have no direct evidence to give on this case ; I saw deceased in cart in Market-street on the day she left hospital, and she looked very poorly ; I saw the man with her giving her a drink ; deceased had brown jacket on, closely buttoned at the time ; she was sitting in a slanting position ; I asked Sheridan, the maintenance man, that if he saw Trafford on the road to send him to me ; there was a communication brought to me about the inquiry, but I had it suppressed owing to the steps taken by the Hospital Committee ; I wrote all the leading articles in this matter. [Article in *Mudgee Guardian* of 16th July, Exhibit "H," and article of 30th, Exhibit "I."] I have no animus against Dr. Nickoll ; I did not

not think it was necessary for to come and give evidence in this matter, though I saw the state of the woman when she was in Market-street; I have no antipathy against the matron; I rather encouraged the Committee in appointing her by my articles in the paper, and I have the highest respect for all the staff of the hospital.

Article 17th
September,
Mudgee
Guardian,
Exhibit L.

Mr. Cannon: Mr. George Hazeltine said to me that certain impressions had been made on his mind since the inquest, and that he considered the inquest was too hurried.

Mr. Thompson: I have no personal feeling against Dr. Nickoll; I have always advocated the appointment of three doctors to the medical staff; I had a conversation with one of the doctors who had been at the *post-mortem* examination; it was Dr. Beith.

Mr. Cannon: There is no mention in the articles produced *re* the appointment of three doctors instead of one; I did not see the Board of Health when I was in Sydney about the case.

Mr. Thompson: I believe Mr. Cassel wrote to Mr. Jones, asking him to urge on this inquiry.

Sworn at Mudgee, this 23rd day of September, }
in the year 1897, before me,—

EDWIN RICHARDS.

M. S. LOVE, P.M., Commissioner.

Dr. Beith recalled:—

Mr. Thompson: I consider hæmorrhage was brought about by miscarriage; I was present at the *post-mortem*, and think hæmorrhage was caused by the separation of the placenta; but I do not know if there was any separation before death; I could not tell from the surface if there was any hæmorrhage; shock appeared to me to be the greatest cause of death; I think Dr. Lester said that the separation of the placenta took place after death; I did not see the large intestine opened; I did not see any clots of blood; so far as I saw, the bowels were empty; I saw a small amount of liquid fæces; I don't know that the bowels being empty was evidence of there being diarrhœa up to the time of death; the bowel was not opened past the sigmoid flexia bend in my presence; I never said to Mr. Richards that he had to thank his brother medical men that he (Dr. Nickoll) was not in a serious position over this matter; I never said that the woman was not fit to leave the hospital; judging from the *post-mortem*, I said that the authorities, under the circumstances, should have been very careful in discharging deceased.

Mr. Meares: In my opinion the *post-mortem* was not an exhaustive one; the appearance of the rectum might be put down to other causes than diarrhœa; I heard the evidence of Dr. Lester yesterday, and I consider that the thickening of the lining membrane of the rectum spoken of by him was of trivial consequence.

Sworn at Mudgee, this 23rd day of September, }
in the year 1897, before me,—

ROBERT BEITH.

M. S. LOVE, P.M., Commissioner.

Dr. Lester recalled:—

Mr. Thompson: The time deceased suffered from diarrhœa would seriously weaken the system; and after an attack of that kind considerable time would have to be allowed for her to get well again; I would not expect to find the bowels empty if deceased had recovered from diarrhœa; the diarrhœa suffered by deceased might have recurred though it had once been checked; at *post-mortem* we saw no indications of very great hæmorrhage; the hæmorrhage appeared to come from the lower pole of the uterus; when I made the incision into the womb I cut part of the placenta, and either Dr. Beith or Nickoll said that that was where the hæmorrhage came from; I stripped the placenta off, and there were no signs of hæmorrhage there; jolting in the cart and premature labour would cause shock.

Mr. Meares: It is perfectly consistent with all I saw that diarrhœa may have ceased for seven or nine days; but possibly there may have been some between the time she left the hospital and her death.

Signed and sworn, at Mudgee, this 23rd day of September, }
in the year 1897, before me,—

CHAS. E. LESTER.

M. S. LOVE, P.M., Commissioner.

This deponent, *William Joseph Cohen*, on his oath, saith as follows:—

Mr. Thompson: I am a proprietor of a boot factory, and reside at Mudgee; I know Dr. Beith; I remember him speaking to me of the inquiry; he said deceased was not cured of diarrhœa when she left the hospital, and was not fit to leave.

Mr. Cannon: Mr. Cohen, of the *Mudgee Guardian*, is my uncle; it was about the Sunday week after the inquiry that Dr. Beith spoke to me.

Sworn at Mudgee, this 23rd day of September, }
in the year 1897, before me,—

WILLIAM J. COHEN.

M. S. LOVE, P.M., Commissioner.

Mr. Richards recalled:—Dr. Beith said these words, and I repeated them to two gentlemen in town, "Nickoll can thank the kindness of his brother medical men for the turn the case took," and I said, "Yes"; I made no other remark; he said, "Did you miss anything from my evidence?" I said, "Yes, a good deal"; he said, "Did you see I was not asked whether the woman was cured of diarrhœa or not?" I said, "Yes."

Sworn at Mudgee, this 23rd day of September, }
in the year 1897, before me,—

EDWIN RICHARDS.

M. S. LOVE, P.M., Commissioner.

This deponent, *Mrs. Mary Ann Daly*, on her oath, saith as follows:—

Mr. Thompson: I am a married woman, and reside at Mudgee; I am a member of the Benevolent Society; I heard that arrangements had been made for Mrs. Beattie to go to Mrs. Salisbury's place for her confinement; the arrangements were £1 for ten days, and we were to pay for the provisions.

Mr.

Mr. Meares : The arrangements were left for Mrs. Stacey, the Secretary, to make ; matters were left entirely in the discretion of the Secretary.

Mr. Thompson : I was deputed to inquire as to whether the Beatties were proper persons to receive assistance ; in the meantime the woman died.

Sworn at Mudgee, this 23rd day of September, } M. DALY.
in the year 1897, before me,— }
M. S. LOVE, P.M., Commissioner.

This deponent, *George Hazeltine*, on his oath, saith as follows :—

Mr. Meares : I am a blacksmith, and reside at Mudgee ; I was one of the jury on the inquest of deceased ; I heard Mr. Richards giving his evidence in Court this morning ; I heard him say that if I had known as much before the inquest as I know after I should have come to a different decision on the matter ; the statement is quite untrue.

Mr. Thompson : I never spoke to Mr. Richards on the subject ; I have not been to Sydney since the inquest specially to consult a doctor.

Sworn at Mudgee, this 23rd day of September, } GEO. HAZELTINE.
in the year 1897, before me,— }
M. S. LOVE, P.M., Commissioner.

Dr. Nickoll :—

Mr. Meares : In the first prescription given to deceased there was chalk, but in the two subsequent ones there was none ; I examined the rectum at the *post-mortem* ; in my opinion the congested condition of the rectum was due to advanced pregnancy ; the condition of the rectum was not consistent with a severe attack of inflammatory diarrhœa ; the medicines given to deceased were not for inflammatory diarrhœa ; I should not have believed the evidence of Cohen if I had not heard it on oath ; I consider that the *post-mortem* was not a complete one ; the whole of the intestines should have been examined carefully, and not superficially ; I treated Trafford's son for his eyes ; his son was struck in the eye with a piece of wood ; I pointed out to them the danger of the injured eye remaining in, and that it would have to be removed, and they would not listen to it.

Mr. Thompson : I never said that I was satisfied with the inquest ; deceased appeared to have no trace of recent diarrhœa ; it is possible that there might have been an evacuation of the rectum through the pains of labour.

Sworn at Mudgee, this 23rd day of September, } HARVEY NICKOLL.
in the year 1897, before me,— }
M. S. LOVE, P.M., Commissioner.

[Inquiry closed 5 o'clock, Thursday, 23rd September, 1897.]

EXHIBITS—MUDGEE HOSPITAL INQUIRY.

Exhibit A.

To William Trafford, Mudgee Hospital, Monday, 28 June, 1897.
I have been instructed by Dr. Nickoll to inform you that Mrs. Beattie is ready to leave the hospital now, and if you do not come for her she will be sent out on the coach at your expense.

E. McEWEN,
Matron.

Exhibit B.

REPORT of the Mudgee District Hospital for the year ending 31st December, 1895, with subscribers' names, life members, rules and regulations ; report of the Committee, Treasurer's statement, and Medical Officer's return of sick treated for the year, &c., &c.

THE UNDERMENTIONED ARE THE OFFICE-BEARERS FOR THE CURRENT YEAR.

Trustees :—Hon. C. H. Cox, D. Cassin, Esq., and C. D. Meares, Esq.

Committee :—1, Ven. Arch. Campbell ; 2, Rev. Dean O'Donovan ; 3, Rev. C. W. Willis ; 4, D. Cassin ; 5, W. Little ; 6, Edward Clarke ; 7, W. F. Kellett ; 8, R. M. Hunter ; 9, E. Deane ; 10, J. C. Gunnell ; 11, J. Loneragan ; 12, C. D. Meares ; 13, W. Sherry ; 14, W. Shaw ; 15, W. L. B. Brown ; 16, F. J. Bird ; 17, C. H. Tuckerman ; 18, Osborne E. Norris ; 19, James Parker ; 20, H. S. Thomas ; 21, P. Barnett ; 22, J. T. Hartigan ; 23, Alex. Low ; 24, G. A. Blumer.

Secretary :—Mr. J. M. Cox.

Hon. Treasurer :—Mr. F. J. Bird.

Medical Officer :—Dr. Harvey Nickoll.

Auditors :—Messrs. T. J. Lovejoy and D. R. Macdonald.

Nurse Superintendent :—Miss Johnson.

Life Members :—Hon. L. H. Bayly ; W. R. Blackman, Esq. ; H. C. White, Esq. ; W. Kite, Esq. (Bathurst) ; W. Smith, Esq. (Caerleon) ; R. J. Black, Esq. ; Matthew Morton, Esq. ; J. L. Brown, Esq. (Caigan) ; John Miller, jun. ; V. J. Dowling, Esq. ; R. Rouse, Esq. ; E. A. Nardin, Esq. ; W. Kellett, Esq. ; S. H. Barnes, Esq. ; A. H. Cox, Esq. ; Geo. Fishburn, Esq. ; Hon. G. H. Cox ; Mrs. G. H. F. Cox ; Mrs. A. H. Cox ; H. Crossing, Esq. ; Sir J. G. L. Innes ; Jas. Atkinson, Esq. ; J. D. Cox, Esq. ; W. Wilton, Esq. ; Evan Richards, Esq. ; Mrs. Evan Richards.

REPORT OF THE COMMITTEE OF THE MUDGEE HOSPITAL FOR THE YEAR 1895.

Your Committee have great pleasure in reporting that the affairs of the institution continue in a highly satisfactory condition. The staff have creditably discharged their duties, and the great number of patients admitted during the twelve months has fully taxed their energy. Since we presented our last report several improvements have been effected on the premises, thereby adding comfort to the patients and value to the property. The main building has been covered with galvanized iron at a cost of £83 5s. 5d. Your Committee, like all governing bodies, have felt the acute depression, whereby their finances have suffered, still they are grateful withal for the present position of their funds. From the Hon. Treasurer's balance-sheet it will be found that the credit balance in Bank is £31 14s. 4d. less than at the commencement of last year. Your Committee desire to place on record their high appreciation of the services of those ladies and gentlemen who gave assistance on Hospital Sunday, at the annual ball, and with subscription lists, and would earnestly solicit a continuation of the same in the interests of the hospital. During the year your Committee have been called together 13 meetings as follows :—D. Cassin, 12 ; W. Sherry, 12 ; Archdeacon Campbell, 11 ; W. L. B. Brown, 11 ; W. Little, 9 ; W. F. Kellett, 9 ; R. M. Hunter, 9 ; G. D. Young, 9 ; E. Deane, 8 ; O. E. Norris, 8 ; C. H. Tuckerman, 8 ; Rev. J. Woodhouse, 7 ; Rev. Dean O'Donovan, 7 ; E. Clarke, 7 ; Jas. Loneragan, 6 ; Rev. C. W. Willis, 4 ; J. C. Gunnell, 4 ; F. J. Bird, 4 ; J. H. Parker, 3 ; P. J. Rheinberger, 3 ; F. Carpenter, 1 ; John Lee, 1 ; C. D. Meares, 1.

MEDICAL

£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.		
G. F. Antel	0	2	6	Cricket Match	0	8	6	(Collected by Ah Coocy.)	J. Hill	0	5	0	
C. Barker	0	2	6	Mr. Fletcher	0	5	0	Ah Coocy	A. Paterson	0	5	0	
M. J. Sheppard	0	2	6	Bax and Bray	0	5	0	Ah Gun	(Collected by Sherry and Nelthorpe.)				
John O'Keefe	0	2	6	E. Scifleet	0	5	0	Lee Hoy	Mr. Anderson	1	1	0	
S. A. Ferrari	0	2	6	Mrs. M. A. Collins	0	10	6	G. R. Clark	Mr. Levan	1	0	0	
W. Stockley	0	2	6	A. Virgin	0	10	6	(Collected by Mrs. Thos. Laing, Hargraves.)					
Heaney & Saunders	0	2	6	C. Smith	0	10	0	Mrs. T. Laing	A. Roth, senr.	0	10	0	
J. O'Keefe	0	2	6	S. Tee Ong	0	10	0	James Crawford	W. Blogg	0	5	0	
W. Gillespie	0	2	6	C. Tomkins	0	2	6	Joseph Gotra	A. Harrison	0	5	0	
Gordon & Pateman	0	2	6	G. D. Young	1	0	0	James Faulkner	J. Morton	0	5	0	
J. Kegan	0	2	6	W. Imber	1	0	0	Geo. Morton	P. Hunt	0	5	0	
D. Howard	0	2	6	Mrs. J. Miller	0	5	0	Samuel Joyce	T. Hooper	0	5	0	
G. W. Kennewell	0	2	6	A. H. Cox	1	0	0	A. Hayley	R. K. Cox	0	5	0	
J. Saap	0	2	6	(Collected by W. G. Bell.)			John Petrie	0	1	0	0	0	
Miss M. Mahon	0	2	6	W. G. Bell	2	0	0	Wm. Presby	F. Campbell	0	5	0	
W. Taylor	0	2	6	W. Gillham	0	2	0	J. Brownlow	A. Roth, junr.	0	5	0	
W. Campbell	0	2	6	Geo. Tarrant	0	5	0	Jas. Hill	J. Langbridge	0	5	0	
P. Atkinson	0	2	0	E. Gillham	0	3	0	Wm. Pilly, junr.	F. W. Hill	0	5	0	
J. Caplin	0	2	0	Miss E. Curran	0	3	0	James Sullivan	W. Mahon	0	2	6	
J. Macnamarra	0	1	0	S. Page, junr.	0	2	6	C. Williams	(Collected by J. B. Malvern, Havilah.)				
G. Swords	0	1	0	Wm. Grant	0	10	0	Gee Lee	John Riley	0	5	0	
G. Marshall	0	1	0	James Grant	0	2	6	J. Carty	J. B. Malvern	0	5	0	
Mrs. Goodridge	0	1	0	A. Dawson	0	2	6	Gas. Bennett	Joseph Harrison	0	2	0	
J. Boyling	0	1	0	James Casey	0	5	0	Gilbert Hickey	Ted. Gannon	0	2	6	
(Collected by Mrs. Smith, Perry-street.)			W. Grinold	0	2	6	E. Harris	T. and T. Laing	Chas. Barton	0	2	0	
Mrs. Crawford	0	5	0	E. Harris	0	2	6	Martin Carty	Wm. Mahon	0	2	6	
A. F. Stocks	0	12	0	S. Page, senr.	0	5	0	F. A. Wilcox	John Ryan	0	2	6	
Mr. McLaren	0	2	6	George Harris	0	2	6	Joseph Wilcox	Edward Baylies	0	2	6	
J. Winn	0	2	6	H. Gillham	0	2	6	Joseph Robinson	Herbert Potts	0	2	0	
W. Bonfield	0	2	6	J. T. Page	0	2	6	Sergt. Travers	James Gaffney	0	2	6	
— Crawford	0	2	6	S. J. T. Page	0	2	6	Thos. Lonragan	Thomas Milton	0	2	6	
R. Gunn	0	3	0	Edwin Woolley	0	10	0	Mrs. W. W. Keen	C. Wilson, junr.	0	2	6	
J. Smith	0	1	0	D. McPhee	0	2	6	H. Keach	Wm. Malvern	0	2	6	
Miss S. Keech	0	2	6	Miss N. Kearns	0	2	6	Mrs. McGregor	John Joyce	0	2	6	
P. Donlan	0	2	0	H. Keach	0	5	0	Mrs. Ensor	Alfred Keech	0	2	6	
Mrs. S. J. Smith	0	7	6	(Collected by Mr. A. A. Suttor.)			Mrs. A. Stuart	0	2	0	0	0	
(Collected by the Rev. C. W. Willis and A. F. Cameron.)			A. A. Suttor	0	10	0	W. Milton	0	2	0	0	0	
Rev. C. W. Willis	1	0	0	H. Baschke	0	2	0	D. Cleary	0	4	0	0	
A. Virgin	0	10	6	T. W. Colley	0	2	0	E. Cassidy	0	1	0	0	
E. Scifleet	0	5	0	A. Lawson	0	1	0	B. Stuart	0	2	6	0	
A. E. Thomas, Boot Factory	1	1	0	F. Lawrence	0	2	0	J. Pilly	0	2	6	0	
W. Marsh	0	10	0	J. Pilly	0	2	0	E. Mitchell	0	1	0	0	
(Collected by Rev. J. Woodhouse and A. F. Cameron.)			J. Lang	0	1	0	A. Friend	0	1	6	0	0	
Rev. J. Woodhouse	1	0	0	Mrs. Lang	0	1	0	(Collected by A. Macdonald, Burudgerie.)					
A. F. Cameron	1	0	0	W. Lang	0	1	0	A. McDonald	2	0	0	0	
George Hazeltine	1	0	0	W. H. Baker	0	2	0	Wm. Cox	0	2	6	0	
J. Atkinson	1	0	0	E. Bond	0	2	6	T. Cox	0	2	6	0	
Mrs. Wilson	0	2	6	Annie Faulkner	0	2	0	D. Cover	0	2	6	0	
(Collected by V. J. Dowling.)			(Collected by V. J. Dowling.)			T. Hundy	0	2	6	Henry Chambers	0	2	6
V. J. Dowling	1	0	0	V. J. Dowling	1	0	0	A. Raynor	0	2	6	0	
V. J. Dowling's employees	0	4	6	V. J. Dowling's employees	0	4	6	C. Connolly	0	2	6	0	
						G. Pauling	0	2	6	Collected by W. Little and W. Schotes	28	1	0

RULES AND REGULATIONS.

- I. That an annual meeting of the subscribers to the Mudgee Hospital be held in the month of January in each year for the purpose of electing the Committee of twenty-four, and transact business connected with the same, and that one fortnight's notice of the time and place of meeting be published in the Mudgee newspapers.
- II. That the Committee shall meet on the first Tuesday in every month—five to form a quorum.
- III. That during the interval between the meetings of the general Committee, the affairs of the hospital shall be under the provisional management of a visiting Committee, consisting of not less than two members, who shall each hold office for two months consecutively, one member retiring each month, and he shall not be eligible for re-election for three months.
- IV. That a donation of £10, in one sum, shall constitute the donor a life member, who shall be entitled to exercise the privileges of an annual subscriber.
- V. That subscribers shall be entitled to vote at all general meetings of the hospital, and to recommend patients for admission as hereafter provided.
- VI. That any five subscribers be empowered to demand that a special meeting of the subscribers be called to transact any business connected with the institution.
- VII. That the Medical Officer be required to attend the hospital daily, or oftener, if necessary, and to make a record of each visit.
- VIII. That the Medical Officer be required to keep a book, entering the names of all persons received into the hospital, together with the age, occupation, religion, and ailment of every such patient, also the date of his discharge, or whether cured or otherwise. A special entry shall be made of all operations performed, with particulars of the same. The book so kept to be open at all times for the inspection of any member of the Committee. Furthermore, the Medical Officer shall cause a card to be placed at the head of each patient's bed, stating age, occupation, and religion.
- IX. That no account or salary be paid by the Treasurer until passed by the visiting Committee, and confirmed by the General Committee.
- X. That the funds of the hospital be deposited in the Bank of New South Wales, Mudgee; cheques to be signed by the Treasurer, Secretary, and one of the clergymen.
- XI. That the Committee prepare a report of its proceedings, and submit it for adoption at each general meeting, and that a copy of such report, together with all the rules and regulations connected with the institution, and the subscriptions for the past year, be forwarded to each subscriber.
- XII. In the foregoing rules "a subscriber" shall be held to be one who has paid for the current year a subscription of £1.
- XIII. That annual subscribers to the Mudgee Hospital be permitted to attend the Hospital Committee Meeting.

Rules for the Admission of Patients.

1. That every subscriber shall be entitled to two "patient's tickets," admitting patients into the hospital, for every £1 annually subscribed. That the clergy of the different denominations, as well as subscribers, have the privilege of giving orders for admission to the hospital, countersigned by the Medical Officer.

II. That every person applying for admission to the hospital as a patient shall procure from a subscriber or clergyman a "patient's ticket," which shall be signed by such subscriber or clergyman, and countersigned by the Medical Officer. In the case of a person who is in destitute circumstances and unable to pay, he shall be admitted as a non-paying patient, in which case the ticket must be further signed by a member of the Committee.

III. Every "patient's ticket" shall have printed on the back thereof an agreement to pay an amount per week to be fixed by the visiting Committee, but in no case to exceed 3s. per day during his stay in the hospital; such tickets to be received by the matron and handed over to the custody of the Secretary.

IV. In cases of patients requiring private wards, applications should be made to the matron, and in such cases the visiting Committee shall fix the amount to be paid.

V. That the Medical Officer's sanction be required in all cases for admission, except those arising from accident, which shall be admitted immediately. Any other cases of emergency shall be taken into the reception room until seen by the Medical Officer.

VI. The following cases not be admitted, viz., incurable cases; chronic cases, such as inveterate ulcers of the legs, &c.; pregnant women; lunacy; infectious diseases, such as small-pox, itch, &c.; confirmed consumptives.

Ward Regulations.

- I. No smoking will be allowed in the wards.
- II. Patients will not be allowed to receive anything from their friends except by permission of the Nurse Superintendent.
- III. Patients absenting themselves without leave will not be allowed to return.
- IV. No gratuity of any kind is to be given by the patients or their friends to any officers or servants of the Institution.
- V. Persons having complaints are to communicate them to the Medical Officer, the Visiting Committee, or one of the clergymen.
- VI. Convalescent patients will be expected to assist, as far as they are able, in the work of the Institution.
- VII. Strict obedience to the directions of the Medical Officer and Nurse Superintendent from all patients will be insisted upon.

Patient's Ticket.

ADMIT THE BEARER

into the Mudgee Hospital as a paying patient, subject to the Rules and Regulations of the Institution.

Subscriber (or Clergyman).
Medical Officer.

N.B.—In the case of a non-paying patient this ticket must be further signed by a member of the Committee.

Date 189 . Member of Committee.

(To be printed on the back of the ticket.)

I hereby agree, in consideration of my receiving treatment at the Mudgee Hospital, to pay to the Treasurer of the Mudgee Hospital, on demand, a sum of money, to be fixed by the Visiting Committee, at a rate not exceeding 3s. per day.

Date 189 . Patient.

Memo.—Amount fixed to be paid by the above patient is fixed at per day.

} Visiting
} Committee.

AN ACT TO FURTHER AMEND THE LAW RELATING TO THE MANAGEMENT OF HOSPITALS. [ASSENTED TO 31st OCTOBER, 1894.]

BE it enacted by the Queen's Most Excellent Majesty, by and with the advice and consent of the Legislative Council and Legislative Assembly of New South Wales, in Parliament assembled, and by the authority of the same, as follows:—

1. The Act fifty-fourth Victoria number twenty-eight is hereby repealed, and the Act eleventh Victoria number fifty-nine, hereinafter termed the Principal Act, is amended as follows:—

2. At any annual or special general meeting for the election of trustees of any public hospital within the meaning and under the operation of the Principal Act, and at the annual meeting for the election of the committee and auditors of any such hospital any contributor qualified to vote shall be eligible for election as trustee or as member of the committee, and any person, whether so qualified or not, shall be eligible for the position of auditor, but no person shall be elected to any of the abovementioned unless proposed and seconded by two contributors qualified as aforesaid, and unless nominated in writing at such meeting, the sanction of the person nominated having first been obtained, and such meeting shall be advertised in the nearest local paper at least a week before the day on which such meeting is to be held.

3. In the event of the number of persons nominated being greater than the number to be elected either for a committee, trustees, or auditors, the election shall be adjourned, and the hospital secretary shall, by advertisement in the nearest local paper, call a meeting for the purpose of such election for a day being not less than seven days nor more than fourteen days after the adjournment aforesaid, and shall forthwith transmit by post or otherwise to every contributor entitled to vote, a voting-paper initialled by the secretary containing the names of all the persons duly nominated, which voting-papers, with the names of those persons struck out whom the persons voting do not desire to vote for shall be enclosed in an envelope endorsed "voting paper," which envelope shall be enclosed in another envelope bearing the voter's signature inside, and returned to the secretary not later than the day before that to which the meeting is called for the purpose of the election, and all such envelopes endorsed "voting paper" as aforesaid shall be handed by the secretary to the scrutineers appointed at such meeting, who after counting the votes shall present a signed return to the adjourned meeting, showing how many votes were recorded for each person nominated, and the chairman of such meeting shall declare those persons elected who have received the majority of votes.

4. No person shall be qualified to vote at any annual meeting of contributors to any such hospital for the election of trustees or any committee of the said hospital, or on any question brought before such meeting aforesaid, unless he has paid to the hospital a contribution of £1 sterling at the least at any time between the commencing of business at such meeting and the commencing of business at the preceding annual meeting, or has contributed and paid £10 in one sum to the said hospital; and no person shall be qualified to vote at any special general meeting of contributors to any such hospital for the election of trustees or any question brought before such meeting unless he has paid to the hospital a contribution of £1 sterling at the least at any time during the twelve months preceding the day for which the meeting is called, or has contributed and paid £10 in one sum to the said hospital.

5. After the passing of this Act, notwithstanding anything contained in the Principal Act or any amendment of the same, the treasurer shall be appointed annually.

6. The committee of any hospital as aforesaid shall appoint—
- (i) The treasurer, secretary, medical officer, warden, matron, and any other officer or servant they deem necessary for the efficient working of such institution, anything in the Principal Act to the contrary notwithstanding.
 - (ii) And make rules for the conduct of business at meetings of the said committee and generally for the management and control of any hospital for which such committee has been elected.

7. When any member of the committee of any hospital as aforesaid dies or resigns or becomes non compos mentis, or refuses or becomes otherwise unable to act as a member of such committee, the committee may declare that such person has ceased to be a member of such committee, and may in like manner appoint a qualified person in his place; and the person so appointed shall have the same rights, powers, and authorities as the person had in whose place he has been so appointed.

8. Whenever by proclamation under section 11 of the Principal Act, the provisions of the said Act shall be extended to any hospital, then :—

The auditors and committee of such hospital, at the date of such proclamation, shall hold their respective offices, and shall to all intents and purposes be vested with the same rights, powers, and authorities in law, as if they had been duly elected under the provisions of the said Act and any Act amending the same.

(ii) At the first annual meeting of contributors to any such hospital after the date of such proclamation as aforesaid, every person who has, at any time within twelve months prior to the commencing of business at such meeting, paid to the hospital a contribution of £1 sterling at the least, or has contributed and paid £10 in one sum to the said hospital, shall be qualified to vote for the election of trustees or any committee of the said hospital, or on any question brought before such meeting.

Exhibit C.

9234 HOSPITAL—MRS. BEATTIE.
Rhu. Crete Co., ʒiv.
ʒj 4 h. H.N.
18/6/97

Exhibit D.

9249 MRS. BEATTIE.
R. Mag. Sulph., ʒii.
M. Rhei. ti., ʒii.
Sq. Zingiton, ʒss.
Aq. ad. ʒvj.
M. ʒss. 4 h. x c. H.N.
19/6/97.

Exhibit E.

9253 MRS. BEATTIE.
R. Bismuth Bent., ʒiiss.
Porsalient, ʒii.
Liq. Hyd. per. ch., ʒiiss.
Sprts. Alt'a ch., ʒj.
Mist. Nayos.
Sy. O.S.
Aq. ad. ʒiv.
M. ʒss. 3 h. x c. H.N.
20/6/97.

Exhibit F.

Sir, Board of Health Offices, 127, Macquarie-street, Sydney, 1 December, 1897.
As it has recently been found that a number of the country hospitals, which receive a subsidy of £ for £ from the Government, do not clearly understand the conditions upon which such subsidy is granted, I have the honor, by direction of the Colonial Secretary, to inform you :—

1. That the Government subsidy of £ for £ is given on the condition that the hospital admits all accidents and urgent cases brought to its doors.
2. That all destitute cases recommended by the Police Magistrate or other approved officer (among whom must be considered the Government Medical Officer and the chief local officer of police) must be admitted without delay ; and
3. That cases of fever, erysipelas, and other infectious diseases must be admitted, as well as ordinary cases, and suitable provision made for their accommodation and treatment.

Should the hospital authorities refuse or neglect to admit any suitable patient who has been properly recommended, the necessary arrangements will be made for the treatment of such elsewhere, and the expense thereof deducted from the next annual subsidy.

I have, &c.,

F. NORTON MANNING,

Medical Adviser to the Government.

The Honorary Secretary, Hospital Committee.

[Exhibit G.]

Pipeclay, 5 July, 1897.

STATEMENT of William Trafford to the committee of the Mudgee Hospital, asking for a further inquiry into the case of the late Mrs. Beattie, who was turned out of the Mudgee Hospital in a dying state last Thursday afternoon, and who died the same night :—

"I beg to state that, being a witness, I was not allowed to ask questions, nor address or speak to any of the jury, and that left Dr. Nickoll and the matron to have it all their own way. You will see by the evidence of Dr. Nickoll and the matron they say Mrs. Beattie was cured of diarrhoea. Dr. Lester, in his evidence, said that in *post-mortem* examination he saw traces of diarrhoea, and if he is asked he must acknowledge that Mrs. Beattie was not cured of diarrhoea. I know all about the arrangements in regard to Mrs. Salsbury. The matron never said a word to Mrs. Beattie or to me about going to Mrs. Salsbury. The matron told Mrs. Beattie that her father had come to take her home. Before I put her foot on the step of the cart I saw blood. I stooped to do something to her boots and stockings, and the blood trickled on to my hand. I did not know at the time where it came from ; I thought it was a relapse of diarrhoea. The letter sent to me by the matron, by order of Dr. Nickoll, said I must take her home. They knew it was 5 miles to Buckaroo, and if I did not take her they would send her home by the coach at my expense. The matron said Mrs. Beattie did not complain about going out of the hospital. The woman patient said she heard Mrs. Beattie tell the matron before she left the room she was not fit to leave the hospital. She also states that she was looking over the balcony, down to the steps, and heard Mrs. Beattie say to me, 'Father, I am not in a fit state to leave the hospital.' I have no hesitation in saying that turning Mrs. Beattie out of the hospital in that state caused her death. Before I left Mudgee I spoke to three of the committee ; they all said she looked very bad. I told them I would take her home at the risk of the doctor and matron. She told me after I had got her in the cart that she felt that she was dying, and she was sure she would never reach home. I am sure it will never be safe for anyone to go into the Mudgee Hospital after what has taken place, for everyone is crying out about Dr. Nickoll. Everyone I speak to says they will never give another shilling to the hospital while Dr. Nickoll is at the head of it. Everyone I speak to says there should be a second doctor, and that is my way of thinking, and that would put a check on him. I have told Dr. Nickoll more than I shall tell you, for I know him, and if the committee will give me a hearing, I have a lot of complaints against Dr. Nickoll. I do hope and trust the committee will make a searching inquiry, for it is one of the most cruel cases ever came before the public, for a poor creature to be sent to an untimely grave, and to leave behind all those poor children. It appears to me that Dr. Nickoll has often been questioned, and always escapes ; but I hope it will not be the case this time, for it is well known that he is very careless. There is a great number of people say that Dr. Nickoll is not a fit man for the position he holds, and I am of the same opinion ; and I do hope and trust the committee will wipe him out and put some other doctor in his place, for I am sure we have better men than ever he was. This letter can be made use of in any way the committee think proper.

I am, &c.,

WILLIAM TRAFFORD.

I know there is no time on Tuesday night to give it proper consideration. I will ask the committee to call a special meeting and allow me to address the committee myself. I have a complaint to make against the doctor for blinding William Brewer; and I am sure I can prove to the committee that he caused Mrs. Beattie's death. I will call the attention of the committee to Mr. Bird, to the Rev. Archdeacon Campbell, also Mr. Steward and Mr. Sherry. They can tell you about the state of Mrs. Beattie. I told them I would take her home at the doctor's risk; but I was sure that Mrs. Beattie was in a dying state when I took her from the hospital.

WILLIAM TRAFFORD,
Care of H. Barton,
Pipeclay Creek, near Mudgee.

Exhibit H.

[Extract from minutes of proceedings at meeting of Mudgee Benevolent Society, June 29th, 1897.]

THE case of Mrs. Beattie was discussed, and Mrs. Daly said she would make inquiry about her from people who lived in the neighbourhood. The secretary mentioned that Mrs. Salsbury would keep her in her house and attend her for ten days for £1, or go to her house and attend her at the time for 10s., food to be supplied by Society. The Secretary was instructed, after receiving further information, to use her own discretion in the matter as to which course to follow. The secretary mentioned that, hearing of Mrs. Beattie being ill, she, after consultation with treasurer and Mrs. Willis, got Mrs. Salsbury to go out and see her. Mrs. Salsbury brought her in, and next day Mrs. Beattie was admitted to hospital.

A. CADELL.

Exhibit I.

[Copy of List of Convictions.]

PARTICULARS of conviction and history of John Rodgers, *alias* Roberts, *alias* Jones, *alias* Caroline, transferred from the gaol at Parramatta to Mudgee gaol, under authority of transmission warrant, dated 1st September, 1890:—

Name of prisoner—John Rodgers, *alias* Roberts, *alias* Jones, *alias* Caroline. Convicted—Parramatta Quarter Sessions, 9th October, 1886. Offence—Having stolen property in his possession. Sentence—Fourteen years penal servitude. Judge—Dowling. Recommendation or remarks—This prisoner was charged on five other charges, but no sentence was passed in either case. Previous convictions:—Forbes Quarter Sessions, 26th August, 1875; burglary; twenty-one months hard labour. *Penrith Police Court, 18th June, 1886; stealing, two charges; two months hard labour on each charge, cumulative. General conduct in Mudgee gaol—Good. Personal description of prisoner:—Name, John Rodgers, &c; born in Liverpool, England, 1823; arrived in Colony per ship "Great Britain" in the year 1852; religion, Church of England; trade or occupation previous to conviction, labourer; height, 5 feet 5½ inches; colour of hair, brown to grey; eyes, brown; education, read and write.

Anthony Wrench, *alias* Trafford, *alias* Roberts, *alias* Caroline.

Per ship "Architect," 1853, free; born about 1830; native of Lancashire; 5 feet 6 inches high; sallow complexion, light brown hair, hazel eyes, large nose, sharp chin, two moles left shoulder-blade.

Tried at Pleasant Creek, 13th May, 1858, vagrancy; two years. Tried at Bullarah, 21st June, 1858 (same year), burglary; sentence, four years (sentences cumulative). Received ticket-of-leave 7th May, 1861, for the district of Melbourne. (*Vict. P.G.*, 1861, page 199.)

Arrested by the detective and general police, January, 1862, at Back Creek, Carisbrook, for stealing fowls; escaped from the lock-up whilst in custody on this charge. When arrested, the boots and coat stolen from the tent of Edward Webster, Back Creek, were found in his possession, but he was not charged, as the owner was absent in New Zealand. (*Vict. P.G.*, 1862, pages 3 and 8. *Vict. P.G.*, 1861, page 452.)

Ticket-of-leave was transferred about 1st October, 1861, to Avoca district, to report at Redbank. (*Vict. P.G.*, 1862, page 18.)

Reported illegally at large. Arrested by the Burnt Creek police, under the name of John Caroline. Remanded to Pentridge, with a recommendation that his ticket-of-leave be cancelled for three months. (*Vict. P.G.*, 1862, page 16. *Vict. P.G.*, 1862, pages 71, 89.)

Received ticket-of-leave again in May, 1862, for the district of Melbourne. (*Vict. P.G.*, 1862, page 190.)

Reported illegally at large, July, 1862. (*Vict. P.G.*, 1862, page 267.)

Arrested by the detective police, Sydney, 4th February, 1865, for burglary on the premises of Messrs. Dawson and Stewart, Brisbane, January, 1865. Escaped from the Central Police Lock-up, Sydney, 5th February, 1865. (*Vide N.S.W. P.G.*, 1865, pages 207 and 47.)

Arrested by the Queensland Police in May, 1865, and sentenced to ten years' penal servitude for burglary. Discharged, under remission, to freedom, 28th October, 1872. (*Vide Queensland P.G.*, 1872, page 90.)

Exhibit J.

[*The Mudgee Guardian*, July 16, 1897.]

THE LATE HOSPITAL STIR—TO BE FURTHER INVESTIGATED.

It is indeed gratifying to find so many in the community commending us for the determined front we have assumed in demanding further and more searching inquiry into the circumstances surrounding the death of the unfortunate woman, Mrs. Beattie. Telegrams and letters encouraging us to go on have been received from as far out as Coonamble. We are glad to receive such expressions, because the position we have assumed is to us singularly critical and trying. We realise that the burden of fastening the responsibility of that poor woman's death on the proper shoulders involves a most serious task. It is gratifying also to be able to tell well-wishers that the Hospital Committee has decided, as we suggested last week, not to constitute itself the tribunal for further investigation. At the meeting on Tuesday evening a resolution was carried with a view to having the matter sifted by the Board of Health. We are delicate about passing an opinion one way or the other on that point; still we cannot help thinking there need be no necessity to go altogether from home. If the authorities are to be consulted, we would suggest that no more competent conductor of an inquiry could be had than our Sub-inspector of police, with the Police Magistrate presiding, to take statements. A suggestion of this kind would be more likely to receive attention from the Department of Justice. Then let the hospital authorities judge as to how far the institution is affected. Both sides, we are sure, would be satisfied with such an inquiry, as the public would be also. Going for members of the Board of Health will involve expense, unnecessarily. The Sub-inspector of Police is already in possession of the facts so far as the Coroner's inquiry went, and the police would be the most likely people to ferret out the deficiencies—the missing links—which we assert emphatically were wanting to have brought about a condemnatory verdict. Even if the Board of Health is asked to assume the responsibility, and we doubt if they will undertake it, there must be certain conditions, especially that the parties, if there be parties, shall have the right to employ a solicitor. In any case this must be demanded. There will be plenty of scope for cross-examination. This granted, we have no fear of the result. Any other mock inquiry will not satisfy the brief we have undertaken on behalf of these orphan children and on behalf of an indignant public. We have had too much experience of inquiries conducted by the layman. Very recently we saw something like a farce under cover of the Public Service Board, when there was no counsel to shape and to curtail evidence. Indeed we have had the privilege of facing an examination before the Board of Health in Sydney, and were not impressed with the method of that august body's procedure. Certainly we would place the experience of our Police Magistrate with our Sub-inspector of Police far before the very formal, cold procedure of the Board referred to. We are sure the hospital authorities would have no objection to substituting the names of our two highest and most responsible local Civil Servants, whose procedure would be

* Prisoner was serving these sentences when convicted at Parramatta Quarter Sessions.

in accordance with the practice of a Court of Justice. This is all we ask; but we shall press the point to have the right to fee a solicitor to uphold our contention. We are not levelling a general charge against the hospital. There may be overwhelming evidence of general goodness. But in this case the points we want cleared up are: How long before the discharge of Mrs. Beattie was she seen by the medical officer? And most important of all: Was Mrs. Beattie in a fit state to leave the hospital at the time she was discharged?

This is the serious feature of the whole business, to our mind—not what the old man, Trafford, said to the matron, or what the matron said to Trafford. As for what might have transpired between the sick woman and the nurse, we are not going to take sides. The woman is silent for ever, and nothing short of a resurrection will clear up this point. The old man, Trafford, is dubbed from the outset a hoary-headed old fabricator; still it is possible he has been repeating no more than his stepdaughter told him when no one else was present to hear.—which is quite a reasonable conclusion that a patient in the hospital will tell a visiting relative, one's stepfather, all his or her grievances, real and imaginary. In connection with our case we do not for one moment intend blending Trafford's statements with the two questions set up above. We do not say for one moment that Trafford is a vile old perjurer, as some put it, because he is corroborated by the girl Ada Sparrow in one particular, and where he might have been supported or contradicted by the members of the Committee whom he saw, we have not yet had opportunity of hearing the gentlemen examined. Of course, in the event of a new inquiry, these gentlemen must be heard; and we would impress on them at this stage that they have to bear testimony for or against the dead, and now, whilst everything is fresh to their mind, to make note of every word Trafford said to them, and what they said to him, and as to the state of the woman when they saw her. This is the time for each of the gentlemen referred to to use pencil and paper. In a month's time memory might fail them. Of course, these gentlemen are not to blame. They could not know that the woman was likely to die. No doubt any one of them would have heeded the appeal of Trafford; but the patient was out of the hospital, and she was discharged by the doctor's order, and according to the rules of the institution there is but one doctor, and for the time being he must be the one controlling cockbird of the roost. Why, some ask, is the *Guardian* so much concerned that it takes this stubborn stand? Simply because we are aiming for future reform in hospital matters, and because that unfortunate creature died a death of torture, and that that death might have been averted. We are not hankering after popularity, but are prompted by that feeling which makes us picture some other mother, some other wife, someone's daughter in poverty, amongst strangers, thrust out of an institution to die within a few hours; and Mrs. Beattie was thrust out—no one can say to the contrary. She had to go, when, it is said, she was not fit to go. True, she was only a pauper; but she was a mother. She had little children at home in the bark humpy—little children that she probably loved as dearly as any mother who reads this loved her offspring. What more natural than that the unfortunate creature, six weeks before her expected confinement, would prefer to go home to the bark humpy to see those little children from whom she had been separated for three weeks—aye, chose to go to her children, to go out in a spring-cart, in the agony of what was her travail, perhaps bent on seeing her little ones. Because if she was fit to leave the hospital she was fit to be at home, even though the put-up cry of "Why didn't she go to Mrs. Salsbury" is the weakly, miserable wail of those who would not care if the woman did die like a dog, so long as somebody we are not now able to name is not made to bear the burden of woman-slaughter. Supposing, for argument sake, that there had been no Mrs. Salsbury's to be a kind of reception-house, according to the hospital authorities the woman was cured of her complaint, and she had to go. If she was not taken away she would be sent away. This view is not *Guardian* fiction either. We might say a great deal, but will not, and merely say this much now to justify ourselves in the position we have taken. If the woman had suicided after she left the hospital the case would be bad enough; but she died by inches—actually bled to death; died sooner than had she opened a main artery. And men stand up to hush up the horror. Some of them look askance at us because we, too, will not hush the thing. "Leave it where the Coroner's jury left it," says one who ought to know better. No, no; though the victim was an obscure creature of God, she had a soul as big, probably, as the soul of any ministering angel on earth, male or female. As we said last week, the Coroner's jury stopped short, and now we want more. We must hear new testimony; we must have former witnesses over again, and cross-examined. Then, and not till then, will the proper verdict be wrung out; then, too, will our detractors now join with the thousands of others throughout the north-west district in the praises of our humble, yet earnest, effort to expose a wrong done to a fellow-being gone from all earthly aid. Let the hospital committeeman who wants to "hush it up" picture his own wife, the mother of his sons and daughters, dying under such circumstances, and probably he would not be as calm as was the husband of the deceased woman in the most trying time—whilst the *post-mortem* examination was being carried out. Let anyone ask Constable Dolman, who was present. The constable had almost to drive off the big, weeping husband, who was with difficulty restrained from bursting in upon the scene. "They're cutting up my poor wife," said the frantic man. Hush it up, they say! Not if we know it—not until the inquiry we must have is an accomplished fact, and things not yet recorded are recorded. If we fail, then at all events we shall at least have the consolation of knowing that we have manfully and fearlessly done our duty to the community, and towards that poor, destitute, obscure woman.

HOSPITAL COMMITTEE MEETING.

THE Ven. Archdeacon Campbell was voted to the chair at the special meeting of the Hospital Committee on Tuesday evening, and there were also present the Revs. R. H. Rickard and C. W. Willis, and Messrs. E. H. Deane, J. C. Gunnell, W. Sherry, D. Cassin, O. E. Norris, C. H. Tuckerman, W. C. Carter, Geo. Stewart, F. J. Bird, W. A. Marsh, Geo. Cadell, H. S. Thomas, W. F. Kellett, W. Little, W. Shaw, and W. Bishop.

The first business taken was the letter from Dr. Lester with reference to a patient named Horne, which had been referred to Dr. Nickoll for a reply. Dr. Lester's letter was read as follows:—

"To Mudgee Hospital Committee.

Gentlemen,

Mudgee, 30 June, 1897.

On the 14th June I was consulted by a patient of mine named Horne. An operation was necessary, and as he could not afford a private operation he said he would have to go to the hospital. I explained to him that the case would be taken out of my hands, but I would write to Dr. Nickoll and ask him to let me know when he intended to operate, as Horne wished me to be with him and administer the chloroform. Dr. Nickoll has not yet replied to my letter, although he told my groom that "he would answer my letter in the morning."

I wish to know, in the event of any patients of mine wishing hospital treatment, can I (or otherwise) attend them? I attach a copy of my letter written to Dr. Nickoll.

I am, &c.,

CHAS. E. LESTER.

[COPY.]

To Dr. Nickoll.

Dear Sir,

A patient of mine, named Horne, from Havelah, intends going into the hospital. He wishes me to give chloroform. Acting on the advice of one of the visiting committee I am writing to you. Will you please let me know when you intend to operate.

Yours, &c.,

CHAS. E. LESTER.

Dr. Nickoll's letter was as follows:—

"Gentlemen,

Mudgee, 13 July, 1897.

"I beg to acknowledge the receipt of your letter dated July 7, enclosing a letter from Dr. Lester, and asking me for an explanation.

"On June 14th I received a message to see a man named Horne staying at Mr. W. Campbell's house. On seeing him I found that an operation would be necessary, and when I told him so he said that he had no means, and would like to be taken into the hospital. I told him to get a ticket, and that he would be admitted.

"The following day Dr. Lester's groom met me in Mortimer-street and gave me the enclosed letter. I read it at the time and said that I would reply to it the next day, as I was then going some distance out of town. Up to this time I was unaware that Dr. Lester had seen the case. I saw Horne shortly after this, and in the presence of Mr. W. Campbell I told him that I had received a letter from Dr. Lester, and asked him if it was a fact that he wished Dr. Lester to give him chloroform. He replied that he did not wish it. I then asked him whether he had expressed any desire at all for Dr. Lester either to give him chloroform or be present at the operation. He replied that he had not done so, but that Dr. Lester had suggested it to him.

"As

"As these facts put such a very different complexion on Dr. Lester's letter, I thought it would save more unpleasantness by leaving it unanswered.

"I return Dr. Lester's letter, also the one sent to me, and a statutory declaration made by Horne."

Accompanying this was a statutory declaration from the man Horne :—

"I, William Horne, of Bara Creek, miner, do hereby declare and solemnly affirm that—

"1. I am at present a patient in the Mudgee Hospital.

"2. On Monday, June 14 last, I came to Mudgee and went to see Dr. Lester. He told me an operation would be necessary, and what his charge would be for same, and I was to think over it before deciding what I would do. On thinking it over I decided to go into the hospital, and I went to Dr. Nickoll to come and see me at Mr. W. Campbell's. On Monday afternoon (before Dr. Nickoll came) Dr. Lester came to Mr. Campbell's, and I then told him that I had decided to consult Dr. Nickoll, and that I had sent for him to come and see me, and that I meant to go into the hospital for treatment. Dr. Lester then asked me if I would ask Dr. Nickoll to let him (Dr. Lester) administer the chloroform to me, and I said I would.

"3. That same evening Dr. Nickoll came to see me at Mr. Campbell's. I did not tell Dr. Nickoll that I had previously been to Dr. Lester. I did not mention Dr. Lester's name to him at all, nor speak to him about the chloroform. Dr. Nickoll examined me, and it was arranged I should go into the hospital and be operated on.

"4. On the next day Dr. Nickoll came to me at Campbell's as to a letter he had received from Dr. Lester. He asked me whether I had expressed any wish for Dr. Lester to administer chloroform to me. I told him I had not, but that Dr. Lester had asked me if I would ask Dr. Nickoll that he (Dr. Lester) might administer chloroform to me, and that I said I would ask. Dr. Nickoll then said that Dr. Beith was in the habit of administering chloroform at the hospital, and I then said I did not care which doctor administered it. A day or two after this Mr. Sherry spoke to me on the same subject, and I told him the same as I had told Dr. Nickoll.

"5. I did not at the time I first consulted Dr. Nickoll, nor at any time afterwards, express any desire for Dr. Lester to give me chloroform, as I did not consider myself a patient of Dr. Lester's, and I did not care who administered the chloroform to me."

The declaration was signed by Horne, before Mr. William Bishop, J.P.

Mr. Cassin said he did not see that they could do anything beyond intimating to Dr. Lester the contents of the declaration. He proposed, "That a letter be written Dr. Lester, stating that a declaration had been made contradicting his statements."

Mr. C. H. Tuckerman seconded.

Mr. O. E. Norris thought they were not going far enough. With reference to this particular matter the motion would answer the case; but Dr. Lester asked if any patient admitted desired him to give chloroform whether he would be permitted to administer it. There ought to be a direct answer of yes or no to this question.

Mr. Cassin thought that in view of the correspondence read, it would be very unwise to force Dr. Lester into the hospital. If they trusted their medical officer they should allow him to elect with whom he would practice.

Mr. Norris said Dr. Lester might write again unless they gave him a direct answer. The Committee should say that Dr. Nickoll was authorised to select his own medical assistant.

The Chairman thought it was usual among professional men to do this.

Mr. Cassin moved, "That under the circumstances the Committee did not think it desirable to interfere with Dr. Nickoll's desire in this matter." It would be unwise to force his hand.

The Rev. R. H. Rickard said it would be better to deal with the first motion, and then deal with the second part of the matter. He moved as an amendment, "That a copy of the declaration be sent to Dr. Lester."

Mr. E. Clarke seconded.

Amendment carried.

The Rev. R. H. Rickard submitted the following motion :—"That if any patient in the Mudgee Hospital desire the attention of any medical man other than the medical officer of the institution, he shall be allowed to call him in, but this committee will not be answerable for any financial responsibility for such attention, and such medical man shall not interfere in any way with other patients." In moving this he said: Everyone knows that if a man has a doctor who understands him he prefers that man to deal with him; and every medical man will admit that he can better deal with a case known to him than with a new case. Another point was that it would be a great gain to the hospital if this motion was carried, for patients of other doctors might wish to occupy the private wards. A patient of Dr. Beith's had told him some time ago that had he been able to have his own medical man he would have become an inmate of a private ward for seven or eight weeks; and, no doubt, there were other similar cases. This would be a gain to the hospital. Since they could, by adopting this, grant a convenience to the public, the public would justify them rather than condemn the committee.

Mr. W. C. Carter seconded the motion.

Mr. Caddell submitted that the motion should be ruled out of order. This matter should come before the general meeting of subscribers.

Mr. Cassin said that this was a matter Mr. Rickard did not understand. This matter had been submitted to the largest meeting of subscribers ever held in Mudgee, and was lost by two to one. The object then was to admit the three doctors to show the spirit of those introducing it, immediately it was lost they nominated Dr. Beith as medical officer, and this was defeated by five to one. He objected to divided responsibility. The medical officer must be responsible to the committee.

Mr. Clarke rose to a point of order, and asked for the Chairman's ruling.

The Chairman said he must rule it out of order.

Mr. Rickard asked for the reason for doing so.

The Chairman said he thought it was so important that the subscribers should have notice of it, and the committee should not be placed in a position of such responsibility.

Mr. Rickard said it was a matter of law, not an opinion. They had an amending Act since the meeting referred to, and that placed the whole responsibility on the committee, not the subscribers. This matter was not before the meeting spoken of.

Mr. Cassin said if this was carried every rule would have to be altered.

The Chairman said the rule said the committee should appoint a "medical officer."

Mr. Norris said there was an Act which stated that where necessary the singular should be read to mean the plural number.

Mr. Rickard : —

The Chairman : I must rule the motion out of order.

Mr. Rickard : With all due respect, Mr. Chairman, I submit —

Mr. Cassin : I think the chair should be supported. He objected to Mr. Rickard's contradicting the Chairman.

Mr. Rickard (in protest) : We are getting an opinion, not a ruling.

Mr. Norris said Dr. Lester was due the courtesy of a reply, as he asked a plain question.

Mr. Caddell moved, "That Dr. Lester be written to, stating that the committee could not interfere with the medical officer's arrangements."

Mr. Cassin seconded. Carried.

• PATIENT BENSON'S CASE.

The following letter was read from Dr. Nickoll relative to the patient Benson :—"This case was not admitted on account of his paralysis, but to try and modify, if not cure, a terrible lesion of large area, and extending down to the bones of his pelvis. His condition requires constant attention, and if he be removed from the hospital it should be to an institution for incurables. I have on more than one occasion discussed this case with members of the committee."

The Chairman said the question arose whether they should not take action to send Benson to Sydney, but he should have some say in it himself.

Mr. Clarke said that perhaps his friends would pay for his keep in the hospital rather than have him sent away. He moved that the secretary inquire.

Mr. Norris seconded. Carried.

THE CASE OF MRS. BEATTIE.

The secretary read the letters written and received with reference to the depositions of the recent inquest, and stated that so far the copy asked for had not reached him. Mr.

Mr. Cassin said that before going further he would like to submit a resolution that he thought would meet the case. It was:—"That having regard to the charges made against the doctor and matron of the Mudgee Hospital with reference to the death of Mrs. Beattie, and with a view of an impartial inquiry into the matter, freed from any suspicion of local feeling or prejudice, the secretary of the hospital communicate with the Chief Under Secretary, with a request from the committee of the Mudgee Hospital that the Chief Under Secretary will be pleased to direct the Board of Health to inquire fully into and report upon the subject matter of the said charges at an early date." It was exceedingly desirable that an impartial and qualified officer should be sent here to conduct an inquiry. The present state of public feeling was very injurious to the best interests of the hospital. If the committee would pass this resolution he was sure the trustees would do what they could to help in the matter.

The Chairman thought the officer should be sent at an early date. He was convinced they could do nothing without the depositions, as the newspaper reports did not agree in one instance. There was something in the *Guardian* that was not in the other paper as evidence of Miss McEwen. They all had the interests of the institution at heart, and came there to do the best for the hospital, not as partisans. They wanted to clear the matter up. He suggested that the Committee do not consider the letters of Mrs. Salisbury and Trafford.

Mr. Clarke seconded the motion. A great deal of feeling existed in the district, and as the matter was one out of the ordinary run of Committee work, and no matter what decision they came to, insinuations would be cast which he did not think should be cast on men who came there to assist in the management of the hospital, an inquiry by the Committee might be the means of causing unpleasantness among them. The best thing would be to get a person to investigate, who was in no way interested.

Mr. Little, who had come prepared with a resolution, read it for the information of the meeting, and was proceeding to speak, when

Rev. Mr. Willis rose to a point of order. Were they going to decide in the matter, or relegate it to someone else?

The Chairman ruled Mr. Little out of order. He would like Mr. Little, however, to bring his proposed new rule before the Committee later on, as it was a very admirable one.

Mr. Carter asked whether if the inquiry were held, the evidence would be published, as well as the report by the officer investigating. The evidence should be published as well as the result, as it would tend to do away with the ill-feeling now existing.

The resolution submitted by Mr. Cassin was carried.

It was resolved that letters, &c., in the case be withheld from the Press.

An anonymous letter was opened but cast aside.

It was resolved that as soon as word was received of the appointment of an official to conduct the inquiry that the Committee be called together to arrange for meeting him.

The meeting then adjourned.

Exhibit K.

[*The Mudgee Guardian*, 30 July, 1897.]

THE HOSPITAL CASE.—AN INQUIRY TO BE HELD.

At last we are in a position to definitely indicate that our representations to the Government in connection with the hospital case are likely to be adopted, as the following information by telegraph from the Press Association will show:—

"Sydney, Thursday.
"The Member for Mudgee saw the Chief Secretary, Mr. Brunker, with Dr. Ashburton Thompson, re the death of the woman Mrs. Beattie. The depositions taken at the coroner's inquest only reached the Board of Health last evening. A decision will be arrived at to-day as to proposed further inquiry. Dr. Thompson thinks with Mr. Brunker that the inquiry should be held by a police magistrate, assisted by himself as Chief Medical Officer of the Government, and such inquiry is likely to take place next week. Mr. Jones has urged prompt action. The authorities here look on it as a very serious case, and think an inquiry, stripped of all local considerations should be held."

It will thus be seen we have not been shirking our duty in this very painful affair. We have impeached the hospital administration, whether rightly or wrongly will be seen when the proposed inquiry is over. It is to be hoped the proceedings will be as free and open as it is possible to have them. We ask no more than the commonest case is granted in a Court of Justice. Every latitude must be given for the free and fullest examination of every person sworn. Thus far have we carried out our duty in this wretched affair. With a police magistrate presiding and the Chief Government Medical Officer of the Colony hearing the medical testimony, no more competent tribunal could be chosen to elicit and sift the intricacies that we hope to see unravelled, and set at rest for ever. It would be still better with our Sub-inspector of Police to assist. As we said in a previous article, we cannot bring that poor woman back to life, but we can prevent similar occurrences in future. No other poor forlorn "nobody" will be liable to similar fate; and those who enter the hospital will know that in the *Guardian* they have a watchman who will see that the institution is run for humanity's sake; who will see that the life of the poor stranger within our gates is as valuable as that of our own flesh and blood. Having said this much, let us now leave it for a scrutinising, anxious public to be the judges, when they have heard all.

Exhibit L.

[*The Mudgee Guardian*, 17 September, 1897.]

THE HOSPITAL MATTER.

SOME people are still to be found in our midst who say we have done the hospital harm by obtaining from the Government the appointment of the Commissioner to sit at the Court-house to further investigate the case of the unfortunate woman, Mrs. Beattie—*dead!* Only this week a Committee-man of the hospital, in his puerile impotency, told us so much. To us it is at least gratifying that our task has so far succeeded, and if all Mudgee raved at us, instead of a paltry handful doing so, we would still stand up and assert that the Coroner's inquiry stopped short, that there was other evidence which should have been forthcoming. We have never yet directly impeached anyone. We simply said there were grounds for further inquiry; we said also "that we could still build up a very strong case from fragments not on the depositions taken at the Coroner's inquiry," and next week we intend having these fragments adduced. We have not been idle all the time, and have succeeded in finding a deal of corroborative evidence to justify us in the stand we have taken. We are going to have the doctors under cross-examination. They are to be asked questions that were unasked by the Coroner, the police, or the jury. Archdeacon Campbell, Mr. Bird, and Mr. Stewart are to be asked to come forward and say what they saw. Knowing all this, "we ought to be silent;" this creature of the Committee comes forward, and tells us we "are doing the hospital an injury." It is the soulless, cringing apologist for a daylight wrong who has been doing the hospital injury. Our object is for the benefit of the poor, forlorn nobody—if they like to be looked at in that way—who has no place to die, if his or her time has come. Then, let them die in the institution, once they are there. But don't hunt them out—don't despise them because they have been unkept and poverty-stricken and friendless. And those who know anything of the *pauper* inmate (we must use the word *pauper*, because the hospital adopts it) know that the majority are poor and friendless. Mary Beattie was one of them. And as we have said previously, the living picture of that poor creature, almost crouching in the cart in front of the public-house door, where she was given stimulants to sustain her, haunts us still. Her piercing glance of agony, as we rode past, still fixes upon us as though from her grave, and which glance of agony wrung from us since the day of the inquest our determination to sift and sift the case to the bottom. So far we have scored all along the line—we checked the influence that seemed to have made the Board of Health tell the Colonial Secretary there was no case for further inquiry. A little later on we will get this Board's report, and show what kind of creatures are associated with that august body. But even there the influence did not stop. Bless you, they wanted further inquiry to be conducted by a medical man; yes, indeed, even that was resorted to, but people will talk, and we heard what was going on, and again we put the brake on. We want a fair and square inquiry, a full inquiry, and this will be the result of next week's proceedings, we believe. Mr. Love, who will conduct the case, is a Police Magistrate of experience, and just as he has disposed of big Police Court cases he will treat this hospital matter, only with greater latitude, and whatever the report of the Commissioner, free from professional or personal sympathies with anyone concerned, we will be satisfied. Then our duty in the unpleasant matter can end—our part as citizens of the community will be discharged—and as journalists who have always been to the front when gross wrong required exposure, we will have done all in our power, regardless of personal expense and frowns and misrepresentation, concerning which we shall say nothing at present.

Exhibit

Exhibit A 1.

Sir, Office of the Chief Medical Officer, Sydney, 22 July, 1897.
I am directed by the Chief Medical Officer to ask that you will have the goodness to let me have on loan the depositions taken at the inquest held on the body of Mary Beattie, at Mudgee, in the early part of the present month.

I have &c.,

C. A. SIMMS,

Secretary.

The Under Secretary for Justice, Sydney.

The depositions above referred to are forwarded herewith as requested.—G.M., B.C., 24/7/97. The Chief Medical Officer.

Re Inquest, body of Mrs. Beattie, near Mudgee.

Sir,

Mudgee Hospital, Mudgee, 8 July, 1897.

At a meeting of the Committee of the abovenamed institution held on the 6th instant, a resolution was passed directing me to apply for a copy of depositions taken at the inquest above referred to. Application has been made to the Coroner, Mr. W. J. E. Wotton, who states that all the inquest papers have been sent to your Department. I therefore beg to apply for a copy thereof. The Committee of Mudgee Hospital purpose making a searching inquiry into the death of this woman, and to aid them in so doing a copy of the inquest papers is asked. A special meeting of the Committee is called for Tuesday next, 13th instant, at 7.30 p.m.; will you therefore be good enough to let me have the copy on or before that date.

I am, &c.,

JOSEPH M. COX,

Secretary.

The Department of Justice, Sydney.

Submitted. As the depositions are required by the Committee of the hospital with a view to further inquiry, they might perhaps be supplied free of cost.—G.M., 9/7/97. Appd.—A.J.G., 9/7/97. Sec. Mudgee Hospital, 24/7/97. Put by, 24/7/97.

MINUTE.

Subject:—Mary Beattie—Inquest re death of.

Department of Justice, Sydney, 9 July, 1897.

Submitted. A copy of the verdict and rider of the jury at inquest touching the death of one Mary Beattie might be forwarded to the hospital authorities at Mudgee.

G.M.

New South Wales, }
to wit.

" Re Mary Beattie."

INQUIRY held at the dwelling-house of William Trafford, at Pipeclay, in the district of Mudgee, in the Colony of New South Wales, this 3rd day of July, 1897, before me, William J. E. Wotton, one of the Coroners of our Sovereign Lady the Queen for the Colony aforesaid, on view of the body of Mary Beattie, then and near there lying dead.

Upon the oaths of George Douglas Young, William Albert Marsh, Frederick William Smith, Henry Strickland Thomas, William James McDiarmid, John Loneragan, Eugene William Daly, Thomas Robert Randall, John Olly Mulley, George Hazeltine, William Frederick Kellett, George William Kenniwell, good and lawful men of the Colony aforesaid; who, having been sworn and charged to inquire (on the part of our said Lady the Queen) when, where, how, and by what means the said Mary Beattie came to her death, do, upon their oaths, say that:—We find that the said Mary Beattie, at Pipeclay, near Mudgee, in the said Colony, on the 1st day of July, 1897, died from collapse due to hæmorrhage attending premature labour, which was brought about by getting into and journeying in a spring cart a distance of about 6 miles upon the same day, and which journey was undertaken a short time after recovering from an attack of diarrhœa.

Rider:—"We suggest that it would be to the interests of all concerned for patients, especially in the condition of the deceased, to be thoroughly examined immediately prior to their discharge from the hospital."

In witness whereof, as well, the said Coroner as the Jurors aforesaid, have to this inquisition set their hands and seals, this day and year aforesaid.

WILLIAM J. E. WOTTON, Coroner,
GEORGE D. YOUNG, Foreman,
WM. A. MARSH, }
FRED. W. SMITH, }
H. S. THOMAS, } Jurors.
W. J. MCDIARMID, }
JOHN LONERAGAN, }

E. W. DALY,
THOMAS RANDALL,
J. O. MULLEY,
G. HAZELTINE,
W. FRED. KELLETT,
G. W. KENNIWELL, }

Jurors.

NEW SOUTH WALES, }

" Re Mary Beattie."

INFORMATION and depositions of witnesses taken on oath, before me, William J. E. Wotton, one of the coroners of our Sovereign Lady the Queen, for the Colony of New South Wales, this 3rd day of July, 1897, at the dwelling-house of William Trafford, at Pipeclay, in the said Colony, on view of the body of Mary Beattie, then and there lying dead.

Witnesses having been sworn:—

Frederick William Dolman sworn, states: I am police constable stationed at Mudgee; from information I received I reported the death of Mary Beattie to the Coroner yesterday morning, and from his instructions I proceeded to the Mudgee Hospital; I saw Dr. Nickoll first, and afterwards saw the matron; I asked her when Mary Beattie was discharged from the hospital; she said, "She left the hospital on the 1st instant at 1 p.m., where she had been for a fortnight"; I afterwards went to Pipeclay, about 5 miles from Mudgee, to the residence of William Beattie, the husband of the deceased, and there saw the body of Mary Beattie; I knew her personally; I examined the body, and found no external marks of violence on it; William Beattie, the husband, stated that she arrived home from Mudgee on the 1st instant, about 4 o'clock p.m., and that he accompanied her and William Trafford, her father, from Mudgee, and that she died about 9 o'clock p.m.; they came from Mudgee in a spring-cart.

Examined by Jury: I asked the matron whether she was willing to leave the hospital, and she said "yes."

Sworn and made at Pipeclay, on this 3rd day of }
July, 1897, before me,—

F. W. DOLMAN.

WILLIAM J. E. WOTTON, P.M., Coroner.

William Trafford, sworn, states: I am a labourer, and reside at Pipeclay; I have seen the dead body of Mary Beattie; she was the wife of William Beattie, and my stepdaughter; I took the deceased to the Mudgee Hospital, on the 18th June last, she was suffering from diarrhœa; I saw her again on the 1st instant; I went to the hospital for her in consequence of receiving the letter "marked H." purporting to be signed by E. McEwen, matron; when I arrived I saw the matron, and told her that on account of receiving her note I had come for Mrs. Beattie; I waited awhile, and Mrs. Beattie came walking downstairs without help; I went towards her as she seemed as if she was going to drop; she was very weak and quite exhausted; I had a lot of bother to get her into the cart; when she put her foot on the step I noticed something came down on to my hand, and saw it was a drop of blood; when I got in the cart she said, "Oh, father, I am dying, and you will not get me home"; she said, "Dr. Nickoll and the matron have killed me"; I said, "Do not talk like that—my wife will

will be home in a few days and she will get you all right"; I, noticing she was very ill, took her to Mr. Bird, the store-keeper, being one of the hospital committee; when I was leaving the hospital the matron stood at the door, jeering; I said, "You ought to be ashamed of yourself turning a woman out of the hospital in this state"; she said something about "bundling the woman out," but I could not catch the whole of it; the matron did not hear the deceased say she was dying; I did not say to the matron before I got her in the cart that she was not in a fit state to leave the hospital; eight days after I had taken deceased to the hospital I went to see her; before I went upstairs the matron said, "You will have to take that woman out of this as she is cured of what she came in for"; I went and saw the deceased and asked her how she was; she said, "Oh, father, I am very bad, pains all over my back and sides, and something wrong with my chest"; I said, "Why do you not tell the doctor about it"; she said, "I have told the doctor, but he takes no notice of what I say, he has never sounded me or examined me in any way"; she said, "He comes in but very seldom and just walks away whistling"; when I came downstairs I saw the matron; I said, "Do you really think that woman would be fit to come out on Monday or Tuesday, she seems so weak and cannot stand, she cannot go on Monday or Tuesday, and I will not take her out"; she said to the effect that if I did not take her out she would be bundled out, and then walked away; I did not hear any conversation between deceased and the matron when she was leaving; after leaving the hospital I took her first to Mr. Bird, as stated, and then to Archdeacon Campbell; they said they could not interfere with the doctor, but as she was destitute they said, "I had better hand her over to the police, and she could be put into the gaol"; I said I "could not think of her going into prison"; Mr. Stewart was with the Archdeacon; these two advised me to hand her over to the police; I said, "Look at the woman? what do you think of her?" the Archdeacon and Mrs. Stewart said, "She looks very bad"; I said, "I will take her home at the doctor's risk"; the Archdeacon gave us some assistance in the shape of food, and I started for home; I picked deceased's husband up in the town, and the three of us came out together in the cart; nothing happened to the deceased on the road other than that she was complaining of great pain, and she was passing blood; I took the cart at a slow pace; there was no extra jolting; I went very carefully; when I left her at her husband's place, about three-quarters of a mile from here, I shook hands with her, and bid her good-night, and came home; I did not see the deceased alive after that; I heard of her death about 9 p.m. of the 1st instant; two of her sons came and said she was dying or was dead; I went up to the place at once and found that she was dead; the family were present, and her husband was closing her eyes; I went in the same night to Mudgee, and reported the matter to the police; deceased told me she could not get a drink from the matron, but that the woman that was in the ward with her used to give her drinks; she said the matron pulled the clothes off her while she was in bed, and made her go on her hands and knees to the "stool," and used to call her bad names, and say the sooner she was out of this the better; she says she asked the matron for a drop of warm milk; she said in answer, "You will get no warm milk here—cold milk is good enough for you"; she says she told the matron she thought a warm bath would do her good; she says that the matron said, "You will get no warm bath here; go home and get a warm bath"; the pains she complained of in the cart were similar to the ones she complained of in the hospital; I do not remember her saying anything about labour pains; the deceased was in bed at the time she was complaining of pains; when I saw her in the hospital deceased said she had these pains constantly.

Examined by Jury: When I took her to Mr. Bird he said, "I cannot interfere"; I said, "You are one of the Committee, and why cannot you interfere"; Mrs. Beattie was in a proper state of mind, so far as I could judge, when she made these statements; there was no one about to help me to lift her in the cart; the matron cleared out at once; I did not ask for any assistance, as there was no one to ask.

Sworn and made at Pipeclay, on this 3rd day }
of July, 1897, before me,—

WILLIAM TRAFFORD.

WILLIAM J. E. WORTON, P.M., Coroner.

William Beattie, sworn, states: I am a miner, living at Pipeclay; the dead body in my house is that of my late wife, Mary Beattie; she was born in Sydney, and was 35 or 36 years of age; her maiden name was Brewer; I married her in 1881, and she leaves six children; I have been away from home the last time for six weeks; I did not see her during that time; I returned to Mudgee on 30th June, and ascertained my wife was in the hospital, and I went in to the hospital on the 1st instant, to see how she was getting on, and saw her in Mudgee in a spring-cart with her step-father; I said she looked very bad, and she said, "I am bad and worse than when I went into the hospital"; I asked her how she got on in the hospital; she said she was there a day and a half before she saw the doctor, and that he never examined or sounded her, merely gave her medicine; she said she asked for warm milk and could not get it, nor warm tea, and that the matron said she was not there to be dictated to by her patients, and that she would have to take what she could get; there was another woman she said in the hospital who was sick, and that if she had not given her drinks, she would have died; she said that when she wanted the chamber or the closet, the matron made her go on her hands and knees to it; she said, "I am turned out of the hospital, and I am dying, and I do not know what you will do with the youngsters, they will be starving for the want of food"; she said she had had diarrhoea, and was suffering from it, and was only able to get up for one day; that she was in the hospital, and that was Sunday; she said she had pains in the stomach and in the sides and back; I accompanied her and Trafford in the cart home; I had to support her, she was so helpless; when I got to the slip-pannel about 30 yards from my house, she could not walk, and I had to carry her to the house and sit her down on a box; she wanted some warm tea which I gave her; and she said she could not sit up any longer, so I put her in the bed; that was about three quarters of an hour after I came home; she had another drink of tea, and wanted the chamber; she passed blood and she could not get up; I had to lift her and put her back into the bed; she was in pain all the time; she often asked for drink; the last time she was on the chamber she did not get up; I was baking some cakes for the children, and I did not hear her breathing; I went to her and saw she was leaning forward; I said to the boys "Your mother is dying, go and tell Trafford," and I knew she was then dead; she died quietly without a struggle; she told me a few minutes before she died, about five minutes, that all the pains had left her; my family and myself are perfectly destitute; I have been sick for nearly twelve months past; and if it was not for what the Archdeacon gave us we should be starving; and I am not in a position to provide for the burial of my wife; I have not a shilling in the world; the ages of the children range from 4 years to 14 years.

Examined by Jury: I think I met my wife with Trafford in the cart about 3 o'clock; I think she died about 9 p.m.; I did not notice any blood coming from her in the cart.

Sworn and made on the 3rd day of July, 1897, {
before me.—

WILLIAM BEATTIE.

WILLIAM J. E. WORTON, P.M., Coroner.

Harvey Nicholl, sworn, states:—I am a legally qualified medical practitioner, residing at Mudgee, and medical attendant to the hospital; I have seen the dead body of Mary Beattie; she was a patient at the hospital from the 18th June last up to the 1st July, when she was discharged from the hospital; when she was admitted she was suffering from diarrhoea; she was brought in by a woman who was engaged to attend her during her confinement, which, upon inquiry, I found was not due until August; the diarrhoea left her in four days, or about that time; it might be five, and she remained in bed until the seventh day from her admission; it was on the afternoon of the eighth day that she was allowed to get up, and lie on a couch near the fire; after that time she got up every morning by herself, and spent the day generally in the verandah; the last day I saw her was last Wednesday; she had just finished her mid-day meal, and was walking about the verandah; she made two complaints to me about her treatment; one was that she was not allowed to have tea, and she was not allowed meat for her tea; that was according to my own instructions, given to the matron personally; I think she had tea about the seventh or eighth day, as much as she liked, but she was not given meat; in addition to the diarrhoea, she had a mitral murmur at the heart, and it was very slight and scarcely perceptible; she was eight months advanced in her pregnancy, and the occasional pains she suffered from in her abdomen and across the loins, I certainly considered was due to her condition; she was treated as to medicine and diet the same as others suffering from similar complaints; deceased complained to me about the pains, and stated they were occasional, not constant; I examined the murmur at the heart by examination; I examined her on more than one occasion; I should think it most probable the first time on the day she came in, that, in the usual practice, I saw her in the afternoon; she came about 3 o'clock, or a little later; I ordered her discharge a few days before she went out; I should think about the 28th June; I considered her at that time, and at the time she did leave, in a fit state to leave the institution, more especially as I had promised the Benevolent Association to look after her during her confinement; the letter produced was written on my authority; neither the matron or the deceased intimated to me that the deceased was not in a fit state to be discharged; after the deceased had

had been told of her discharge she had plenty of opportunities of telling me that she was not in a fit state to leave, but she did not do so; I have not examined the body since death; I cannot give any idea as to the cause of death; when I first heard of it, I thought it was premature confinement.

Sworn and made at Pipeclay, on this 3rd day }
of July, 1897, before me, — }
WILLIAM J. E. WOTTON, P.M., Coroner.

HARVEY NICKOLL.

Ethel McEwen, sworn, states:—I am the matron of the Mudgee Hospital; I have seen the dead body of Mary Beattie, and that is the same Mary Beattie who was a patient under my care in the hospital; she was admitted on the 18th June; she was suffering from diarrhoea; she was seen by Dr. Nickoll in about two and a half hours after admission; he then provided her with medicines; he told me she had to be kept in bed, certain medicines and diet to be given, and these instructions were carried out by me; she remained in bed until the eighth day, when she was allowed up to lie on the couch in front of the fire; she complained of pains coming on spasmodically when she first got up; she complained for the first two days after she got up of occasional pains; she did not complain the day she was discharged; I think it was the 29th June she last complained of the pains; I told Trafford on the 26th June, that she would be ready to go out the beginning of the week; Trafford said he would not take her out, but would go and see the doctor; I said, "Do so"; he said he would not take her out, because there was not a crust of bread to eat out there; Trafford did not say she was ill, but began abusing me, so I went away and left him; I did not at any time refuse to supply her with drink; excepting tea which the doctor prohibited; I gave milk instead, she had warm milk; I did not pull the clothes off her and compel her to go to the chamber on her hands and knees; I often complained to her about her getting up when she was told not to; the latter part of the time she was in the hospital, she seemed well; she was able to get up and walk on the verandah; she was weak; she was better and able to carry the lounge from one balcony to the other to avoid the sun; I did not treat her differently from what I treated other female patients; I did not tell her at any time that "she would have to leave the hospital and that that was no place for her"; the deceased walked down stairs by herself, and I took her to the door and left her at the time Trafford came to take her away; that I did not want to give him another opportunity of abusing me; as far as I could judge deceased was in good health when she left the hospital; I know the state she was in (pregnancy); she did not tell me she was not sufficiently well to go, and did not make any objection to leaving.

Sworn and made at Pipeclay on this 3rd day }
of July, 1897, before me, — }
WILLIAM J. E. WOTTON, P.M., Coroner.

ETHEL McEWEN.

Ada Sparrow, sworn, states:—I am a domestic servant and reside at Mudgee; I have seen the dead body of Mary Beattie to-day; she was in the hospital the same time that I was there; we were both in the same ward; I was there the day she was discharged; she said she had a pain in her back; she did not care to eat anything; she got all she wanted; but all she would take was water; she said the day she was leaving that she was "not in a fit state to go, and had told her father so"; I cannot say whether anybody else heard her say this but me; I never saw the bed-clothes pulled off her, and made go to the chamber on her hands and knees; I never heard the matron say that she would have to be "bundled out of that;" or that the hospital was not a fit place for her; I never heard the matron refuse her anything; anything she asked for she got; she never made any complaint to me about being badly treated; I had opportunities of speaking to her constantly, and she made no complaint; Dr. Nickoll visited her in his ordinary rounds as well as the other patients; she did not say the doctor was not treating her properly, nor of being neglected by him; I have given the deceased water; the matron never refused to give her anything; I did not see any examination; she was in the hospital before I went in; I cannot say what happened before.

Examined by Jury: When deceased said she was not in a fit state to leave, she did not say why she was not fit; I cannot say whether she was fit to leave, but she used to walk about the room right enough; I saw deceased leaving the hospital; there was a cart at the door waiting for her; her father was there and helped her up; I was on the balcony; I did not hear what deceased said in the cart; I heard her say when on the door-step that she was not able to go, and she said that up in the ward also in the presence of the matron; the matron said her father was waiting for her down stairs, and that the doctor said she could go; the matron caught hold of her arm, I cannot say whether she led her down stairs as I was not there; she dressed herself every morning without help while I was there; she was not willing to go away from the hospital; I do not think she was able to get into the cart without assistance; I was nine days in the hospital and discharged yesterday; deceased was discharged at 1 o'clock; I have seen the deceased dragging a lounge along the balcony to avoid the sun; it was a cane one; I did not hear the matron reprimand her for getting out of bed; deceased got into the cart quite easily without the slightest pain with Trafford's assistance; deceased had just finished some beef-tea that the matron had given her when her father came for her; all the conversation between the matron and deceased I did not hear.

Sworn and made at Pipeclay, on this }
3rd July, 1897, before me, — }
WILLIAM J. E. WOTTON, P.M., Coroner.

ADA SPARROW.

Harvey Nickoll further states:—I was present at a *post-mortem* examination of the deceased; in my opinion the cause of death was due to hemorrhage during labour; death took place before the labour was completed, and the rest of the observations I have made during the *post-mortem* bear out the evidence I have given formerly; I think the removal in a spring-cart would accelerate labour under any conditions, but I think the hemorrhage took place when in the act of getting into the cart.

Examined by Jury: I last saw the deceased on Wednesday, the 30th June; all traces of diarrhoea had been cured, and had been so for days; there was no signs of hemorrhage during her stay in the hospital; it is likely the hemorrhage would not have happened if she had remained in the hospital, as medical attendance would have been forthcoming; the act of getting into a spring-cart could bring on labour with a woman in her condition, or at any period of pregnancy.

Sworn and made at Pipeclay, on this 3rd day }
of July, 1897, before me, — }
WILLIAM J. E. WOTTON, P.M., Coroner.

HARVEY NICKOLL.

Robert Beith, sworn, states:—I am a legally qualified medical practitioner residing at Mudgee; I was present this morning when Dr. Lester performed a *post-mortem* examination on the body of Mary Beattie; she died in labour from shock with hemorrhage; getting up into a spring-cart, and travelling from Mudgee to where she lies, might cause the labour altogether; being discharged from the hospital after an attack of diarrhoea, and labour supervening, might be dangerous to life, if taking a journey in a spring-cart; it might not have happened if she had remained in the hospital; the fact of her leaving would not have caused it, but getting up into the cart and going a journey no doubt would cause it.

Sworn and made at Pipeclay, on this 3rd day }
of July, 1897, before me, — }
WILLIAM J. E. WOTTON, P.M., Coroner.

ROBERT BEITH.

Charles E. Lester, sworn, states:—I am a legally qualified medical practitioner, residing in Mudgee; I made a *post-mortem* examination of the body of the deceased, Mary Beattie; I consider the deceased about 40 years of age; no external marks of violence; there was a large clot of blood protruding from the vagina; the skin of the abdomen showed the deceased had been delivered of children, and she was at present within about six weeks of her confinement; I opened the chest; there was about half a pint of fluid in the right pleural cavity, otherwise her lungs were healthy; there was a small clot of blood in the right side of the heart, the left side was empty; I opened the abdominal cavity, and opened the lower part of the bowel, and found recent signs of diarrhoea; I opened the womb, and found the mouth of the womb open, nearly all the fluid had escaped, and there was signs of recent bleeding; all the other organs examined were practically healthy; I attribute the cause of death to collapse from hemorrhage; I heard Trafford say that when assisting deceased into the spring-cart

spring-cart something dropped on to his hand which he found to be blood; if at the time a medical man had been called he would have had no difficulty in diagnosing her condition, or if he had mentioned it to the matron, she would have understood it, and have obtained medical assistance, and death would probably have been averted; a woman might travel in a spring-cart in the condition of the deceased with no fatal results; deceased getting into a spring-cart in the condition she was in, and going a journey, might bring on labour.

Sworn and made at Pipeclay, on the }
3rd July, 1897, before me,—

CHAS. ED. LESTER.

WILLIAM J. E. WOTTON, P.M., Coroner.

Recalled :—An examination two days before a premature confinement would probably show signs; I would not consider a journey advisable for a person just after suffering from diarrhoea, as convalescence is often unduly retarded; diarrhoea predisposes a person in condition of deceased to premature labour.

WILLIAM J. E. WOTTON, P.M., Coroner.

CHAS. ED. LESTER.

Ethel McEwen, recalled, states :—I made the deceased aware that, just as she was leaving the hospital, that all arrangements had been made for attendance upon her in her confinement, and that she had better see Mrs. Salsbury before she left town, that the Benevolent Society had made all arrangements; I heard that Dr. Nickoll was to attend her.

Examined by Jury : Deceased did not say when leaving that she was not in a fit state to leave; it was then I told her about the arrangements for her confinement; deceased came downstairs by herself.

WILLIAM J. E. WOTTON, P.M., Coroner.

ETHEL McEWEN.

No. 707.—New South Wales.—District of Mudgee.—3rd July, 1897.

Inquisition on view of the body of Mary Beattie.

Finding :—We find that the said Mary Beattie, at Pipeclay, near Mudgee, in the said Colony, on 1st July, 1897, died from collapse due to hæmorrhage attending premature labour, which was brought about by getting into and journeying in a spring-cart a distance of about 6 miles upon the same day, and which journey was undertaken a short time after recovery from an attack of diarrhoea.

Rider :—We suggest that it would be to the interests of all concerned for patients, especially in the condition of the deceased, to be thoroughly examined immediately prior to their discharge from the hospital.

WILLIAM J. E. WOTTON, P.M.

Sydney: William Applegate Gullick, Government Printer.—1897.

[1s. 6d.]

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

REPORT FROM THE SELECT COMMITTEE

ON THE

MUDGEE SHOW-GROUND BILL;

TOGETHER WITH THE

PROCEEDINGS OF THE COMMITTEE,

AND

MINUTES OF EVIDENCE.

ORDERED BY THE LEGISLATIVE ASSEMBLY TO BE PRINTED,
18 *August*, 1897.

SYDNEY: WILLIAM APPEGATE GULLICK, GOVERNMENT PRINTER.

1897.

1897.

EXTRACTS FROM THE VOTES AND PROCEEDINGS OF THE
LEGISLATIVE ASSEMBLY.

VOTES No. 42. TUESDAY, 3 AUGUST, 1897.

4. MUDGEES SHOW-GROUND BILL (*Formal Motion*):—Mr. Robert Jones moved, pursuant to Notice,—
(1.) That the Mudgee Show-ground Bill be referred to a Select Committee for consideration and report.
(2.) That such Committee consist of Mr. J. C. J. Fitzpatrick, Mr. Haynes, Mr. Wilks, Mr. Edden, Mr. Hurley, Mr. Carroll, Mr. Simeon Phillips, Mr. Pyers, and the Mover.
Question put and passed.
-

VOTES No. 49. WEDNESDAY, 18 AUGUST, 1897.

4. MUDGEES SHOW-GROUND BILL:—Mr. Robert Jones, as Chairman, brought up the Report from, and laid upon the Table the Minutes of Proceedings of, and Evidence taken before, the Select Committee for whose consideration and report this Bill was referred on 3rd August, 1897; together with a copy of the Bill as agreed to by the Committee.
Ordered to be printed.

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1897.

MUDGEES SHOW-GROUND BILL.

 REPORT.

THE SELECT COMMITTEE of the Legislative Assembly, for whose consideration and report was referred on 3rd August, 1897, the "*Mudgee Show-ground Bill*," beg to report to your Honorable House:—

That they have examined the witness named in the margin (whose The Hon. G. H. Cox, M.L.C. evidence will be found appended hereto); and the Preamble having been satisfactorily proved to your Committee, they proceeded to consider the Bill, in which it was not deemed necessary to make any amendment.

Your Committee now beg to lay before your Honorable House the Bill without amendment.

ROBERT JONES,
Chairman.

*No. 1 Committee Room,
Legislative Assembly,
18th August, 1897.*

PROCEEDINGS OF THE COMMITTEE.

WEDNESDAY, 18 AUGUST, 1897.

MEMBERS PRESENT:--

Mr. Carroll,	|	Mr. Edden,
Mr. Hurley,	|	Mr. Robert Jones,
Mr. Simeon Phillips.		

Mr. Robert Jones called to the Chair.

Entry from the Votes and Proceedings appointing the Committee read by the Clerk.

Printed copies of the Bill *referred*, together with original Petition to introduce same, before the Committee.

The Hon. George Henry Cox, M.L.C. (*a Trustee of the Mudgee Agricultural Society's Show-ground*) called in, sworn, and examined.

Room cleared.

Preamble considered.

Question, "That this Preamble stand part of the Bill," *put* and *passed*.

Clauses 1 to 6 read and *agreed* to.

Title read and *agreed* to.

Chairman to report the Bill without amendment to the House.

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

MINUTES OF EVIDENCE

TAKEN BEFORE

THE SELECT COMMITTEE

ON THE

MUDGEES SHOW-GROUND BILL.

WEDNESDAY, 18 AUGUST, 1897

Present:—

MR. HURLEY,
MR. EDDEN,

MR. CARROLL,

MR. ROBERT JONES,
MR. SIMEON PHILLIPS.

ROBERT JONES, Esq., IN THE CHAIR.

The Hon George Henry Cox, called in, sworn, and examined.

1. *Chairman.*] You are one of the Trustees of the Mudgee Agricultural Society's Show-ground? Yes.
2. Will you state to the Committee the object of this Bill? It appears that some years ago the Government made a grant of land to the Society, and it was supplemented by a further grant, making together something like 21 acres. The Society had some small amount of subsidy given them by the Government, but it was quite inadequate for the purposes for which it was required—fencing, erecting buildings, clearing, and other works. The consequence was, that a number of gentlemen had to unite together to obtain a sum of money to carry out the necessary improvements. They agreed to become personally responsible to the Bank to the extent of some £600. As far as my recollection serves me, the overdraft amounts to something like £650 or £660. Those gentlemen are very anxious to get rid of their liability, and have requested the Member for the district, Mr. Jones, to bring in a Bill enabling them to mortgage the land over which, at present, they have no control, to reimburse themselves for the liability under which they are now labouring to the Bank. It is also considered desirable to make further improvements; but considering that there is a debt of more than £600 on the land and buildings, they do not see their way to expend money unless they have some security.
3. *Mr. Edden.*] The Preamble of the Bills says this:—"To authorise the Trustees of certain lands dedicated for the use of the Mudgee Agricultural Society to mortgage and sell the said lands for the purpose of enabling the said Trustees to pay off the present liabilities incurred in effecting improvements on the said lands; and to effect further improvements thereon; and to purchase other lands in the town of Mudgee";—that seems to me a sort of contradiction? That is transcribed from two or three other Bills of the same kind which have been passed by Parliament; it was thought desirable to adopt the same words.
4. *Mr. Phillips.*] It is a power which they may or may not exercise? Yes. It is clear that if the Trustees have power to mortgage they must have power to sell, because in the event of the money being claimed, and the parties not being able to get it, they must raise it by the sale of the property; therefore it is necessary to have power of sale—not that they intend to sell.
5. What they want is power to mortgage? Yes; and power to raise further money for various contemplated improvements.
6. *Mr. Hurley.*] Do you think they can clear off this liability and raise a further sum? It is 21 acres of land, in the town of Mudgee, and therefore of considerable value. I was stating that it is necessary, in order to carry out the objects of the Society, to make further improvements. One necessary improvement is the erection of a grandstand. A number of people go to the show-ground on the days on which

Hon. George
Henry Cox.
18 Aug., 1897.

Hon. George
Henry Cox.
18 Aug., 1897.

which the Show is held, but there is not a place where they can sit down to rest; and some people do not go to the Show because they cannot put up with the inconvenience of having to stand all the day. The erection of a grandstand will involve the expenditure of some hundreds of pounds, which there is no means of raising unless they can give security on the land. There are also other things to be done. It is considered desirable to further utilise the land by opening a track for bicycles. It is considered that a fair amount may be obtained from bicycle clubs if a proper course is prepared for them. It is the intention of the Committee to use the ground for various other purposes, as well as for the Agricultural Shows. The Bill has been introduced to enable the Trustees to make further improvements, and to make the ground as valuable and useful as possible for the benefit of the inhabitants of Mudgee. These are the reasons which commend to my mind this application to Parliament to pass this Bill.

7. *Chairman.*] There is no reserve available in Mudgee at the present time where sports, such as cricket, football, or cycling, could be held? No.

8. They are held at present on private land? Yes. I may mention that there is a small park of 10 acres in the town, but that is all laid out in walks and plantations, and is not available for sports.

9. The Robertson Park is not suitable? No.

10. *Mr. Hurley.*] Is there any land in the township of Mudgee which the Trustees think of substituting for this land? No.

11. Then that will contradict the words of the Preamble, which says: "and to purchase other lands in the town of Mudgee, or in the vicinity of the said town, for the use and general purposes of the Society"? The only reason for those words being in the Preamble is that this is an exact copy of similar Bills which have been passed by Parliament. It is thought desirable, having once formed a precedent, to follow that precedent without variation.

12. *Chairman.*] If the present liability was paid off, is it your opinion that for other purposes it would be easy to raise further money amongst the present Committee? I think so. I think it is unfair to ask the present bondsmen to become further liable than they are already. Some of them are individually liable for this large amount, and it is unfair to ask them to increase it.

13. *Mr. Carroll.*] Has the money been owing long? Yes, some years.

14. Has the interest been paid up yearly? Yes.

15. Otherwise the institution is solvent? Well, sometimes when the Society have a Show they make a few pounds; on other occasions they only just make both ends meet.

16. What is the amount of the subscription? Ten shillings a member.

17. I suppose you have several hundred members? No; only about 160.

18. Are the townspeople all satisfied with regard to this Bill? Yes.

19. They are all satisfied that it is to be a general benefit? Yes.

20. *Chairman.*] You know that this Bill was placed in my hands to bring forward in Parliament with the consent of the present Committee? Yes.

21. *Mr. Edden.*] Clause 1 gives the Secretary for Lands power, from time to time, to give his consent to the raising of money on mortgage on the said lands? Yes; it is considered desirable, because you might have Trustees who might take the bit in their mouths, so to speak, and do what would be undesirable; therefore the Secretary for Lands should have this right, because this is Crown property, although it is vested in Trustees to exercise some little control.

22. *Mr. Phillips.*] There have been similar Bills passed for other Societies? Yes; and this is word for word the same as the other Bills.

23. *Chairman.*] This Bill is brought in with a view to place those men who are the guarantors at the present time on the same footing as the rest of the Committee? Yes; to relieve the guarantors of the burden which they have taken upon themselves, and which we think unfairly rests upon them. It has been on them for some years, and we think that we could get the money at a much cheaper rate elsewhere than from the Banks.

24. And the Committee think it would be unfair to further increase their indebtedness as long as those gentlemen are guarantors for this amount? Yes; we want to spend at least £400 in putting up a grandstand, but we cannot do it with this heavy burden on these few individuals.

25. As far as you know, the present guarantors are not complaining, nor is the Bank? No; the only complaint was by a gentleman who is not a guarantor, but who has spoken very warmly of the way in which the guarantors have been allowed to remain with this heavy liability upon their shoulders for so many years.

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

REPORT FROM THE SELECT COMMITTEE

ON THE

NYNGAN TOWN HALL (MORTGAGE) BILL;

TOGETHER WITH THE

PROCEEDINGS OF THE COMMITTEE,

MINUTES OF EVIDENCE,

AND

APPENDIX.

Ordered by the Legislative Assembly to be printed, 23 November, 1897.

SYDNEY: WILLIAM APPELEGATE GULLICK, GOVERNMENT PRINTER.

1897

1897.

EXTRACTS FROM THE VOTES AND PROCEEDINGS OF THE
LEGISLATIVE ASSEMBLY.

VOTES No. 71. WEDNESDAY, 17 NOVEMBER, 1897.

5. NYNGAN TOWN HALL (MORTGAGE) BILL (*Formal Motion*):—Mr. Waddell moved, pursuant to Notice,—
- (1.) That the Nyngan Town Hall (Mortgage) Bill be referred to a Select Committee for consideration and report.
- (2.) That such Committee consist of Mr. Bruncker, Mr. Haynes, Mr. Cann, Mr. Robert Jones, Mr. Edden, Mr. Kelly, Mr. Pyers, Mr. Hogue, Mr. Chanter, and the Mover.
- Question put and passed.
-

VOTES No. 73. TUESDAY, 23 NOVEMBER, 1897.

9. NYNGAN TOWN HALL (MORTGAGE) BILL:—Mr. Waddell, as Chairman, brought up the Report from, and laid upon the Table the Minutes of Proceedings of, and Evidence taken before, the Select Committee for whose consideration and report this Bill was referred on 17th November, 1897; together with Appendix and a copy of the Bill as agreed to by the Committee.
- Ordered to be printed.
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1897.

 NYNGAN TOWN HALL (MORTGAGE) BILL.

 REPORT.

THE SELECT COMMITTEE of the Legislative Assembly, for whose consideration and report was referred on 17th November, 1897, the "*Nyngan Town Hall (Mortgage) Bill*,"—beg to report to your Honorable House:—

That they have examined the witnesses named in the List* (whose *See List, p. 4. evidence will be found appended hereto), and the Preamble having been satisfactorily proved to your Committee, they proceeded to consider the Bill, in which it was not deemed necessary to make any amendment.

Your Committee now beg to lay before your Honorable House the Bill as agreed to by them.

T. WADDELL,
Chairman.

*No. 2 Committee Room,
Legislative Assembly,
23rd November, 1897.*

PROCEEDINGS OF THE COMMITTEE.

THURSDAY, 18 NOVEMBER, 1897.

MEMBERS PRESENT:—

Mr. Edden,	|	Mr. Haynes,
Mr. Robert Jones,	|	Mr. Kelly,
	|	Mr. Waddell.

Mr. Waddell called to the Chair.

Entry from Votes and Proceedings, appointing the Committee, read by the Clerk.

Printed copies of the Bill referred, together with original Petition to introduce same before the Committee.

Present:—F. W. Walker, Esq. (*Solicitor representing B. E. Burns, Esq., Nyngan, Solicitor for the Bill*).

Frederick William Walker, sworn and examined.

[Adjourned till Tuesday next at 2 o'clock.]

TUESDAY, 23 NOVEMBER, 1897.

MEMBERS PRESENT:—

Mr. Waddell in the Chair.

Mr. Edden,	|	Mr. Hogue,
	|	Mr. Kelly.

Present:—F. W. Walker, Esq. (*Solicitor representing B. E. Burns, Esq., Nyngan—Solicitor for the Bill*).

Joseph Knight (*Mayor of Nyngan*), called in, sworn, and examined.

Witness handed in opinion of Sir Julian Salomons as to the power of the Council to borrow money for the purpose of erecting a Town Hall. [*See Appendix.*]

Room cleared.

Preamble considered.

Question,—“That this Preamble stand part of the Bill,”—put and passed.

Clauses 1 to 4 read and agreed to.

Schedule read and agreed to.

Title read and agreed to.

Chairman to report the Bill without amendment to the House.

LIST OF WITNESSES.

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1897.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

MINUTES OF EVIDENCE

TAKEN BEFORE

THE SELECT COMMITTEE

ON

NYNGAN TOWN HALL (MORTGAGE) BILL.

THURSDAY, 18 NOVEMBER, 1897.

Present:—

MR. EDDEN,
MR. ROBERT JONES,MR. HAYNES,
MR. KELLY,

T. WADDELL, ESQ., IN THE CHAIR.

Frederick Wm. Walker, solicitor, sworn and examined:—

1. *Chairman.*] You are a solicitor of the Supreme Court of New South Wales? Yes.
2. You are acting for Mr. Burns, of Nyngan, who is the solicitor for the Nyngan Municipal Council? Yes.
3. You have a knowledge of the provisions of this Bill, and of the reasons which have induced the Municipal Council to ask Parliament to pass it? Yes.
4. Have the necessary notices been published in the newspapers in conformity with the Standing Order of the House relating to private Bills? Yes.
5. Some months ago the Municipal Council at Nyngan decided to build a Town Hall? Yes.
6. They then applied to a company in Sydney to lend them the money to do so? I believe so.
7. According to the reading of the Act by laymen, they had reason to believe that they had full power to mortgage the general rates, as well as the land and the building? I was informed by Mr. Burns that they considered that they had that power.
8. From all you know in connection with this matter, do you think that there were reasonable grounds for laymen to take that view of the Act? Yes.
9. After deciding to build a Town Hall, they applied to a company in Sydney to lend them the money on the security of a second mortgage over the general rates—that is, after the mortgage given in connection with the water supply—and also a mortgage over the land and the building? I believe they applied to someone, but I do not know who it was.
10. A company in Sydney, you understand, were willing to lend the Council money to build the Town Hall? If they could be satisfied as to the security.
11. Thinking that everything was right, the Council let a contract for the work, and the contractor proceeded with the building? I believe that is correct.
12. About the same time the Council made an application to the Principal Under Secretary for the necessary warrant giving them the power to mortgage the general rates? Yes.
13. They got a warrant to mortgage the land and the building? Yes.
14. They did not get a warrant to mortgage the general rates? No.
15. But they applied to the Principal Under Secretary for a warrant for that purpose? I believe they did.
16. And the Principal Under Secretary, thinking that there might be a doubt as to whether the law gave power to grant a warrant in this special case, submitted the point to the Crown Solicitor? It was referred to the Crown Solicitor for his advice to see whether it could be done.
17. What opinion did he give? I think his advice was against it. They then took counsel's advice themselves. It was considered that it is not a permanent improvement within the meaning of the Act.
18. Owing to this warrant not being obtainable the company referred to would not lend the money? I believe so.
19. In the meantime the contractor went on with the work? Yes.

F. W.
Walker.
18 Nov., 1897.

- F. W. Walker.
18 Nov., 1897.
20. And the building is nearly completed? It is nearly finished, and they want the money to pay the contractor.
21. Unless this Bill is passed, there is no way for the Council to pay the contractor? None whatever; they can borrow the money if the Bill is passed.
22. There is a mortgage over the general rates in connection with the water supply? There is a mortgage over the general rates.
23. Are you aware whether they are building any offices in connection with the Town Hall which will be a source of revenue? I am informed that they are.
24. *Mr. Edden.*] What is the revenue of the municipality? I cannot say.
25. *Mr. Kelly.*] Do you know the amount of the contract? I think it is about £1,300. They ask for leave to borrow £1,500 in case the contract exceeds £1,300.
26. *Mr. Edden.*] Have any public meetings been held at Nyngan to urge that this should be done, or to point out some necessity for it? I do not know of any public meetings being held, but I know that the advertisement announcing the intention to borrow certain moneys has been appearing in the Nyngan papers for some months past, so that the people must be aware of it up there.
27. I suppose that advertisement was published in accordance with the section of the Municipalities Act when they thought they had the authority to borrow the money? Yes.
28. Are the aldermen all favourable to this being done? I cannot tell you.

TUESDAY, 23 NOVEMBER, 1897.

Present:—

MR. HOGUE,

MR. KELLY.

MR. EDDEN,

T. WADDELL, ESQ., IN THE CHAIR.

F. W. Walker, Esq., representing B. E. Burns, Esq., of Nyngan, appeared as Solicitor for the Bill.

Joseph Knight called in, sworn, and examined:—

- J. Knight.
23 Nov., 1897.
29. *Chairman.*] Are you Mayor of Nyngan? Yes.
30. When did your Council first decide to build a new Town Hall? In 1894.
31. Under what Act did you think you had power to borrow money to erect the building? The Municipal Loans Act of 1888.
32. After deciding to build the hall, and reading that Act, did you and the other members of the Council think you had full power to borrow money to build a hall? Yes.
33. Did you then apply for the necessary warrant from the Principal Under Secretary? Yes.
34. Did you then make any arrangements with any company in Sydney to lend you the money? Yes the Citizens' Life Assurance Company.
35. Did you let a contract for the building before you actually got the money in hand? Yes, thinking the money would be available at any time.
36. Why did the company refuse to lend you the money after having promised it? Because they said we had to get the warrants under the 190th section of the Municipalities Act, in order to mortgage the general rates.
37. Up to this point, did you think that you were quite sure to get the money, and had you actually commenced the building before you knew you would not be able to get the money? Yes.
38. When the company stated that they would have to get a mortgage over the general rates as well as over the land and building, did you then apply to the Principal Under Secretary for a warrant to mortgage the general rates? Yes.
39. Did he grant the warrant? No; he referred us to the Crown Solicitor.
40. Had he doubts as to whether the law gave power? Yes.
41. What was the Crown Solicitor's opinion? He was also doubtful, and he advised us to get counsel's opinion.
42. Did he think that the law did not give the power, but, at the same time, that it was one of those doubtful points that should be submitted to eminent counsel? Yes.
43. Did you obtain the advice of counsel as to whether the Government had power to grant a warrant or not? Yes; we got Sir Julian Salomons' opinion. [*See Appendix.*] He said that he did not think the Town Hall was a permanent improvement under the Act.
44. And consequently that the Government would not have power to issue a warrant? Yes.
45. Did he give any opinion as to the law being difficult to understand or being rather indefinitely worded? He said the law might be defective.
46. Did the Crown Solicitor wish the point to be referred to Sir Julian Salomons so as to be absolutely sure? Yes.
47. Have you let the contract for the building, and is the work now far advanced? It will be completed in about four weeks.
48. When you let the contract were you and the other members of the Council fully satisfied from the wording of the Act that you had the power to give the necessary mortgages in order to get the money from us? Yes; we felt so satisfied that we applied to the company for the money.
49. If you had any doubts at all about being able to get the money, would you have let the contract? No.
50. Have you now been placed in a very awkward position? Yes.
51. When you found you would soon have to pay the first instalment on the contract, did you apply to the company for the money? Yes.
52. What answer did the company's solicitor give you? He found that the warrant did not give power to grant a second mortgage over the rates.
53. Did the Company then refuse to lend you the money unless you got a warrant giving that power? Yes.
54. Was it after that refusal that you applied to the Principal Under Secretary for a warrant to give a mortgage over the general rates and it was then found that it could not be legally granted? Yes.

55. Unless you get a Bill through the House immediately giving you the necessary powers, will the Council be in a very serious position financially? Unless we get something done, I do not know what we shall do. We have no means of paying a contractor; we have paid him all we possibly could out of the general rates already. J. Knight.
23 Nov., 1897.
56. How much? £395.
57. Would this mortgage be a second mortgage? Yes; the general rates have been mortgaged for the waterworks.
58. Would the company have been agreeable to take a second mortgage? Yes.
59. What amount of interest have you to pay for the money borrowed for the waterworks? The waterworks cost £9,000 and the interest amounts to £325 8s. 9d. per annum.
60. What would be about the cost of the waterworks per annum for management? £246. That includes all costs.
61. What would the interest and working expenses of the waterworks come to in a year? £571 8s. 9d.
62. What is the total return from the waterworks per annum? From the rate of 12d. in the £, £323 1s. 6d. We get from the Railway Commissioners £300; that gives a total revenue of £623 1s. 6d.
63. Then you derive a profit from the waterworks? Yes; they are self-supporting. There is nothing to pay from the general rates on their account.
64. For some years past has your financial position been good? Yes, it is really good. At present we have a debit in the bank of £185 18s. 4d., but we are really in credit to the amount of £285 11s. 9d., because we have paid away nearly £471 10s. for the Town Hall.
65. Have you any other loans except the waterworks loan? No.
66. Have you carried out the work of forming the streets without borrowing any money at all? When we first started we borrowed £400. That was seven years ago. We have paid that off.
67. So that practically you have carried out all the works in connection with the streets without borrowing anything? Yes.
68. Then your financial position is really a good one? Yes.
69. What is about the annual revenue from the general rates? In 1891-92 the revenue was £280 17s. 6d.; in 1892-93, £319 5s. 6d.; 1893-94, £314 4s. 7d.; 1894-95, £405 0s. 11d.; 1895-96, £401 5s. 9d.; 1896-97, £338 7s. 5d.; 1897-98, £322 19s. The outstanding rates at the present time are £251 4s. 6d.
70. Are you likely to get most of the outstanding rates? Yes, pretty well all of it.
71. So that the rates have been increasing during the last few years? Yes.
72. Is the town likely to improve? Yes.
73. Consequently there is every probability of the rates increasing as the time goes on? Yes.
74. With reference to the Town Hall itself, have you to rent a building now to meet in? Yes; we have no Council Chambers.
75. So that by erecting a Town Hall you will save rent? Yes.
76. *Mr. Edden.*] What amount of rent do you pay at present? We pay £13 a year for a mere shell which is not at all suitable.
77. *Chairman.*] Do you expect to get any revenue from the Town Hall? I think it will more than pay the interest.
78. What will the interest amount to? £78 per annum.
79. Did the Government give you the land? Yes.
80. Will the only annual liability which you will have to meet in connection with the Town Hall be £78? Yes.
81. What do you think will be about the annual return from the Town Hall? I cannot state the exact amount, but I am certain it will pay the interest. There is no other hall in the place, and the offices which we will have to let will be worth £52 per year.
82. So that the Town Hall will be no additional cost to the rate-payers, as it will be self-supporting? Yes.
83. *Mr. Walker.*] With regard to the income to be derived from the Town Hall, have you allowed for repairs and insurance? It will more than cover all that. I believe the revenue will pay something towards a sinking fund.
84. *Chairman.*] Of what material are you building the Town Hall? Brick, with a galvanized-iron roof and ceiling.
85. Is it a substantial building that will last for some years? Yes.
86. *Mr. Edden.*] Do you expect the income from the Town Hall to pay the interest on the loan? Yes.
87. Have you allowed for insurance, cleaning, &c.? Yes.
88. How do you propose to raise the £1,500 that you intend to borrow? I think the hall will pay a good deal of the principal. There are a great many entertainments given in the town.
89. Do you look upon the hall as an absolute necessity for the town? Yes; there is no hall there at present. There is a hall at Mr. Barrett's, but it is used as a store at present.
90. Do you look upon this hall as, practically, a necessity for the benefit of the public? Yes.
91. Has there been unanimity amongst the aldermen on this question? Yes.
92. Has there been any protest from the people? No; and the proposal was well advertised. They all seemed willing.
93. *Chairman.*] Did you say you had a warrant under one Act to mortgage the land and building? Yes.
94. Was it the refusal of the Government to grant you a warrant under the Municipalities Act to mortgage the general rates as well that caused the difficulty in getting the money? Yes.
95. Is the company still willing to lend the money if you can get power to mortgage the general rates? Yes.

APPENDIX.

[To Evidence of Mr. Joseph Knight.]

QUESTIONS UPON CASE FOR OPINION OF SIR JULIAN SALOMONS.

1. Can the block of land promised by the Government be considered, under the circumstances stated, as land held or purchased?
2. Can the authorities already given by the Governor and Executive Council be amended so as to carry out the wishes of the municipality?
3. Can the existing authorities be cancelled as suggested in the third paragraph of the case?
4. If so, must not any new borrowing be under the 190th section with all its attendant formalities, and can the "promised land" be included in the security to be offered?
5. Is the erection of a Town Hall a permanent improvement within the meaning of the Municipalities Act?
6. Assuming that the Governor and Executive Council can cancel the existing warrants and that the powers to borrow upon the promised site and building have thereby gone, in what way could the land and building be made a security for any advance obtained? Can an application to borrow be successfully made, offering as security the existing rates and the site and building, when the deed of grant is obtained?

(COPY) OPINION.

1. I am of opinion that the land promised by the Crown is not land "purchased" by the municipality, nor is it, in my opinion (until it is conveyed), land held by the municipality within the meaning of the Act, 52 Vic. No. 9. It is, however, I consider, land upon which the municipality is entitled to borrow money by virtue of the provisions of the said Act, for by section 1—which, read by the light of the preamble, authorises the borrowing of money on land to be used as the site for a Town Hall—a municipality is authorised to borrow money on such site, although the site itself may not have been at such time actually purchased.

2. As to the second question, I think not. The only authority given by the said Act is to borrow (for the purchase of a site and paying for the erection of a Town Hall) on the security of the site and the building. There is, therefore, no power to give security over the rates for this purpose, nor could such security be given except for the purposes and in the manner prescribed by section 190 of the Municipalities Act of 1867. (See answer to Question 5.)

3. I think the existing authorities can be cancelled—that is, if no money has been borrowed under them.

4. In order to be able to give security over the rates the borrowing must be under the provisions of the above section 190, and of course all the formalities required by the section must be complied with. I am, however, of opinion that the land promised by the Government could not be included in the security until it had been conveyed to the Council.

5. In my opinion the erection of a Town Hall is not a "permanent improvement" within the meaning of section 190 of the Municipalities Act. Section 117 seems to me to indicate what works are meant by the expression "permanent improvements," and they do not, I think, include the erection of a Town Hall. The fact that it was thought necessary to pass the Act, 52 Vic. No. 9, tends to show that the Legislature considered that borrowing money for the erection of such a building was not within the powers already existing under the 190th section.

6. The law may be defective, but I know of no way by which, as the law stands, the existing rates can be made a valid security for money borrowed for the purpose of building a Town Hall. In my opinion, in order to enable the Council to borrow money on the security of the rates (for the purpose in view), the authority of an Act of Parliament is necessary.

JULIAN E. SALOMONS.

Denman Chambers. 18th September, 1897.

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

REPORT FROM THE SELECT COMMITTEE

ON THE

LITHGOW CO-OPERATIVE COAL COMPANY
RAILWAY BILL;

TOGETHER WITH THE

PROCEEDINGS OF THE COMMITTEE

AND

MINUTES OF EVIDENCE.

Ordered by the Legislative Assembly to be printed, 2 December, 1897.

SYDNEY: WILLIAM APPLIGATE GULLICK, GOVERNMENT PRINTER.

1897.

423—A

[1s. 3d.]

1897.

EXTRACTS FROM THE VOTES AND PROCEEDINGS OF THE
LEGISLATIVE ASSEMBLY.

VOTES No. 64. WEDNESDAY, 27 OCTOBER, 1897.

5. LITHGOW CO-OPERATIVE COAL COMPANY RAILWAY BILL (*Formal Motion*):—Mr. Hogue moved, pursuant to Notice,—
- (1.) That the Lithgow Co-operative Coal Company Railway Bill be referred to a Select Committee for consideration and report.
- (2.) That such Committee consist of Mr. Affleck, Mr. Edden, Mr. Fegan, Mr. Griffith, Mr. Gormly, Mr. Hawthorne, Mr. Lyne, Mr. Mackay, Mr. Young, and the Mover.
- Question put and passed.
-

VOTES No. 78. THURSDAY, 2 DECEMBER, 1897.

9. LITHGOW CO-OPERATIVE COAL COMPANY RAILWAY BILL :—Mr. Hogue, as Chairman, brought up the Report from, and laid upon the Table the Minutes of Proceedings of, and Evidence taken before, the Select Committee for whose consideration and report this Bill was referred on 27th October, 1897; together with a copy of the Bill as amended and agreed to by the Committee.
- Ordered to be printed.
- * * * * *
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1897.

LITHGOW CO-OPERATIVE COAL COMPANY RAILWAY BILL.

REPORT.

THE SELECT COMMITTEE of the Legislative Assembly, for whose consideration and report was referred on the 27th October, 1897, the "*Lithgow Co-operative Coal Company Railway Bill*,"—beg to report to your Honorable House:—

That they have examined the witnesses named in the List* (whose evidence will be found appended hereto), and the Preamble having been satisfactorily proved to your Committee, they proceeded to consider the several clauses and the Schedule to the Bill, in which it was deemed necessary to make certain amendments.

Your Committee now beg to lay before your Honorable House the Bill as amended by them.

JAMES A. HOGUE,
Chairman.

*No. 3 Committee Room,
Legislative Assembly,
2nd December, 1897.*

PROCEEDINGS OF THE COMMITTEE.

TUESDAY, 16 NOVEMBER, 1897.

MEMBER PRESENT :—

Mr. Hogue.

In the absence of a Quorum, the meeting called for this day lapsed.

WEDNESDAY, 17 NOVEMBER, 1897.

MEMBERS PRESENT :—

Mr. Hogue,	|	Mr. Fegan,
Mr. Affleck,	|	Mr. Edden,
Mr. Gormly,	|	Mr. Griffith.

Mr. Hogue called to the Chair.

Entry from Votes and Proceedings, appointing the Committee, *read* by the Clerk.

Printed copies of the Bill referred, together with original Petition to introduce same, before the Committee.

Present :—William Arnott, Esq. (*Messrs. Arnott and Reynolds, Solicitors for the Bill*).

William Arnott sworn and examined.

John William Wilson (*one of the Promoters*) called in, sworn, and examined.

Witness withdrew.

John Haydon Cardew (*Licensed Surveyor, and A.M.Inst.C.E.*) called in, sworn, and examined.

Witness withdrew.

William Wiley (*one of the Promoters*) called in, sworn, and examined.

Witness withdrew.

[Adjourned till Wednesday next at 11 o'clock.]

WEDNESDAY, 24 NOVEMBER, 1897.

MEMBERS PRESENT :—

Mr. Hogue in the Chair.

Mr. Gormly,	|	Mr. Fegan,
Mr. Affleck,	|	Mr. Hawthorne.

John Sydney Cargill called in, sworn, and examined.

Witness withdrew.

Henry Deane (*Engineer-in-Chief for Railway Construction*) called in, sworn, and examined.

Witness withdrew.

Jasper Gaze Wiseman (*Council Clerk of the Borough of Lithgow*) called in, sworn, and examined.

Witness withdrew.

[Adjourned till Tuesday next at 11:30 o'clock.]

TUESDAY, 30 NOVEMBER, 1897.

MEMBERS PRESENT :—

Mr. Hogue in the Chair.

Mr. Fegan,		Mr. Affleck.
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Present :—William Arnott, Esq. (*Messrs. Arnott and Reynolds, Solicitors for the Bill*).

[Adjourned till Thursday next at 10 o'clock.]

THURSDAY, 2 DECEMBER, 1897.

MEMBERS PRESENT :—

Mr. Hogue in the Chair.

Mr. Affleck,	|	Mr. Mackay,
	|	Mr. Edden.

Present :—William Arnott, Esq. (*Messrs. Arnott and Reynolds, Solicitors for the Bill*).

William Arnott recalled and further examined.

Hugh McLachlan (*Secretary to the Railway Commissioners*) called in, sworn, and examined.

Witness withdrew.

Henry Deane recalled and further examined.

Witness withdrew.

John

John Haydon Cardew, recalled and further examined.

Witness *produced* plan showing the land proposed to be taken for a tramway.

Room cleared.

Preamble considered.

Question,—“That this Preamble stand part of the Bill,—put and passed.

Solicitor called in.

Clause 1 read, amended,* and agreed to.

Clause 2 read and *omitted*.

Clause 3 read, amended,* and agreed to.

Clause 4 read, amended,* and agreed to.

Clause 5 read, amended,* and agreed to.

Clause 6 read, amended,* and agreed to.

Clause 7 read and agreed to.

Clause 8 read and *omitted*.

Clause 9 read and agreed to.

Clause 10 read and *omitted*.

Clause 11 read, amended,* and agreed to.

Clauses 12, 13, 14, 15 severally read and *omitted*.

Clause 16 read, amended,* and agreed to.

Clauses 17 to 44 inclusive severally read and agreed to.

Clause 45 read, amended,* and agreed to.

Clause 46 read, amended,* and agreed to.

Clause 47 read and agreed to.

Schedule read and *omitted*.

New clause to stand as clause 2, read and agreed to.

New clause to stand as clause 9, read and agreed to.

New clause to stand as clause 14, read and agreed to.

New clause to stand as clause 15, read and agreed to.

New clause to stand as clause 33, read and agreed to.

New clause to stand as clause 34, read and agreed to.

New clause to stand as clause 35 read and *agreed to*.

New clause to stand as clause 36 read and *agreed to*.

New clause to stand as clause 46 read and *agreed to*.

New clause to stand as clause 47 read and *agreed to*.

New clause to stand as clause 48 read and *agreed to*.

New clause to stand as clause 49 read and *agreed to*.

New Schedule read and *agreed to*.

Title read and *agreed to*.

Chairman to report the Bill with amendments to the House.

* See Schedule
of Amendments

SCHEDULE OF AMENDMENTS.

Page 2, clause 1, line 21. After “aforesaid” *insert* “and to use so much of the said roads”

Page 2, clause 1. *Add* at end of clause “Provided also that the gauge of the said railway shall be the Gauge same as that of the Government railways.”

Page 2, clause 2. *Omit* clause, *insert* the following new clause to stand as clause 2 :—

2. The said railway and all necessary bridges and causeways in connection therewith shall be in all respects constructed and at all times maintained in a proper and workmanlike manner as directed, and to the satisfaction of the Engineer-in-Chief for Railway Construction; and the Company shall at all times make, do, and supply all such repairs, alterations, additional works, things, and materials as in the opinion of the said Engineer-in-Chief shall be necessary for the proper and safe working of the said railway. And if the Company shall fail to make, do, or supply any such repairs, alterations, additional works, things, and materials within a reasonable time after being by notice in writing under the hand of the said Engineer-in-Chief required to make, do, or supply the same, the Governor, with the advice of the Executive Council, may declare the said railway to be closed until such repairs, alterations, additional works, things, or materials shall have been made, done, or supplied as aforesaid; and if the Company cause or allow the said railway to be worked during such closure, the Company shall be liable to a penalty not exceeding £10 for each and every day the said railway is so worked.

Page 3, clause 3, lines 18 to 26. *Omit* “Provided that if the railway shall be damaged by parties who shall themselves use the railway for transit and supply locomotive power, the Company shall be entitled to compensation for such damage, to be recovered by action in the Supreme Court of New South Wales, the District Court, or the Court of Petty Sessions; and in estimating such damage the Company shall be entitled to compensation not only for the cost of repairing and restoring the railway, but also for the consequential damage (if any) sustained by reason of the suspension of transit or otherwise.”

Page 3, clause 4, line 27. *Omit* “And be it enacted that” *insert* “subject to the approval of the Governor and Executive Council.”

Page 3, clause 5, lines 51 and 52. *Omit* “For the purposes and subject to the provisions hereinafter contained.”

Page

Page 3, clause 5, line 54. After "empowered" insert "to enter into and upon the roads and lands hereinbefore referred to, and any roads and lands contiguous thereto and to survey, take levels, and stake or set out the same for the purpose of laying out the said railway and all other works connected therewith and"

Pages 3 and 4, clause 6, lines 60 and 1. Omit "(save and except as mentioned in section two hereof)."

Page 4, clause 8. Omit clause 8.

Page 4. Insert the following new clause to stand as clause 9 :—

Motive-power and rolling stock.
Power to Railway Commissioners to object to rolling stock.
Penalty.

9. It shall be lawful for the company to use and employ steam or other motive-power, and carriages, waggons, and trucks to be drawn hereby on the said railway. Provided that it shall be lawful for the Railway Commissioners of New South Wales at all times to object to any rolling stock used or intended to be used on the said railway, and if the Company shall use any rolling stock after the same shall have been so objected to, the Company shall be liable to a penalty not exceeding £10 for each and every day the same shall be so used.

Pages 4 and 5, clause 10. Omit clause 10.

Page 5, clause 11, 10, line 26. Omit "Secretary for Public Works or the" insert "said"

Page 5, clause 11, 10, line 27. Omit "of New South Wales"

Page 5, clause 11, 10, line 30. Omit "Secretary or"

Pages 5 and 6, clause 12. Omit clause 12.

Page 6, clauses 13, 14, and 15. Omit clauses 13, 14, and 15.

Page 6, clause 16, 11, line 49. After "for" insert "the safety of the public and"

Page 7. Insert the following new clauses to stand as clauses 14 and 15 :—

Compensation for resumptions, &c.

14. Before proceeding with the construction of the said railway or any section thereof, the Company shall give notice of the lands (including Crown lands) proposed to be taken and used for the purposes of the said railway. Such notice shall be given to the owners of such lands and shall state,—

- (i) The particulars of the lands proposed to be so taken and used.
- (ii) That the Company are willing to treat as to the compensation to be made to such owners for such lands and the damage (if any) sustained or to be sustained by them by the exercise of the powers conferred by this Act.
- (iii) That such owners are required to forthwith deliver to the Company particulars of their respective estates or interests in such lands, and of the claims made by them in respect thereof, and such other particulars, and in such form as may be prescribed by such notice, together with an abstract of their title to such lands.

Service of notice on owners of lands

15. All notices required to be served by the Company upon the owners of such lands shall be served either personally upon such owners or left at their usual place of abode in New South Wales: Provided that if any such owners shall be absent from the colony, or cannot be found after reasonable inquiry, such notices shall be left with the occupier (if any) of such lands, or if there be no such occupier shall be affixed upon some conspicuous part of such lands, and a copy thereof published by and at the expense of the Company once a week for four consecutive weeks in the New South Wales *Government Gazette* and in a newspaper published at Lithgow, and shall also be posted and kept posted at the post office nearest to the lands to which such notices refer for a period of one month.

Page 10. Insert the following new clauses to stand as clauses 33, 34, 35, and 36.

Power of purchase of tramway by Government.

33. At any time, after two years from the commencement of this Act, the Governor, with the advice of the Executive Council, may, if he think fit, purchase such tramway upon giving to the Company six months notice in writing of his intention to do so. If the amount tendered for the purchase of the property be considered inadequate by the Company, the amounts shall be ascertained by assessment in terms of the Lands for Public Purposes Acquisition Act: Provided that the cost of resumption shall not exceed by ten per centum the original cost of construction: Provided further that on such resumption taking place, the lands on which the tramway has been constructed shall be held to have reverted to the Crown.

Running powers over tramway to Railway Commissioners.

34. The said Railway Commissioners shall have running powers over the said railway to enable them to obtain supplies of any coal, wood, stone, gravel, clay, or other material that may be required by the Railway Department for its own use. Provided that for such privilege the said Department shall pay the Company at the rate of one half-penny per ton per mile on such material, and that the weight of engines used by the Railway Commissioners, and their speed, be not greater than that used or approved of by the Company.

Power to assign.

35. It shall be lawful for the Company at any time, by any deed or instrument in writing, to assign and transfer all the rights, powers, privileges, benefits, and advantages conferred upon them by this Act to any person or persons or to any duly registered company, and upon any such transfer or assignment being signed or executed, the person or persons or duly registered company in whose favour such transfer or assignment is made shall then stand in the place of the Company, and shall have all the rights, powers, benefits, privileges, and advantages conferred upon the Company by this Act.

Hire to be paid as described by the said Company.

36. The hire and charges to be made under this Act by the Company shall be in such terms and amounts, and shall be paid to such persons upon or near to the tramway, or in such manner and under such regulations as the Company shall by notice appoint.

Page 11. Insert the following new clauses to stand as clauses 46, 47, 48, and 49 :—

Railway Commissioners may appoint Inspectors.

46. The said Railway Commissioners may from time to time appoint any person to be inspector for the purpose of inspecting the said railway, and of making any inquiry with respect to the condition of the works thereof, or into the cause of any accident thereon, provided that no person so appointed shall exercise any powers of interference in the affairs of the Company. Every inspector under this Act shall, for the purpose of any inspection or inquiry which he is directed by the Railway Commissioners to make or conduct, have the following powers—that is to say :—

- (i) He may enter and inspect the said railway and all the stations, works, buildings, offices, stock, plant, and machinery belonging thereto or used in connection therewith.
- (ii) He may, by summons under his hand, require the attendance of any person who is engaged in the management, service, or employment of the said Company, and whom he thinks fit to call before him and examine for the said purpose, and may require answers or returns to such inquiries for the said purpose as he thinks fit to make.
- (iii) He may require and enforce the production of all books, papers, and documents of the Company which he considers important for the said purpose.

47. Whenever in or about the said railway, or any of the works or buildings connected therewith, or any building or place, whether open or enclosed, occupied by the Company for working such railway, any of the following accidents take place in the course of such working—that is to say,—

- (i) Any accident attended with loss of life or personal injury to any person whomsoever ;
- (ii) Any collision where one of the trains is a passenger train ;
- (iii) Any passenger train, or any part of a passenger train, accidentally leaving the rails ;
- (iv) Any accident of a kind not comprised in the foregoing descriptions, but which is of such kind as to have caused, or to be likely to cause, loss of life or personal injury, and which may be specified in that behalf by any order to be made from time to time by the said Railway Commissioners,

the Company shall send notice of such accident, and of the loss of life or personal injury (if any) occasioned thereby, to the Railway Commissioners. Such notice shall be in such form and shall contain such particulars as the said Railway Commissioners may from time to time direct, and shall be sent by the earliest practicable post after any such accident takes place.

48. The Railway Commissioners may from time to time by order direct that notice of any class of accidents shall be sent to them by telegraph, and may revoke any such order. While such order is in force notice of every accident of the class to which the order relates shall be sent to the Railway Commissioners by telegraph immediately after the accident takes place. Failure to comply with the provisions of this section shall render the Company liable for each such offence to a penalty not exceeding twenty pounds.

49. It shall at all times be lawful for the Crown to make any road through, over, under, or across the said railway, or the land used therewith, without paying or being liable to pay any compensation therefor to the Company, provided that in making any such road as little interference as possible with the said railway or the working thereof, shall be made.

Page 11, clause 45 50, line 50. *Omit* "three" *insert* "two"

Page 11, clause 45 50. *Add* at end of clause "If the railway hereby authorised shall cease to be worked as a railway by the Company for twelve calendar months, the land, site, and permanent way thereof shall, on proclamation by the Governor, with the advice of the Executive Council, vest in and become the absolute property of the Crown without making any allowance or compensation or paying any consideration in respect thereof to the Company."

Page 11, clause 46 51, line 54. After "Act" *insert* "the words 'the Company' shall mean and include the said William Hunter, John William Wilson, and William Wiley, their heirs, executors, administrators, and assigns, and"

Page 12, Schedule. *Omit* Schedule *insert* the following new Schedule :—

SCHEDULE.

All that piece or parcel of land, being parts of portions 41 and 5, parish of Marangaroo, and portions 45 and 53, parish of Lett, county of Cook, in the Colony of New South Wales: Commencing at the south-west corner of M.P. 1, parish of Marangaroo; and bounded thence by the south boundary of M.P. 1, bearing 88° 36' 1,140.5 links; thence by part of the western boundaries of portions 89 and 5, bearing 180° 1,027 links; thence by a line bearing 154° 19' 1,450 links; thence by a curve of 1,025 links radius for 486 links, its chord bearing 167° 53' 30"; thence by a line bearing 181° 30' 411 links; thence by a curve of 975 links radius for 341 links, its chord bearing 171° 28'; thence by a line bearing 161° 26' 648.8 links; thence by a line bearing 71° 26' 25 links; thence by a curve of 1,050 links radius for 175 links, its chord bearing 156° 39' 30"; thence by a line bearing 171° 0' 1,584 links; thence by a line bearing 261° 0' 25 links; thence by a curve of 2,025 links radius for 372 links, its chord bearing 155° 58' 30"; thence by a line bearing 181° 31' 1,676 links; thence by a curve of 775 links radius for 566 links, its chord bearing 150° 36' 30"; thence by a line bearing 139° 39' 30" 867 links; thence by a curve of 775 links radius for 656 links, its chord bearing 115° 24' 30"; thence by the railway fence bearing 245° 57' about 110 links; thence by a curve of 825 links radius for 585 links, its chord bearing 295° 24' 30"; thence by a line bearing 319° 39' 30" 867 links; thence by a curve of 825 links radius for 602 links, its chord bearing 330° 36' 30"; thence by a line bearing 1° 31' 1,676 links; thence by a curve of 1,975 links radius for 362 links, its chord bearing 335° 58' 30"; thence by a line bearing 261° 0' 25 links; thence by a line bearing 351° 1,584 links; thence by a curve of 950 links radius for 159 links, its chord bearing 336° 39' 30"; thence by a line bearing 71° 26' 25 links; thence by a line bearing 341° 26' 648.8 links; thence by a curve of 1,025 links radius for 359 links, its chord bearing 351° 28'; thence by a line bearing 1° 30' 411 links; thence by a curve of 975 links radius for 462 links, its chord bearing 347° 53' 30"; thence by a line bearing 334° 19' 1,346 links to western boundary of portion 5; thence by part of that boundary bearing 180° 215 links to a creek; and thence by that creek upwards, to point of commencement.

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1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

MINUTES OF EVIDENCE

TAKEN BEFORE

THE SELECT COMMITTEE

ON THE

LITHGOW CO-OPERATIVE COAL COMPANY
RAILWAY BILL.

WEDNESDAY, 17 NOVEMBER, 1897.

Present:—

MR. GORMLY,
MR. AFFLECK,
MR. GRIFFITH,

MR. HOGUE,
MR. FEGAN,
MR. EDDEN.

J. A. HOGUE, ESQ., IN THE CHAIR.

William Arnott, Esq., of the firm of Arnott and Reynolds, solicitors, appeared for the promoters of the Bill.

William Arnott sworn and examined:—

1. *Chairman.*] I believe you are solicitor for the Bill? My firm are the solicitors for the promoters.
2. Have you advertised the Bill in conformity with the requirements of the law? Notice of the promoters' intention to apply for the Bill has been duly advertised, in conformity with the Standing Orders of the Legislative Assembly, in the *Sydney Daily Telegraph*, in the *Government Gazette*, and in a paper printed and circulated in the Lithgow district. That notice correctly and, I think, fully specifies the general purposes of the proposed Bill.
3. Have you petitioned Parliament for leave to bring in the Bill? Yes.
4. Have you any statement to make in connection with the Bill? The Bill as drafted by me and presented to the House is, I believe, on the same lines as other Bills for purposes similar to that for which this is intended. Possibly some few amendments may be deemed necessary; but, as it at present stands, it gives the usual powers to the promoters for making and using the proposed railway, and it also has provisions for safeguarding vested interests and preventing the promoters from taking more than surface rights, and provides for compensation to be paid to owners, and for disputes as to the value of the land being decided by arbitration; also the manner in which the arbitration is to be conducted and the arbitrators appointed, and it proposes to give the promoters power to make by-laws. That is a power which will hardly ever be used, because it is proposed that the Railway Commissioners shall work the line. It is not proposed to carry passengers on the line, but simply to use it as a means of conveying coal from the coal-mines to the Lithgow station.
5. Have you notified the Railway Commissioners of your intention? I sent a letter to the Secretary for Railways giving him notice that the Committee would sit yesterday, and enclosing a copy of the Bill and a tracing of the proposed connection of this line with the Great Western Railway, near Lithgow station. The meeting having lapsed yesterday, I wrote again, giving the Secretary notice that the Committee would sit this morning at 11 o'clock.
6. Have you submitted to the Secretary for Railways a schedule of the rates that you propose to charge? The rates are set out in the Bill itself; these are maximum rates; but, as I have said, the line is proposed to be worked by the Railway Commissioners.

W. Arnott.
17 Nov., 1897.

- W. Arnott. 7. These rates are, I presume, subject to the approval of the Railway Commissioners? I do not think there is any provision in the Bill for that, but there is a provision that the promoters shall charge a rate not exceeding a certain amount, and the only people whom we are likely to do business with in that respect are the Railway Commissioners.
- 17 Nov., 1897. 8. Do you anticipate any passenger traffic? No passenger traffic at all. The line is simply to be for the conveyance of coal from the mine to the Lithgow station.
9. *Mr. Gormly.*] What is the distance? About 1 mile.
10. *Chairman.*] This is a co-operative company which is promoting this line? At present the promoters are only three individuals. I understand that they contemplate, when they get the thing going, turning it into a co-operative company.
11. *Mr. Affleck.*] Is it not a co-operative company at present? No; they are simply calling themselves the Lithgow Co-operative Company; that is just a trading name.
12. Have you any information as to the extent of the coal land which is to be developed? I understand that the land which the promoters are entitled to work comprises an area of between 680 and 690 acres, under the whole of which there are large coal deposits.
13. The Bill requires that the line shall be completed within three years? Yes; the 45th clause provides for that.
14. I presume that the plans will be submitted? Yes.
15. As far as you know, the law has been complied with in all respects, and care has been taken in drafting the Bill to conserve all public and private rights? Yes.
16. *Mr. Fegan.*] Do you not think that three years is a long time to allow for the making of a line of railway? I should not be prepared to say that it will take three years to make the line; it could be made in a few months.
17. If this is a *bonâ fide* company why do they want such a long period as three years? When I was instructed to draw the Bill I was not aware of the length of the line, and I simply took care to give them plenty of time.
18. In Bills which have been passed lately in regard to warrants of distress, certain exemptions have been allowed—such articles as workmen's tools, wearing apparel, beds, and bedding being exempt;—would you have any objection to that being provided for in this Bill? I do not think we have anything in the Bill referring to that. I assume that you mean warrants of distress issued by landlords upon tenants. That would apply, of course, assuming that the company erected houses that would be occupied by miners.
19. Refer to clause 35? That is a provision in which the company is authorised to take possession of the land for the purposes of the railway. If the owner refused to give possession, then by summary process they could invoke the aid of the sheriff.
20. *Chairman.*] Would anything in this Bill override the law in this respect? It does not touch the law of landlord and tenant in any way. We would have no objection to this Bill making working men's tools exempt, and also wearing apparel and bedding.
21. *Mr. Affleck.*] Under clause 3 a person wanting to carry goods over the line and providing their own trucks and engines would have to pay 2d. instead of 3d., is not that too small a reduction as compared with the amount to be paid by those who do not provide their own motive power, who have only to pay 3d.? The clause says not exceeding 2d., but it is not anticipated that there will be any traffic over the line except what is carried by the Railway Commissioners.
22. What will be the gauge of the line? Four feet 8½ inches.

John William Wilson sworn and examined :—

- J. W. Wilson. 23. *Chairman.*] What are you? Colliery manager.
- 17 Nov., 1897. 24. Are you the John William Wilson described in the preamble of the Bill as one of the promoters? Yes.
25. What is the extent of the coal land you propose to work? Between 600 and 700 acres.
26. What is the depth of the seam? The depth from the surface is about 100 feet.
27. What is its thickness? Five feet 8 inches of marketable coal. The seam altogether is 11 feet in thickness.
28. What output of coal do you expect from it? About 27,000 tons of large coal and 3,000 tons of small coal annually, bituminous coal.
29. How has the land been acquired? Under the 28th section of the Mining Act.
30. Have you any documents with you bearing upon the acquisition of the land? I produce the lease, with the plan attached, of the land which is to be worked.
31. Has the company yet been formed? There are three of us in the company.
32. And you propose to form it into a co-operative company to work the land? Yes.
33. Do you know of any objection to the construction of this railway line? I have not heard of any.
34. Have you any idea of what the cost of construction will be? I think it will cost about £3,500.
35. *Mr. Fegan.*] Why do you ask for such a length of time as three years within which to construct the railway? To get the company formed, and other preliminaries. We want to form it into a co-operative company.
36. Why do you ask for such a long period as three years? It should not take three years.
37. What do you think will be a reasonable time? I think the work should be carried out within two years.
38. The land is only 1 mile from Lithgow? Yes.
39. What distance is it from this land to the next colliery? The nearest one is the Hermitage Colliery, which is within half a mile. That is on the west side; on the east side is the Zigzag Colliery, that is within a mile, and the workings are within half a mile of this property.
40. What seam is it called? The Lithgow Valley seam.
41. Which has been worked by other companies? Yes.
42. So that the coal has been thoroughly proved? Yes.
43. You have a seam of 5 ft. 8 in. of good steam coal? Yes.
44. How many men will this mine employ? About thirty-five.
45. I suppose you have no idea yet as to what are the terms of the articles of association? No; I have no idea of that at present.
46. You have not got the capital at present? No.

47. You expect that under this Bill you will be able to raise sufficient capital to get the work done? Yes. J. W. Wilson.
48. Have you been a working miner yourself? I have been connected with mines all my life. 17 Nov., 1897.
49. Have you got a certificate under the Act recently passed? Yes.
50. Were you managing a colliery at that time? Yes; the Zigzag.
51. Working the same seam? Yes.
52. You would have no objection to a less time than three years being provided within which to make the line? No; two years would do.
53. You think it would not hamper the Company in any way? I should not think it would.
54. You have every reason to believe that if the Bill is passed you will get the necessary capital? Yes, I think so.
55. Have any other colliery proprietors objected to the passing of this Bill? Not to my knowledge.
56. *Mr. Affleck.*] Have those other two mines that you have mentioned got a railway connection? Yes; they have direct communication with the Great Western line.
57. Then you do not expect to get any traffic from them? No.
58. *Chairman.*] I presume that although you ask for three years in which to construct the line, you do not anticipate that it will take that length of time? No, I think two years will be quite sufficient; everything ought to be in good going order in that time.
59. There might be some delay in the formation of the Company, which would render a period of three years necessary? Yes; but I think that we can get the money straight away, as soon as the Bill is passed.
60. *Mr. Gormly.*] What would be the chief causes of delay of two years before you could open the railway;—would it be in connection with the construction of the railway or in the opening of shafts? It would be in connection with both; all the work could be carried on together.
61. You would require to sink shafts before you could utilise the railway? Yes.
62. Which would cause the greatest delay, the construction of the mine or the sinking of the shafts? I think it would all be carried out at the same time. It would not take long to sink a shaft—only about six months. It is only 100 feet, and very good sinking.
63. *Chairman.*] Do you propose to deal with the work of sinking the shaft and the construction of the railway both at the same time? Yes; as soon as the Bill is passed we can start with the shaft, and have it ready almost before the railway.
64. Could it all be constructed within twelve months? Yes.
65. *Mr. Arnott.*] You have had a great deal of experience in coal-mining? Yes; twenty-two years.
66. You know the whole of that district very well? Yes.
67. You are aware that the Bill proposes to give power to run the railway over certain roads? Yes.
68. Do you produce a plan of the district? Yes.
69. These roads that the line is to cross are not used, are they? Yes; they are used for day traffic.
70. There is a road from the Hermitage Colliery to M.P. 1, on the road between portions 41 and 5;—is that road used? That road is not used. We propose to cross that road between portions 41 and 5.
71. That part of the road is not used at all? No.
72. Are there any coal-shafts on the road? There is a little shaft, which Hunter and Wilson put down 40 feet.
73. Are there any shafts at the Farmers' Creek end of the road? There are no shafts, but there is a tunnel.
74. That in itself blocks the road, does it not? Yes.
75. This line is to cross the new road, is it not? Yes.
76. That is a road leading over to the Lithgow railway bridge, is it not? Yes.
77. Is that road used? Yes, it is.
78. Is there much traffic over it? A fair amount.
79. How often do you think your trucks will have to cross that road? Not more than twice a day.
80. The surrounding lands are all mining properties, are they not? Yes; they are used for mining and smelting.
81. Would the construction of this railway affect their operations at all? Not in the slightest degree.
82. Do you know what amount will be payable to the Crown in royalties if this mine is opened up? It would amount to £712 10s. per annum.
83. How much per ton? Sixpence a ton for shale and large coal and 3d. a ton for small coal.
84. That is set out in the lease? Yes.
85. It would also mean a considerable outlay for miners' wages? Yes, miners and other workmen.
86. The promoters do intend to open this coal mine, do they not? Yes.
87. Would it be any use for them to open this mine without having the railway? It would not be of any use.
88. The land would be absolutely useless without the railway? Yes.
89. Is it proposed to work this colliery with your own rolling-stock? No; the Railway Commissioners will work it.
90. So that the running on the line will be entirely under the control of the Railway Commissioners? Yes.
91. *Mr. Gormly.*] That is if the Railway Commissioners will undertake to run their rolling-stock on it? Yes.
92. There is no agreement between the proposed company and the Commissioners, or any promise? No; but the Commissioners work the colliery lines in that district. The trucks are brought to the mines and loaded, and the Commissioners take them away.
93. *Mr. Arnott.*] You asked for leave to run your own waggons to provide against such a contingency as the Railway Commissioners not supplying rolling-stock? Yes; but the Commissioners usually provide the rolling-stock in that district.

John Haydon Cardew sworn and examined:—

94. *Chairman.*] You are a licensed surveyor? Yes; and Associate Member of the Institute of Civil Engineers, London. 17 Nov., 1897.
95. You are aware of the object of the Bill before the Committee? Yes.
96. Have you surveyed the line of railway which it is proposed to construct? I have.

- J. H. Cardew. 97. *Mr. Arnott.*] You have had considerable experience in railway matters, have you not? Yes, I have.
 98. I believe you are consulting engineer for the Zigzag Colliery? Yes.
 17 Nov., 1897. 99. One of the largest collieries in the district? Yes.
 100. You have also been engaged on many works for the Government? Yes. And I was employed quite recently by the Railway Commissioners in the McSharry arbitration case against the Railway Commissioners. I was also employed by the Railway Commissioners on the quadruplication of the Western Railway Line, and the proposed duplication to Goulburn.
 101. You know the country over which this railway is proposed to pass? I do.
 102. Have you carefully surveyed it? Yes.
 103. Does the description in the schedule to the Bill correctly describe the land? It does.
 104. I believe the plan produced was made from your survey? Yes.
 105. That shows correctly the proposed route? It does.
 106. Do you know as a matter of fact what roads this railway will cross over? Yes. First of all it crosses the new road to the bridge.
 107. Is that road used much? Not a great deal.
 108. The only other part where it crosses the road is near M.P. 1? Yes.
 109. Is that road used? It is not used. It is not even marked out or made—it is an impracticable road. It goes over a mountain. That road is also blocked by the Hermitage Colliery, near Farmer's Creek.
 110. What is the total length of the proposed line? About 1 mile.
 111. Is it proposed to make the line on the same gauge as the Government railway? Yes.
 112. What is the ruling grade? That question I have not really gone into yet; but I can say, approximately, that the steepest grade would be about 1 in 35. I think that that can be obtained with a little cutting.
 113. That would be going up to the mine? Yes.
 114. So that it will only be empties returning that will have to ascend that grade? Yes; the load will always be going down hill.
 115. Do you know the nature of the surrounding country? Yes.
 116. Is it used chiefly for mining purposes? It is used very little for anything but mining. It is very mountainous.
 117. Would the construction of the railway interfere with the mining operations of the adjoining mines? Not in the slightest.
 118. Could the coal-mines on M.P. 1 be worked on a commercial basis at all without the construction of a railway such as is proposed? No, they could not.
 119. The land would be practically useless without the railway? It would be valueless without a railway to take the minerals away.
 120. What do you estimate will be the cost of making the railway? About £3,500. I have not taken out a detailed estimate, but I think that that would about cover it.
 121. How long do you estimate it would take, in ordinary working, to make the line? Three or four months.
 122. Do you know how long it would take to put down the shaft upon M.P. 1? I have not gone into that question yet.
 123. We have been told by a preceding witness that the coal lies at a depth of 100 feet;—can you form any idea how long it would take to sink a shaft? They will not sink a shaft, but drive in an adit. They will have to go 300 or 400 feet.
 124. Is it not proposed that you shall be the consulting engineer for these mines? I cannot say. I am consulting engineer for the railway. I do not know whether they will engage me for the mine itself.
 125. The line, as proposed, presents no engineering difficulties? None at all.
 126. *Chairman.*] As far as you know, the construction of the line will not in any way interfere with the existing rights of private individuals or of the State? No; I cannot see that it will interfere with the rights of private individuals or with those of the State either.
 127. *Mr. Gormly.*] Have you made an estimate of what the line could be constructed for with a grade of 1 in 50? No.
 128. Would it be practicable? I have not made a detailed estimate of the cost at all.
 129. Would it be possible, at a reasonable cost, to construct a line with a grade of 1 in 50? No; it would not be possible, owing to the nature of the country. You could not do it without zigzagging all over the country.
 130. You are of opinion that it is not possible to make the line at a lower grade than 1 in 35? Not at a reasonable cost.
 131. *Chairman.*] Are you responsible for the drawing up of the schedule of the Bill containing the description of the land? I wrote the description of the land.
 132. Is it not usual to give the name of the county in the schedule? Yes.
 133. You would have no objection to the schedule being amended to that extent? No; I believe the county was mentioned in my description.
 134. *Mr. Fegan.*] You say that you are consulting engineer for the line? Yes.
 135. Is it not strange that you are not able to give us something definite as to the grades;—you have produced a plan which shows grades of 1 in 30 and 1 in 32? Those are only pencil-marks.
 136. Is not that to give the Committee an idea of the grades? No, not at all. They were put on for my information. I brought the plan with me as being all the information that I have at my disposal.
 137. Do you not think that you ought to be able to give us definite information in regard to the grades? The line has not been finally staked out.
 138. So that the Committee cannot go by this plan? As far as the land is concerned which will be required for the purposes of the line you can go absolutely by the plan, but not as to the grades. They have not been detailed yet. The position of our works at the pit bank will determine them to a great extent.
 139. Is the plan produced in accordance with the schedule to the Bill? Exactly; but there is nothing about grades in the Bill.
 140. Does not a great deal depend upon the grade? Yes.

141. Do you not think that the Committee ought to have more information about them? It is for the Committee to say. J. H. Cardew.

142. I am asking you? I do not think so. 17 Nov., 1897.

143. You are asking for three years to make the railway;—if you were going to make it with a better grade would it take longer? Yes; but it would not be practicable to make it 1 in 50.

144. Do you think that three years is too long a period? I do not know anything at all about the time mentioned in the Bill, I have not seen a copy of it.

145. *Mr. Affleck.*] You say that the grade will not be over 1 in 30? I think it quite possible to obtain a grade of 1 in 35.

146. *Mr. Gormly.*] Would you be prepared to state, for the information of your principals, that the line could be constructed with a grade of 1 in 35? Yes.

147. *Mr. Fegan.*] Will the proposed railway be within the Lithgow municipal area? I am not acquainted with the municipal boundaries of Lithgow; but I think it must be within the municipal area.

148. Have the municipal council raised any objection as to the right of way? I have not heard of any objection.

149. Would not the railway interfere with the traffic on their streets? It crosses the road approaching the bridge across the railway at Lithgow station; but it is a very common thing at Lithgow to see railway lines crossing the streets.

150. At what point do you connect with the Western Line? About 300 feet to the east of the Lithgow station.

151. *Mr. Edden.*] Do you know whether this company has got any private land there which, after the opening of this line, they will be able to cut up and sell in allotments to the men that work at the mines? I do not think they have.

152. *Chairman.*] As far as you know, the line is wanted solely for the purpose of developing the coal-mine? Yes, as far as I know.

153. *Mr. Gormly.*] Would it be convenient for the workmen to live at Lithgow? Yes; it would not be a mile away.

William Wiley sworn and examined.—

154. *Chairman.*] You are aware of the object of the Bill into which the Committee is inquiring? I am. W. Wiley.

155. Are you the William Wiley mentioned in the preamble of the Bill? I am. 17 Nov., 1897.

156. *Mr. Arnott.*] You are one of the promoters of the Bill? Yes.

157. And with the other two promoters you intend opening coal-mines on M.P. No. 1? I do.

158. And to do that will necessitate an expenditure of a considerable sum of money? It will.

159. And that money will be thrown away if a railway such as the one proposed is not constructed? We could not develop the colliery without the railway.

160. The land would be useless without the railway? Yes.

161. It would be impracticable to open coal-mines there without a railway to get the coal away? Yes.

162. In opening this colliery, and in constructing a railway such as is proposed, I suppose, that large sums of money will have to be expended? Yes; about £9,000 altogether in making the railway and opening the mine.

163. If these mines are opened it will mean a further outlay of money, will it not? There would be a large amount paid in wages.

164. All this money will go to people in the Colony, will it not? Yes.

165. Therefore it will benefit those people? Decidedly.

166. Do you or your co-promoters own any other land in the district? Not that I know of.

167. *Mr. Edden.*] You are not certain? I am pretty certain. I have never heard them speak of any.

168. *Mr. Arnott.*] You own none? I own none.

169. This mining lease was obtained some time ago, was it not? It was obtained this year. It is a mining permit.

170. Have you had some correspondence with the Mines Department in connection with mining under this piece of land? Yes; and more particularly with that adjoining it. An application was made under the 28th section for power to mine under the road approaching this land, as shown on the map; application was also made to the Lands Department for permission to occupy the surface of a portion of the road adjoining this land.

170½. What was the result of these applications? In both cases the Lands Department advised that it would be better, as we had to cross over private lands, to get a Bill passed. The Mines Department advised the same course.

171. Do you know the country over which the line travels? Yes.

172. Do you know what it is used for? It is a poor bit of country. There are a few cows on it. It is rented at £30 a year for 100 acres, with about 200 acres alongside of it.

173. Are mining operations being carried on under this land? No.

174. If mining operations were carried on, would the proposed railway affect them in any way? I think not.

175. *Chairman.*] The land is coal-bearing, is it not? It is very shallow. The coal outcrops at one corner, and at the extreme end it is not very deep.

176. You know that road near M.P. 1, where the line proposes to cross it? Yes.

177. Is that road used at all? No, not at all. It is not used from one end to the other in any portion. It is occupied with screens in one part.

178. *Mr. Fegan.*] What is your profession? General agent and land valuer.

179. You are one of the promoters of the company? Yes.

180. Do you not think that for an expenditure of £3,500 three years is too much time to ask for? I dare say it is. Probably two years would be ample.

181. You have no objection to its being made two years? No; but it takes a little time to put things in train.

182. *Mr. Edden.*] You want only two years to construct this line of railway? It takes some little time to put things into proper order. There is the arbitration business to be gone through in taking the land. Time must be allowed for that; you cannot rush these things.

183. You think two years would be sufficient? Yes.

- W. Wiley. 184. I suppose it is your intention to float a company? No, I think not.
- 17 Nov. 1897. 185. You are not sure? I am not exactly sure as to the system, but we know we can carry out the work.
186. You are not certain but what you will float a company? No.
187. *Chairman.*] You call it the Lithgow Co-operative Coal Company's Railway? Yes.
188. Whatever company is formed will be on the co-operative principle? That is the intention.
189. *Mr. Edden.*] It is the intention to form a company? Yes.
190. Suppose you fail? We shall have gone to a lot of expense for nothing.
191. You will not go on with it if you do not form a company? I do not say that; we may be able to finance it ourselves, and probably should.
192. You have definitely stated your intention to form a company;—how many shares will there be for the public to take up? It is impossible to say at present.
193. You say that the undertaking will entail an expenditure of about £9,000. Surely you ought to be able to tell us how many shares you will offer to the public. I suppose you have not yet decided how many promoters' shares there will be? No; a lot of expense will be incurred. We have to find out what the expenses would be.
194. The solicitor was asking you something about benefiting the community. In the preamble of the Bill it says, "And whereas the said coal-mines are likely to prove beneficial to the Colony"; how do you think they will prove beneficial even to the promoters or the shareholders seeing that coal is selling at 4s. 10d. per ton;—how do you expect to get a profit? It is 4s. 3d., because the colliery proprietors charge that. If they charged more they could get it.
195. I suppose you have no idea what wages the men make? If they are working full time they would make a reasonable wage. I do not say that it should not be better, but if they were working continuously the wages would be satisfactory.
196. They are not working continuously? I think the mines are nearly all overmanned.
197. Too many men, and consequently they do not work full time? No.
198. If you get your mine developed will it be the means of making the men work more time? There is an increase in the trade at Lithgow. There has been a large increase during the last few years. A large quantity of coal is used for smelting purposes. There are some big smelting works at Lithgow.
199. I want to know how this coal-mine is going to benefit the public, seeing that the coal-mines at Lithgow are not working full time;—will it not be the other way about? I do not think so. There is a big market for coke at Lithgow which has not been utilised at all.
200. Would you make all your coal into coke? I do not say all, but some of it. There is a fine opportunity there now which is being neglected.
201. Of course, you must have gone into the whole business? Of course, if I thought the thing would be a failure I would not have gone into it.
202. How much do you expect to sell the coal at per ton? That is very hard to say.
203. Suppose things remain as they are for the next four or five years, coal being 4s. 3d. per ton at Lithgow, do you think it is possible for you to open a mine, form a company, and benefit the public? I say that there is a trade there that should be supplied. Coke is wanted for the western mines.
204. I suppose you make the coke from small coal? Yes; but there is no reason why they should not make it from large coal.
205. But you would not pay the price for large coal and then crush it into small? There is no reason why you should not do it.
206. Do they do that elsewhere? Yes; in some parts of England.
207. Where in England? I could not tell the colliery, but they do it in certain cases, and there is no reason why they should not.
208. Considering what the prices are, do you think it is possible for you to form a company, to call upon the public to take up shares, and to ensure that it will be a success? I think there is every possibility of it.
209. You say there is a trade at Lithgow? Yes; that is one item.
210. Who would consume the coal at Lithgow? Nobody.
211. Where would it go to? To the western mines, which are opening up very freely at Cobar, Nymagee, and in that locality. The coke trade is increasing very fast, and coke is being sent to Broken Hill from Illawarra.
212. If it was not for the coke business you would not open this mine? There is a chance of a fair development in the coal trade. It has been increasing for the last two years.
213. In clause 3 of the Bill it says:—
- The railway shall when constructed be open to the public use upon payment of a toll to the company of a sum not exceeding three pence per ton per mile on freight for every transit.
- Do you not think that that is an exorbitant charge? It is the usual formula that has to be put into Bills of this kind. A clause could be put in if necessary stating that under no circumstances should more than a certain profit be obtained. The Government will use the line solely.
214. You say that you have no other land about this line? No.
215. And none of the other promoters have any? No.
216. You say definitely that it is not the intention of the company to cut up land into blocks for sale? Certainly not.
217. *Mr. Affleck.*] You say that you are perfectly agreeable that the three years within which the line is to be constructed shall be made two years? Yes.
218. *Chairman.*] In case of arbitration proceedings occurring that would make a delay, would it not? I think so. There might be many things that would delay matters, but two years ought to be sufficient time.
219. Touching the question of the opening of this mine being beneficial to the public;—do you consider that any development of mineral wealth is directly or indirectly beneficial to the public? It must be in one way or another.
220. Have you proved the quality of the coal on this land? It has been proved on either side of it. This coal is below the surface.
221. Lithgow coal is very good for coke making? Yes, very good indeed.
222. Is there not a great deal of coal from Lithgow being used on the railways? Yes.
223. Is the demand increasing? It has been increasing considerably during the last three years.

224. Do you think it is at all likely with the population increasing that things will remain as they are now at Lithgow? As a matter of fact, the establishment of smelting works has made things move along very fast in the western mines. Lithgow seems to be the spot at which they do their final refinement of the ores. W. Wiley.
17 Nov., 1897.

225. In your opinion, is there likely to be any increase in the demand for coal from the western mines? I feel confident that there will be.

226. You think, at any rate, that there is a fair prospect of this venture proving successful? I do indeed.

WEDNESDAY, 24 NOVEMBER, 1897.

Present:—

MR. GORMLY,
MR. AFFLECK,

MR. FEGAN,
MR. HAWTHORNE.

J. A. HOGUE, Esq., IN THE CHAIR.

John Sydney Cargill sworn and examined:—

227. *Chairman.*] You are an officer in the Crown Solicitor's Department? Yes.

228. Have you been furnished with a copy of the Bill? Yes.

229. Have you seen the Crown Solicitor about it? I have spoken with him in reference to the matter, and I have read the Bill. J. S. Cargill.
24 Nov., 1897.

230. Are there any provisions of the Bill to which you think exception can be taken;—any which in any way clash with the existing law? No; I see nothing that clashes with the existing law.

231. Is there any respect in which you think the Bill might be amended in any point affecting the public interest? There is one point. Under clause 45 it is provided that, unless the railway is completed and brought into use within three years, the rights and privileges of the Company shall cease. There does not appear to be any provision as to whether the railway, or such portion of it as may have been constructed, should be forfeited or not. Of course, it may not be considered necessary, inasmuch as the Company is, in the first instance, bound to purchase the land over which the railway is constructed. At the same time it might be desirable, in the interest of the community generally, that the Railway Commissioners should have some right with regard to the line or such portion of it as may be completed.

232. Is there any such provision in any other Act? Yes; it is in the Capertee Act, clause 49, which says that if the line shall be unworked for one year continuously it shall be competent for the Railway Commissioners to take possession of the same on paying compensation.

233. Is there anything whatever in reference to the public interest that the Bill touches in regard to which the Bill needs amendment? No; I do not see in it any unnecessary interference with public rights.

Henry Deane sworn and examined:—

234. *Chairman.*] You are Engineer-in-Chief, Railway Construction Branch? Yes.

235. Have you been furnished with a copy of the Bill? Yes, and I have gone through it carefully.

236. Have you any suggestions to make with regard to it, or any objections to it? I object to the form of the Bill very much. There are a great number of clauses that want alteration—in fact, the whole of the Bill almost, in my opinion, wants redrafting. It is a great pity that it was not drawn up in the form of one of the more recent private railway or tramway Bills. During the last six years, or even more, we have paid a great deal of attention to the wording of the provisions of private railway Bills, and a satisfactory result has been obtained without the infliction of any hardship on the promoters, and I think that if this Bill had been drawn up according to the form in which more recent Bills have been drawn up there would have been no objection to it. As it is at present there are a great many omissions; there is nothing in the Bill about gauge; there is nothing about inspection, nor the passing of plans for works; there is nothing about the width of the land required; there is nothing about the payment for or leasing of Crown lands. There is a provision for land to be acquired by the promoters without formal transfer or conveyance, which, as matters are at present viewed, is very objectionable. Then the land resumption clauses are not as complete as they should be, and there is no provision for resumption of the railway by the Government, as is usual in all these Bills. The Government may not want to take the line, but it is usual to have a provision of that kind; and, finally, I have been trying to make out the course of the line from the Schedule, and I find that the Schedule is not sufficiently descriptive. I sent one of my officers to see Mr. Wiley about the matter, but he was not able to catch him. The Committee will notice that in one or two places where curves are mentioned, it does not state which way they turn. The length and bearing of the previous straight is given, but it does not say whether the curve bears to the right or the left, so that it is impossible to mark the line on any plan from the description given in the Schedule. I should recommend that the Bill be almost entirely redrafted on the lines, say, of the Simpson's Railway Act, on which a great deal of attention was bestowed, or upon the lines of one or two of the later Bills, which would probably meet the same object.

237. It is rather to the form of the Bill than to the substance that you object? It is both to the substance and the form.

238. One objection that you take to the Bill is that there is no provision made about the gauge? Yes.

239. Will you state in detail the objections that you have to some particular clauses? The objections are so numerous that I find it rather difficult to enumerate them. I have mentioned some of the particular points which I find are not attended to in the Bill; but there are other points about which, if the Bill were put into proper form, one would have something—say, for instance, clause 12, about over-bridges and under-bridges. I am not at all clear that the provisions made in clause 12 are proper ones to make, for the reason that I have not been able to trace the line on any plan. Therefore, I do not know whether the roads are properly dealt with. It would be impossible, at a moment's notice, to say whether the provisions for the width and headways are sufficient. If it were not perhaps going further than I am asked to go I might suggest that it would really save the time of the Committee if the Bill had a thorough overhaul by the

H. Deane. the solicitor, and I should be very happy to give any assistance in the matter if the promoters' solicitor will come to me, but this Bill is so imperfect, according to modern ideas, that it is impossible to deal with it, and I think it can best be dealt with in the way I have indicated. Possibly the preamble is correct, and some of the clauses.

24 Nov., 1897.

240. *Mr. Affleck.*] What Act do you propose that they should take as a model? Simpson's Railway Act is one of those which has had the most attention bestowed upon it.

241. *Chairman.*] Would you be prepared to go through the Bill with the solicitor, and suggest the necessary amendments? Yes; I shall be very pleased to see him. The Capertee Tramway Act is more in accordance with what is required. This Bill is quite different from the Capertee Act; for instance, that Act gives authority to construct and inspect in clause 1; gauge, levels of lines, repairs, &c., clause 2. The only thing I have to add is that in addition to what has been provided in Simpson's Act, and I think in the Capertee Act, there should be provision to allow the Government to open roads across the line at any future time without claiming compensation for interference. Of course, the promoters will not object to anything of that sort.

Jasper Gaze Wiseman sworn and examined:—

J. G.
Wiseman.

24 Nov., 1897.

242. *Chairman.*] What are you? I am Council Clerk to the borough of Lithgow.

243. Have you seen the Bill? I have not.

244. Are you aware of its general purport? I believe it is to provide for a siding from the Lithgow platform, on the north side, to portion M.P. 1.

245. Then you do know the general purport of the Bill? I do.

246. You know that it is a Bill for the construction of a line from the railway to the Co-operative Company's coal-mine? Yes.

247. Is there any objection to the line on the part of the Lithgow people? No.

248. *Mr. Gormly.*] Do you know whether the line has been surveyed? I am informed that it is, and I have seen the survey-pegs.

249. *Chairman.*] Has the matter been before the Municipal Council of Lithgow? No.

250. Has it been spoken of there? No.

251. Do you know what the opinion of the people of Lithgow is as to the propriety of constructing this line? I do not think there is any objection to it; the only people who could object are the proprietors of the land over which the line is to go.

252. I suppose that you would be in a position to hear the objections if there were any? I should be most likely to hear them.

253. *Mr. Gormly.*] Do you know whether there is any objection to the proposed mode of crossing any of the roads? No.

254. Can you tell the Committee what effect the line would have on existing roads? I do not think it would delay the traffic.

255. Do you know how it is proposed that the line shall cross the roads? By level crossings, I understand.

256. *Mr. Fegan.*] Do you not know? I do not know where the line will cross the roads exactly, but they gave me to understand that it was to be ordinary level crossings, the same as the others.

257. Who gave you to understand that? The proprietors.

258. Have you been in conversation with the proprietors about it? Yes.

259. But you have not seen the Bill? No.

260. *Mr. Gormly.*] Have you seen the plans of the proposed line? I saw one this morning.

261. You had not a plan before you when you had a conversation with the promoters as to where the line would cross the road? No; they showed me on the municipal map the line approximately.

262. *Chairman.*] Do you know the road marked on the plan which the line is proposed to cross? Yes.

263. Is there much traffic? Similar to what there is on all the other main roads of the borough. We have other lines crossing the roads in the borough in exactly the same way, and it has not been detrimental.

264. *Mr. Hawthorne.*] Would there be sufficient traffic to necessitate someone being kept at the crossing to warn people of the approach of trains? I suppose the traffic there would be the same as the traffic on any other line. About twice a day is the average number of trains, and it does not incommode the street traffic at all.

265. *Mr. Fegan.*] Do you know where the pit's mouth would be? Outside the boundary of the borough. The whole of the land is outside the municipal area, but the line is to pass through the municipality.

266. Some councils have way-leave;—have you any suggestion of that kind? We could only deal with the line. The way-leave could only affect the coal-mine where the screens and the output of coal came into the municipality. The coal is obtained outside the municipality. We could not rate the mine, but we could rate the coal which comes out of the mine. That is the point of dispute between municipalities and the owners of mines. We rate the screen, the area of land, and the buildings to which the coal is brought within the municipal boundaries. We assess this at an annual rental, based on the output of coal. When the coal itself comes from beyond the municipal area, we argue that the value of the screen is so much decreased owing to the extra cost of bringing the coal there, then the way-leave is charged.

267. The Municipal Council of Lithgow has a Bill before Parliament? Yes.

268. What would the effect of that Bill be if this Bill passes;—will that Bill operate on this? Not at all.

269. Would any provision of this Bill have any effect upon it? It could not.

270. You say that you never saw this Bill? No, I never saw it.

271. Are you here to give evidence on a Bill that you never saw? I do not know what evidence is required from me. I was simply asked to come here. I have here a letter asking me to come. The letter says: "Mr. Wiley, one of the promoters of the abovenamed Bill, requests me to write and ask you to be good enough to attend before the Select Committee on such Bill, at the Legislative Assembly Chambers, Macquarie-street, Sydney, on Wednesday next." That was signed by the solicitor for the Bill.

272. You are asked to give information with regard to a Bill that you never saw? Yes.

273. You do not know whether it will be in conformity with the Bill that you have before Parliament? It could not interfere with it; they are so diverse. The two Bills could not clash.

274. If the Bill gave power to the Company to take in three or four streets, do you think that the people of Lithgow would be against that? Certainly.
275. How do you know that there is not such a provision in the Bill? I cannot possibly know when I have not read the Bill. I am told that it is to give power to erect a tramway, a plan of which I have seen. As far as I know the people have no objection to it.
276. *Mr. Affleck.*] Suppose that when a tramway has to cross certain roads or streets in the municipality over which there will have to be level crossings, do you think the people will object to the tramway being constructed on that account? Not on the north side. If the tramway crossed one main street the people would object.
277. Does it cross any particular street where they would be likely to object? No.
278. *Chairman.*] Are there any other tramway lines running into Lithgow? There are five other tramway lines crossing the roads.
279. And no objection has ever been made to them? They were constructed before Lithgow became a municipality.
280. Are they in any way detrimental to the progress of Lithgow, or do they contribute to it? They contribute to the progress of Lithgow.
281. Would such a line as this contribute to the progress of Lithgow? I think so.
282. *Mr. Fegan.*] Are the colliers at Lithgow working full time? Pretty nearly full time. I seldom see idlers in the streets now, and that is the best test.

J. G.
Wiseman.
24 Nov., 1897.

THURSDAY, 2 DECEMBER, 1897.

Present:—

MR. HOGUE,	|	MR. MACKAY,
MR. AFFLECK,	|	MR. EDDEN.

J. A. HOGUE, ESQ., IN THE CHAIR.

William Arnott, Esq., of Messrs. Arnott and Reynolds, Solicitors, appeared for the promoters of the Bill.

William Arnott further examined:—

283. *Chairman.*] Since the Committee last met I understand that you, in conjunction with the Engineer-in-Chief of the Construction Branch, Public Works Department, have gone carefully through the Bill? I have.
284. And various alterations have been made in the Bill? Yes; at Mr. Deane's suggestion.
285. Those suggestions are now embodied in the Bill before the Committee? Yes.
286. What is the general tenor of the amendments? The general tenor of the amendments is to make the construction of the railway and the working of it after it is constructed subject to the approval and direction of the Railway Commissioners and their officers.
287. Are you aware whether they approve of the Bill as it now stands? I saw Mr. Deane on Monday morning, and he told me that he would approve of the Bill as amended. The Bill made it compulsory on the promoters, if they were allowed to make the railway, to make it in a certain way, the bridges to be of a certain height and width; but all that is done away with now by leaving it to the direction and approval of the Engineer-in-Chief for Railway Construction. Some provisions have been taken out of the Bill, and others have been put in.
288. *Mr. Affleck.*] It was understood that the clause which provided that the railway was to be made within three years was to be altered, three years being thought too long a time? I understood that that was an alteration which the Committee themselves proposed to make. We have no objection to it.
289. *Chairman.*] There is provision made amongst the amendments for the width of gauge? Yes; the gauge is to be the same as that of the Government railways.

W. Arnott.
2 Dec., 1897.

Hugh McLachlan sworn and examined:—

290. *Chairman.*] You are Secretary to the Railway Commissioners? I am.
291. You are familiar with the objects of the Bill before the Committee? Yes.
292. You see the amendments that are suggested in the Bill before you? Yes. In going through the Bill there were a number of things which it seemed to me should be provided for. In the first place, the railway should be made to the satisfaction of some responsible officer, and the rolling stock should be subject to approval. I see that these things are provided for in the amendments now in the Bill.
293. Will now clause 9 be all that is required with regard to the rolling stock? Yes; it is not very likely to be required, but it is a good one to have in the Bill. I expect that the Company will not have any rolling stock of its own.
294. Have you seen the provision with regard to the gauge? Yes. There is a provision in lines 20 to 25, page 3, which is new to me. It seems quite unnecessary to put in a provision like that. It is not usual, because the Company has its remedy at law. If ever anything happens, it might be imagined that there was something more in it than an ordinary ground of action.
295. It does not give anything beyond the ordinary common law rights? It is unnecessary, and it would be wise to leave out the whole of that proviso. It is liable to lead to misunderstanding. I notice also in another clause there is power given to make a branch railway, and this branch railway could run anywhere—it might be possible for the Company to make a branch railway that would compete with the Government railway. I think it is wise to provide that even a branch railway should have the approval of the Governor-in-Council. Some of the old Acts provide that a branch railway shall not be made parallel to a Government railway, but if you put in the Bill that it shall only be made subject to the approval of the Governor-in-Council that will make it all right. The most important clauses to the Railway Commissioners are those in regard to the connections, and I think that clauses 38, 39, and 40 provide for all that is necessary. I see that power is provided for the Government to purchase. I have suggested once or twice that another provision should be put in Bills of this sort, that is, that if a line is not worked for a certain period it should revert to the

H.
McLachlan,
2 Dec., 1897.

H.
McLachlan.
2 Dec., 1897.

Crown. The clause which I am referring to is in Simpson's Railway Act, and I think it is in the Capertee Tramway Bill. I would suggest that it be put in this way: That the line shall revert to the Crown if it is not worked for a period of twelve months. There is one weakness in regard to the appointment of inspectors. Power is given to the Railway Commissioners to appoint persons to inspect and examine rolling stock, buildings, and all sorts of things; but there is no penalty provided. We may find a line in a most defective condition, but there is no penalty to compel the Company to remedy it. There is no obligation on the Company to repair any defects when they are pointed out. If the Commissioners require certain things to be done, they cannot enforce it.

296. In the second clause there is a penalty for neglecting to carry out repairs, &c., will that meet the case? I think that perhaps the provisions of new clause No. 2, which it is proposed to add, may be sufficient.

297. *Chairman.*] Is there anything else that you object to? No; as far as the policy of the line is concerned, the Commissioners see no objection to it. Our interests seem to be properly protected. The promoters have no powers on our line, and we have power to make whatever provision we find necessary with regard to junctions.

Henry Deane further examined:—

H. Deane.
2 Dec., 1897.

298. *Chairman.*] I understand that since you last gave evidence you have gone through the Bill with the solicitor of the promoters and suggested certain amendments? Yes.

299. Does the Bill now embody all your views with regard to this proposal? I think they fairly meet my recommendations.

300. Have you any further suggestions to make in regard to the Bill? I think it fairly meets the objections which I pointed out. I think it will be sufficient with regard to the schedule, if you give the bearings of the chords. The description now produced does that.

301. *Mr. Affleck.*] Would you substitute the description now produced for the schedule in the Bill? Yes; I think it may fairly be taken as meeting the case.

John Haydon Cardew further examined:—

J. H. Cardew.
2 Dec., 1897.

302. *Chairman.*] Have you prepared a new schedule for the Bill? I have.

303. Is it the one now produced? Yes.

304. There is a difference between that amended schedule and the one in the Bill? There is no difference, as far as the land is concerned, but there is an addition. I have quoted in the description the bearings of the chords. I believe that Mr. Deane made some objection to it. From a surveyor's point of view, they are not really required; but from an engineer's point of view they are.

305. Do you produce a plan for the information of the Committee? Yes; the description which I have just referred to is a description of the land edged red on the plan.

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

GOVERNMENT LABOUR BUREAU.

(ANNUAL REPORT FOR YEAR ENDING 30TH JUNE, 1897.)

Printed under No. 20 Report from Printing Committee, 21 October, 1897.

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The Superintendent, Government Labour Bureau, to The Minister for Labour and Industry.

Sir,

Sydney, 9 September, 1897.

I have the honor to submit the fifth annual report of the Government Labour Bureau for the year ending June 30th, 1897.

I am pleased to be able to report what may be considered a very marked improvement in the number and condition of the unemployed generally for the year as compared with the one preceding it.

In the following table will be noticed a considerable diminution in the numbers for the year:—

	Previous year.	Year ending 30 June, 1897.	Decrease.
Average daily registrations.....	36.65	21.43	15.22 per day.
Average weekly number of unemployed working on the different relief works about Sydney.....	1,570	106.2	1463.8 per week.

It may be mentioned in connection with the latter item that the winter of this year was not so severe as that experienced in the previous one. The decrease is, nevertheless, a most significant one.

From the number employed on relief works a fairly reliable estimate may be formed of the probable number of destitute unemployed in and around the metropolis. It should, however, be borne in mind that the numbers quoted for both years do not represent so many individuals, but the number of working orders issued to men for the specified periods, some receiving one, two, or three days a week, in accordance with the family scale regulating the working time. But there can be no mistaking the comparison, as showing the improvement in condition and number of unemployed for this as compared with the previous year.

The same improvement is observed in the country districts of the Colony. Last year the sum of nearly £2,000 was expended by the Government in £ for £ moieties to the different country municipalities, to assist their destitute local unemployed. This year no such special amounts were granted, nor were they asked for.

The reports from the agents of our country branches all indicate a distinct improvement generally throughout the Colony, especially when the large increase in the revenue of the Railways (*vide* the Commissioners' last report) is also considered.

When it is remembered that during the first four or five months of 1897 the whole Colony suffered from a severe drought, casting a gloom all over the country, and creating great loss of stock, crops, &c. ; causing stagnation in all avenues of labour and industry, and resulting in dearth of employment, the foregoing facts and figures unmistakably indicate a marked improvement in trade and commerce generally throughout the Colony, and in the number and condition of the unemployed, both in the city and country at the present time.

It is safe also to anticipate a continuance of this improvement. From all parts of the interior there is evidence of the beneficial effects of the late rains, which with increased cultivation justifies the confidence of many that the approaching season will prove the most prolific known for many years.

From latest reports agricultural, pastoral, and mining industries are reviving, and will absorb the bulk of all unemployed able and willing to work caused by the late drought.

Relief Works.

No doubt the drought was the cause of creating and increasing the unemployed in the country, a large number of whom, induced by the reports that relief works were being started in Sydney to alleviate the distress of the destitute unemployed, flocked to the metropolis in the hope of securing a share; and which there is every reason to believe also had a similar effect in inducing many unemployed from adjoining colonies to come to Sydney with the same hope; thus swelling the ranks of our own local unemployed to a much larger degree than would otherwise have been the case.

It is a most singular fact that the majority of these men will remain here so long as they can possibly earn a bare existence, preferring to enjoy the excitement of city life rather than return to the country. This has been proved repeatedly by numbers of men refusing legitimate employment in the country, and preferring to wait their turn once in six or eight weeks on the relief works.

It is, therefore, questionable if these temporary means of assisting the destitute unemployed are of much genuine benefit to them, excepting perhaps in the cases of married men with large families, whose circumstances will hardly permit them to go to the country; others too old; and numbers of clerical and professional men unfitted for hard manual labour, such as is required in country pursuits.

The Building Trade.

It is to be regretted that the building trade, which is generally a reliable index of the condition of the labour market, is still and has been for some time very much depressed.

If the erection of the City Markets be excepted, very few buildings of any note, either public or private, have been erected during the year which would give employment for any length of time. This inactivity has had the effect of a reduction in wages, and has caused many of our best mechanics to leave the Colony with a view of bettering their condition in Western Australia and South Africa, in which some have succeeded, while others have returned poorer but wiser men.

The cause of the depression in the building trade is due chiefly to its having been overdone during the period of the late memorable land boom, when speculation in land, and the erection of buildings in the city and suburbs, far exceeded the demand. To the bursting up of the land boom, and the numerous financial societies it brought into existence, together with a series of ill-advised industrial disputes, may be attributed the chief cause of the severe depression in all branches of labour and industry from which the Colony has suffered for years. It is not the want of capital that we are suffering from, but the want of confidence. There is plenty of money, but a lack of enterprise through the want of confidence.

There is, however, evidence that the country is on the "up grade" again; and if the industrial classes will only use their experience and common sense in their own interests, confidence between capital and labour may again be restored to their mutual advantage.

Number of Unemployed.

The number of men apparently unemployed daily seen in and around this city is not a fair criterion of the actual state of the labour market generally.

In all large cities, and especially where the Parliament and Government sit, there can be seen at all times a number of men professing to belong to the unemployed. Amongst these, especially in winter when work is slack, are a number of genuine working men, who really desire work and anxious to secure it in the interests of their families. But there are also a number of those who seldom if ever work or desire it. How they live can only be imagined, yet they seem to fatten on idleness and mistaken charity. Their chief trade and calling seems to be in button-holing Members of Parliament and appealing to the Government for relief works about the city. And while they can get a few days on wages at these works, they frequently refuse legitimate employment in the country.

The attractions of Hyde Park and city life are too much to give up by this section of the unemployed. These are invariably the men who make the most noise and give the most trouble to the Labour Bureau; and who only degrade their genuine fellow working men.

So far as I am able to judge, there are not more than from 3,000 to 4,000 genuine unemployed in Sydney and the suburbs at the present time. It is a most difficult matter to form an accurate estimate of the probable number of genuine unemployed, as a great many of the men attending here receive occasional work now and then, and cannot for that reason be classified as strictly unemployed; and in the 3,000 to 4,000 mentioned a great proportion of this class is included.

The average daily attendance of unemployed at the Bureau is from 150 to 400, excepting when a selection takes place of men for relief works. On such occasions, the attendance is doubled at least. They come and go all day in the hope of getting something to do. The conduct of the unemployed about the Bureau is generally good, excepting when induced and led away to mischief by agitators who lack the courage to "face the music" themselves.

Fossickers.

The recent drought interfered to a large extent with fossicking and gold-mining all over the Colony.

The industry is of little use unless there is an abundance of water; and owing to the dearth of same, fossickers, and in some cases mines, were compelled to discontinue work.

For the year, only 1,647 men from the city and country were sent to different parts of the Colony fossicking. The preceding year 5,209 men were sent; showing a decrease this year of 3,562.

As a recognised industry fossicking has been in operation for the last four years, during which time no less than 25,707 men have been assisted and sent all over the Colony. Several have done well, others fairly well, and others have made just sufficient to live.

A man recently called at the Bureau to refund the cost of his railway fare, and stated he and his mate joined a party who were working some ground in the Parkes district, which had been abandoned some twenty-five years ago. After sinking only 3 feet a very rich reef was struck, for which they had been offered £14,000 cash and 6,000 shares by a company that wished to buy them out.

Another man called a short time ago, also to refund the cost of his pass, and stated he left here on 23rd May last for Cooma, where he had succeeded very well at fossicking, and had come down to Sydney for a trip. Two old fossickers, who had made sufficient to take them over to Western Australia, recently sent a draft in payment of passes issued them by the Department. They stated they were doing well, and had not forgotten the assistance given them by the Bureau when they were hard up and needed it most.

A large number of men have combined fossicking with other work, have sent for their families, and settled down in the country. In this way over 700 families have been sent to join them.

It is worth noticing that the value of gold won in the Colony since the fossicking system was introduced by the Bureau has on the whole steadily increased, as the following totals will show:—

Year.	Oz.	Value.		
		£	s.	d.
1891	153,336	558,305	12	3
1892	156,870	569,177	17	4
1893	179,288	651,285	15	8
1894	324,787	1,156,717	7	7
1895	360,165	1,315,929	0	0
1895-6 (intermediate period)	111,024	402,590	0	0
1896-7	275,285	1,014,077	2	3

Wages.

The rate of wages offered at the Bureau was about the same as last year. In some callings there has been a slight reduction.

The Bureau does not, as is generally known, interfere with the terms or conditions of employment. Its main object is to bring employers and workmen together, leaving it to the parties themselves to make their own arrangements.

In cases, however, where an employer offers what is considered a very low wage, we sometimes point out that he cannot expect to get a good man at his rate of wages; and frequently by these means an increase is secured for the man and better class of labour for the employer.

It may be of interest to quote a few of the applications for labour, and the wages offered by different employers, showing the liberal rates and class of work offered by some in contrast to the very small wages and the variety of qualifications (accomplishments in some cases) required by others:—

J. W. required a married couple. The man as boundary rider; the wife to cook and wash for overseer. Wages £65 per annum and found—a bonus of £10 if they gave satisfaction; rail and coach fares paid by employer. The couple engaged have since spoken of their employer in the highest terms of praise; whilst the employer wrote to express his satisfaction of their services.

J. D. wrote for a steady reliable engineer for station. Wages first month, £2 10s. per week and found; and afterwards £3 10s. per week and found. Employer and employee have both expressed mutual satisfaction.

J. M. wrote for two single men of good character, steady, and able to read and write; wages £61 per annum and found, with a rise of £7 per annum to good men.

J. B. wrote for baker, good tradesman, sober and steady; wages £2 per week and found.

J. G. wrote for gold miners; wages £2 10s. per week.

Several mechanics have been forwarded to employers at wages 9s. and 10s. per day of eight hours.

In contrast, however, the following instances may be quoted:—

J. H. from the country wrote as follows:—"I want a generally useful man for hotel-work, and teach the children for a few hours each day. Must be able to do garden work, milk, kill sheep; also teach music and the piano, and play same for singing and dancing. Wages 20s. per week and found." This gentleman failed to secure a man from the Bureau.

X. Z., not far from Sydney, wanted a thoroughly reliable, steady, sober, single man to be generally useful and competent to drive his wife out; to wear livery. Wages 2s. per week and found.

J. L. writes for an elderly man as tutor for six children, must have good references, bear a good character, and be competent. Wages 6s. per week and found.

These few instances are chosen from many similar ones to illustrate the different opinions of some employers as to remuneration of services.

I regret to report that during the year several mechanics refused to accept places in the country from 6s. to 9s. per day. And others, many of them single men, refused work from 7s. 6d. to 20s. per week and found, but were always eager to receive a turn on any of the relief works about Sydney.

Relief Works Classified.

Centennial Park.—This work (for rations) of levelling the building sites surrounding Centennial Park ceased in February, 1897. The total number of turns of from one to three days (according to the number in family) worked was 5,027. Of course, as already explained, this does not represent as many individuals. The total cost of rations for this work from the 1st July, 1896, to February, 1897, when it was discontinued, was £1,348 19s. 10d.

Free Rations.—The issue of free rations to the families of unemployed, who were in the country seeking employment, commenced in November, 1896. The total number of families were 369, with 1,504 children. The average number of families receiving free weekly rations was 10. The total cost to end of June, 1897, was £80 5s. 11d.

Centennial Park.—From the 16th January to 13th February, 1897, 106 old men erected 348½ rods of fencing. Each pair of fencers were allowed to put up a limited number of rods at 3s. per rod. The total cost came to £52 5s. 6d.

Randwick Rifle Butts.—From April to end of June, 177 old men were employed on piece-work, clearing on the Randwick Rifle Butts, the cost of which came to £153 8s. 9d.

Kensington, &c.—In June, 1,035 received five days' work at Kensington and Centennial Park, at 5s. per day, at a total cost of £1,293 15s.

Church and School Lands.—The clearing and road-making on the Church and School Lands was completed in February last; and from the 1st of July, 1896, to that time, 1,034 unemployed, chiefly old men, received fortnightly turns at piece-work; total cost, £3,716 17s. 7d. A great deal of good work has been done by the unemployed on this estate. No less than 9 miles of streets have been formed and made, and 737 acres of land have been cleared and partially fenced. Altogether £16,000 have been expended in improving the estate, with a view of letting it in blocks on long leases, from which, no doubt, a good return will be obtained; and at the same time it has been the means of finding employment for a very large number of destitute unemployed.

Sewage Farm.—During the year 2,920 of the unemployed received fortnightly turns as they came round on the Sewage Farm, Botany, at 6s. per day. A large amount of levelling and filling up has been done in preparing the land for the Western Suburbs Sewerage Scheme. The total cost of this work for the year was £12,913 9s. 11d., which has enabled a large number of the unemployed to find work.

Shea's Creek, Cook's River, and Muddy Creek Reclamations.—These works have been in progress for some years. During the year 2,442 men were employed in fortnightly turns at 7s. per day. The total expenditure for the year was £37,944 11s. 10d. This outlay also found employment for a large number of unemployed married men. Those selected for the above-mentioned relief works were limited to married men only, and the weekly and fortnightly turns referred to came round about every six or eight weeks.

The following table will give the numbers of men employed on the different relief works and the total cost incurred:—

		Average	Total Cost.
		Weekly Number.	£ s. d.
Total number of men employed on the Centennial Park for rations from 1st July, 1896, to February, 1897	5,027	152.3	1,348 19 10
Number of families receiving free relief from November, 1896, to June 30th, 1897 ...	Families— 369 Children— 1,504	10.0	80 5 11
Rations to fossickers .....	.....	.....	7 16 0
Number of old men employed on Centennial Park erecting fence	106	21.0	52 5 6
Number of old men employed clearing at Randwick Rifle Butts	177	14.7	153 8 9
Number of men employed at Kensington and Centennial Park in June at 5s. per day ...	1,035	517.5	1,293 15 0
Number of men employed on Church and School Lands, 1st July, 1896, to February, 1897	1,034	31.3	3,716 17 7
Men employed on Sewage Farm at 6s. per day	2,920	56.0	12,913 9 11
Shea's Creek for year at 7s. per day	2,442	47.0	37,944 11 10
Cost of railway fares for year, less amounts received as refunds .....	.....	.....	4,647 5 8
Forest thinning operations—approximate cost .....	.....	.....	5,000 0 0
Railway deviations—approximate cost .....	.....	.....	8,000 0 0
Stock routes—approximate cost .....	.....	.....	2,817 0 0
Total weekly average number of men .....	.....	106.2	.....
			£77,795 16 0

West Bogan Scrub-clearing.

This work being of a reproductive character cannot therefore be called a relief work, although it has been the means of finding employment for a large number of the unemployed.

The first batch of men was despatched to the work on 14th September, 1896, when five gangs of ten men each were sent to Nyngan. The total number of men sent to this work at different periods up to the end of June, 1897, was as follows:—

	Number of men.
From Sydney—61 gangs	610
Do to fill vacancies	258
Engaged by Mr. Taylor locally to fill vacancies	223
From country branches in gangs—	
Nyngan	20
Bathurst... ..	20
Bourke	27
Cooma	10
Goulburn	19
Newcastle	25
Lilbgow	2
Tarana	10
Orange	20
Moama	8
Deniliquin	10
Gundagai	10
Taralga	10
Young	10
Coolabah	10
	1,302
Less number of men abandoned work, completed blocks, &c.	620
Number on the works, 30th June, 1897	682

Much adverse criticism and unfavourable comments have appeared in the press from time to time, and the same has found expression on the public platform, *re* the Bogan Scrub works, and the small wages the men were earning, &c., which, however, has not been borne out by actual results, as will be seen by reference to the paysheets and statements of several of the men who have completed their blocks and returned to Sydney. According to the former, a number of the gangs have earned wages varying from 4s. 6d. to 9s. 6d. per day each man, whilst two or three of the gangs went as high as 14s. and 15s. per day each man. It is true that several of the gangs only made from 2s. 6d. to 3s. 9d. per day, and in some cases even less; but on inquiry the cause has invariably been traced to their own fault, the chief reasons being quarrelling among themselves, dissension, laziness, &c., and others have found the work unsuitable.

In a gang of ten men there may be six really good workers, while the other four might be the reverse. The good men would be compelled to do the work of the gang, and, as a natural consequence, dissatisfaction would creep in, disorganise the gang, and the result would be low wages.

Of course at the commencement of the clearing a large number of men willing and eager to work went to the Bogan with the best of intentions, but through inexperience in that class of work, physical inability, and the extreme heat in that part of the year, were unable to give either themselves or the work a fair trial. The result was low returns, which a great many, not taking into account the causes mentioned, seemed only too eager to attribute to the low prices offered. As a matter of fact, the prices on some blocks which at first gave a very low return have since proved sufficient to permit good men earning liberal wages.

Only recently, a man received a letter from a gang working on the Bogan, informing him of a vacancy, and instructing him to call at the Bureau and apply for same. Among other things the writer stated the following:—"I have had a look very near all through the block, and by what I have seen of it I think if you can bring a couple of good men such as I have mentioned, we can make good wages by all working well together. We are getting 3s. per acre, and with a full gang last month we made £1 10s. per man clear of everything."

It has been proved beyond doubt that all gangs that work together amicably and unitedly can earn good wages on the Bogan.

Many of the men who completed their blocks and returned have informed me that those who would work together could do well; and, perhaps, the best evidence of this is that almost every one of these are anxious to return to the Bogan.

The cost of living is not as high as is frequently stated and generally supposed. One man writing to the Bureau from the Bogan for men to fill vacancies in his gang went on to state that they were doing very well, and that their living cost 5s. 3d. per man per week; but added that the living was plain, yet good, and did not include "pickles, jam, cigarettes, or bottled beer."

Others have stated that plain living costs from 6s. to 10s. per man per week.

The men themselves formed their own gangs, and have always been told to select men who are suitable for the work, and who would agree and work unitedly together.

The heavy rush in the first instance to form gangs and get away was the cause no doubt of a number of men getting into gangs altogether unsuitable for and unable to do a fair share of the work. The character of the country in the density of the scrub, &c., of course effected the earnings of the block each month.

Taking the bad with the good, however, the average earnings of the men came to about 6s. per day. And taking an all round view of the work, good bushmen admit that the prices per acre and the wages earned are the best paid unskilled labour at present in the Colony.

Some

Some of the families in Sydney of the married men have been advanced provisions, the cost of which has been deducted from their earnings, till they are able to send their wives money.

Mr. H. C. Taylor, Officer-in-charge of the West Bogan Scrub Works, very kindly furnished me with a short review of the Bogan scrub clearing from its inception up to the end of June, which I append hereto:—

“In compliance with the request contained in your letter of the 21st instant, I am writing a somewhat hurried summary of the work done in ringing, cutting down, and grubbing the timber and scrub upon the large area of public land situated on what is commonly known as the West Bogan.

“So far as I am concerned the work actually commenced on the 28th August, 1895, when Mr. Forester Condell and myself left Sydney for Nyngan, to initiate the business by inspecting a few blocks situated on the holdings known as West Bogan No. 1, Budgery, and Hermidale.

“This work was soon completed, and on the 15th of the following month fifty men arrived at Nyngan, to start operations in accordance with the specifications. Since that time the business has been kept going, and remunerative and reproductive work has been found for upwards of 1,263 men, drawn from all conditions of life, but the majority of whom were strangers to work of this description, and some strangers to work of any description. The principal portion of the work is located on the southern side of the Nyngan-Cobar railway line, for about 40 miles, the area forming a triangle, the apex of which is about 20 miles from the base.

“In addition, however, the work has been conducted on more scattered areas along the Nyngan-Bourke railway, extending as far as Coolabah, a distance of 47 miles.

“The total area of the blocks that have been let under the terms of the West Bogan Agreement up to the 30th ultimo is 385,354 acres, and of this total 201,940 acres had, it is estimated, been dealt with up to that date. The actual cost of the work for the period in question may be set down at £20,000. To my thinking the State has started a useful, and what will eventually become a profitable, undertaking, and has afforded a large number of unfortunate and thriftless individuals an opportunity of keeping themselves above the reach of want, and of those referred to, many, owing to their weaknesses, will never be able to do more than this, nor, indeed, do they seek it. To the hard working and careful it has presented a means of acquiring money, whereby they have been enabled to drift into other avenues of employment, to which they are more suited. All reasonable effort has been made to assist those desiring work to obtain an equivalent for it. The State has come to the assistance of men in an absolutely penniless condition, and supplied them with the wherewithal to support themselves. Tents, tools, and all other implements necessary have been supplied on credit, the goods being purchased wholesale, and retailed at cost price. Under the “butty-gang” system, which is in force here, the men are in a great measure their own masters. In some instances the gangs which left Sydney have remained and completed the works undertaken, with apparently little internal dissension. In the majority of cases, however, there have been many changes. Men have found the work unsuitable and the conditions of life strange to them. Others have been unable to perform the work, and others, again, unwilling to do so. These have drifted back to the populous centres. The men who have stuck to the task have earned what must be regarded as good wages for bush work, when compared with that paid by private employers, and it may be safely asserted that the average wage would equal 6s. per day. In operating upon an area of, say, 5,000 acres of land some time must necessarily elapse before a gang of ten could complete its contract, and in fixing the price to be paid per acre for the work the earnings would of course be variable. It has come to pass that one month men would find it hard to pay the cost of living, whilst the next would find them in comparative affluence. This has caused many to abandon the work as unremunerative, with the result that they have gone back to absolute distress, and once more found it necessary to seek assistance from the Government Labour Bureau. In some cases I have found that the earnings of a gang for the first month has been as low as 2s. 6d. per day, but this is invariably due to the fact that the men are not in condition, and their hands are not equal to the task of wielding an axe, or a slasher, all day. This defect soon disappears, and then better wages are earned. The improvement in the condition of the men is soon apparent in more ways than one, but principally by the paysheets. I have quite lately seen instances of men returning to Sydney after six months work here, with accumulated savings, after having provided for their families in Sydney, amounting to £20, and it is not too much to say that it would have taken a much longer time for them to have been in such a position had they been in the locality of some city.

“So far as I am able to ascertain, at this late date, the total number of men sent from Sydney amounts to 762, but as there have in the past been so many changes from one gang to another, it is hard to keep any accurate record, and in fact I have not tried to do so knowing that the information would be available elsewhere. I have set down the total number of men that have been employed from time to time as 1,263, but the total is also swollen by the defections from one gang to another.

“At the expiration of the last half year the total number employed amounted to 586.

“In the conduct of any future works under the same system, it appears to me that better results would be obtained if the works were allotted in smaller areas, and by that means the number of men in a gang could be reduced. Some discretion should be exercised by the Government in the selection of the gangs, and as far as possible men of the same nationality or creed should be placed together, and married and single men should form separate gangs. When the gangs arrive here I find that the men in many instances are absolute strangers to each other, the only tie that binds them being their common poverty. After the first payment this bond soon disappears and trouble commences. Men who are not kindred spirits are sent to Coventry and forced to leave the gang, and in some cases are voted out. It is no good for a minority to battle against this condition of affairs, and the only way out of the difficulty has been to find them a place in some other gang. It is a fact, and one that admits of no contradiction, that the greatest trouble and difficulty these men have had to contend with is the comparative absence of unity. Co-operation in labour is not the success that the theory of it teaches us.

“One word in conclusion as regards those men. My experience has shown me a strong desire on their part to meet all their liabilities, and it can be stated that the losses sustained by the many tradespeople and dealers, with whom they are brought in contact, have been trivial. The same can be said as regards their obligations to the Crown, and the cheerfulness and readiness with which they defray the cost of railway fares, tents, tools, &c., calls for all praise.”

Refunds.

Refunds.

The amount received as refunds of railway passes, &c., for the year was £2,864 19s. 3d., or £1,371 less than for the previous year. The total amount received as refunds since the refund system was adopted (a period of four years and ten months) is £14,618 8s. 4d. There is still a large sum owing, viz., over £50,259 Gs. Every opportunity is taken to collect arrears of payments, by the frequent issue of circulars, &c., and also through the country agencies.

Registry Offices.

During the existence of the Bureau numbers of persons engaged through registry offices for employment in the country have applied to me for railway passes to enable them to reach their destination, and in all cases which I believe to be genuine I have granted such passes, at the same time taking an order on the employer in each case for a refund.

My experience, however, of these registry offices during the existence of the Bureau leads me to the conclusion that a great many abuses exist in connection with them which might, and should, be remedied.

In the interest of the unemployed themselves I would strongly recommend that these offices be licensed and placed under Government supervision. The principal reason that prompts me to bring this matter specially under notice is that I am satisfied that several of those professing to have obtained employment through registry offices have been victimised. After spending, perhaps, all they possessed in registry fees, they have found themselves stranded in a strange place, without employment, and without the means of existence whilst they looked for it. Only recently there were several such cases in Court, when in some instances substantial damages were awarded.

In the interests of all those seeking employment through these offices, I would strongly recommend that an Act be passed legalising all such offices, and placing them under the supervision of the Government, so that poor people may not be victimised.

I understand such a measure is at present engaging the attention of the Victorian Legislative Assembly, and were such an Act passed in this Colony it would result in benefit to the unemployed, and be a source of revenue to the State.

Country Branches.

These branches (forty-two in number) have been for the most part in operation since March, 1896. They have been the means of furnishing the head office with the state of the labour market in the various districts of the Colony and the probable number of unemployed in the country. They have also generally assisted with any information required, as well as collected refunds for railway fares, &c.

The annual reports from the different agencies are hereto attached, giving the nature of the chief industries, rate of wages, &c., in each district, from which it will be seen that labour and industry has improved generally throughout the Colony, especially since the breaking up of the drought, and also that the numbers of the unemployed are diminishing.

The total number registered at the branches during the year was 1,253, and the total number assisted and sent to work was 534. The amount of refunds of fares collected by the agents for the year was £159 15s. 9d.

A return is also attached, showing in detail the numbers registered and sent to employment by the different branches for each month of the year ending 30th June, 1897.

Summary.

The number of unemployed registered at the Bureau Head Office during the year was 6,427 (or 7,635 less than the previous year), of which 2,498 were married men with 4,608 children depending on them, and 3,929 were single men.

The total number assisted and sent to work for the year was 13,713, or a decrease of 6,858 to that of the previous year, and 7,291 more than the number registered; but this is owing to the fact that many registered in previous years were sent to different jobs during the year, in some cases to five or six.

The number of fossickers for the year was 1,647, or 5,446 less than the previous year, due to the drought referred to.

The number of arrivals from the other colonies (viz., 676) shows a decrease of 320 as compared with that of the previous year (viz., 996).

I may mention that no assistance is rendered to those coming from the other colonies until they have resided in the Colony six months.

The number of those registered at the Bureau who were arrested for drunkenness and other offences during the year, and whose tickets were taken from them and forwarded to this office by the police, was 210, as against 307 for the previous year—a decrease of 97.

The late secretary, Mr. P. E. Bloxham, severed his connection with the Bureau in February last, having been appointed Governor of H.M. Gaol, Goulburn. The office of secretary has been abolished, and Mr. C. E. Ramage, as chief clerk, was promoted to carry out the duties previously performed by Mr. Bloxham.

Having altered the beginning and ending of the annual report to that of the Government financial year, I have the honor to append an intermediate detailed report from 18th February to 30th June, 1896, which brings the figures up to date.

On behalf of the staff I have pleasure in stating that the various duties in connection with the Bureau were never better or more expeditiously carried out than at present.

JOSEPH CREER,
Superintendent.

INTERMEDIATE RETURN, from February 18th to June 30th, 1896.

Number registered.....	3,283
Assisted and sent to work	5,327
Amount of collections	£1,227 7s. 7d.

CLASSIFICATIONS of Trades and Occupations registered during the year ending 30th June, 1897, and a comparison of same with previous years.

Trades.	1893-94.	1894-95.	1895-96.	1896-97.	Trades.	1893-94.	1894-95.	1895-96.	1896-97.
Accountants.....				4	Coppersmiths.....	5	4		1
Acrobats.....			1		Cordial-makers.....	9	10	8	3
Actors.....		1			Curriers.....	8	4	8	5
Agents.....				3	Cuttlers (tailors).....				1
Architects.....	1	4	5	3	Dairy hands.....	66	43	41	39
Art decorators.....			1		Dealers and hawkers.....		21	94	42
Artesian-well borers.....		2	2		Dentists.....	1	2	1	1
Artists.....	4	2	1	2	Divers.....		4		
Artists' models.....		2			Draftsmen.....		8	6	2
Asphalters.....	7	5	9		Drainers.....	3	4	9	
Assayers.....		5	2		Drapers.....	44	57	30	16
Auctioneers.....	3	3	1		Drivers.....		3		
Beacon-curers.....			1		Dyers.....	3	1	3	2
Bakers.....	149	109	129	89	Electricians.....	4	9	7	1
Ballad writer.....				1	Electroplaters.....			1	
Barbers.....	2	2	1	2	Engine-drivers.....	112	103	80	51
Barmen and boots.....	30	21	21	6	Engineers.....	158	138	100	45
Barrister.....				1	Engravers.....		1	6	
Basket-makers.....	7	2	7	5	Factory hands.....				2
Bellows-makers.....		1			Farm hands.....	473	407	222	208
Billard-markers.....	1		2	2	Farmers.....	11	5	20	15
Blacksmiths and strikers.....	201	174	156	68	Fellmongers.....	3	67	69	55
Boatbuilders.....	4	2	2	2	Fencers.....	3	3		1
Boatmen.....			1		Firemen and furnacemen.....	99	68	69	42
Boiler-makers.....	74	33	26	10	Fishermen.....		4	15	12
Bone-carvers.....			1		Fitters.....	19	29	42	12
Bookbinders.....	4	6	7	5	Florists.....		1	3	
Book-keepers.....				3	Foundry hands.....		1	33	3
Boot-finishers and operators.....		2	8	30	Frame-makers (picture).....			2	3
Bootmakers.....	59	77	201	89	French polishers.....	14	15	11	4
Bottlers.....	3	6	8	1	Furnaceman.....		1		
Box-makers.....				1	Furriers.....			3	
Brassfinishers.....		3	10	3	Galvanizers.....			1	1
Brassmoulders.....	5	4	2	2	Gadainers.....	155	152	137	86
Brassworkers.....			1		Gasfitters.....				1
Brewers and hands.....	5	6	3	2	Generally usefuls.....	762	396	345	208
Bricklayers.....	206	123	110	46	Glass-makers.....	1			
Brickmakers.....	81	86	78	25	Glass-stainers.....		4		
Bridge hands.....	16	9	19	12	Glaziers.....			3	3
Brushmakers.....	1	4	1		Goldsmiths.....		1		
Builders.....	5				Graziers.....				1
Bushmen.....		190	188	146	Greengrocers.....				5
Butchers.....	199	196	212	144	Grocers.....	56	72	73	33
Butlers.....			1		Grooms.....	338	323	272	169
Cabinet-makers.....		5	11	2	Gilders.....				1
Calmen.....			2		Gunsmiths.....		3	3	
Candle-makers.....				1	Handdressers.....	33	21	24	6
Cannister-maker.....				1	Hair-workers.....				
Canvassers.....	19	26	44	11	Harness-makers.....				6
Cardbox-makers.....				1	Hat-finishers.....				1
Corders, wool.....					Hatters.....	4		3	
Caretakers.....	15	16	14	6	Herbalists.....				
Carpenters.....	576	537	339	150	Horre-collar makers.....			2	
Carpet-layers.....		1			Horse-trainers.....		4		
Carriers.....					Hydropathists.....			1	
Carters.....	348	321	472	181	Ink-makers.....		1		
Carvers.....				1	Iron-dressers.....			1	
Casemakers.....		6	5		Ironfounders.....				1
Cellarmen.....	5	3	1	3	Ironmongers.....	13	12	20	9
Chainmen.....	23	19	20	3	Iron-moulders.....	63	22	39	9
Chairmakers.....		1		1	Iron-turners.....		31	9	4
Charcoal-burners.....			1		Ironworkers.....	23	16	25	7
Chemists.....		12	17	4	Ivory-turners.....				
Chimney-sweepers.....		1	4	1	Jammakers.....			5	1
Cigarette-makers.....			1		Japanners.....	1	1		
Circus hands.....		2			Jewellers.....	5	4	5	1
Civil engineers.....		4	5		Jockeys.....			2	1
Clay-modellers.....	1	1			Journalists.....	12	11	8	4
Clerks and accountants.....	264	263	264	155	Kitchenmen.....				2
Cloth-weavers.....		2	1		Labourers.....	3,285	4,548	6,152	2,274
Coach-body-makers.....	41	12	8	6	Laundry hands.....	1	2	1	1
Coachmen.....	6	17	10	10	Law clerks.....		1	6	
Coach-painters.....	5	11	13	6	Lead-workers.....		1		
Coachsmiths.....		15	9	1	Leather-dressers.....	1	1	1	
Coal-trimmers.....				1	Lecturers.....				
Commercial travellers.....	15	20	13	6	Lithographers.....		1	8	
Compositors.....		61	92	18	Locksmiths.....	2	7	3	
Condiment-makers.....		1		4	Lumpers.....	2			
Confectioners.....	8	14	6	2	Machine hands.....				1
Cooks.....	314	262	275	156	Machinists.....	26	13	2	5
Coopers.....	8	13	18	11	Marble masons.....			10	1

Trades, &c.	1893-94.	1894-95	1895-96.	96-97.	Trades, &c.	1893-94.	1894-95.	1895-96.	1896-97.
Marble-polishers	11	4	3	1	Sleeper-getters .....	.....	.....	.....	.....
Marine engineers .....	.....	2	.....	.....	Smelters .....	.....	6	5	5
Married couples	42	39	17	.....	Soapmakers .....	.....	3	1	.....
Masons (stone)	134	133	110	60	Solicitors .....	.....	.....	1	1
Master mariners	3	1	8	2	Spinners .....	.....	.....	.....	1
Matmakers .....	.....	.....	1	.....	Station hands	763	299	253	183
Medical doctors .....	.....	1	1	.....	Stationers	3	2	3	3
Merchants .....	.....	1	.....	.....	Stenographers .....	.....	2	3	.....
Messengers .....	.....	1	.....	.....	Stereotypers .....	.....	1	2	.....
Metal-polishers .....	.....	.....	1	.....	Stewards	26	31	16	7
Mill hands .....	.....	.....	.....	2	Stokers .....	.....	.....	.....	.....
Millers	8	8	13	4	Stone-cutters .....	.....	.....	2	.....
Millwrights	5	4	1	1	Stone-polishers (litho.) .....	.....	1	.....	.....
Miners	1,200	2,116	1,200	670	Storekeepers	96	35	24	2
Mining engineers .....	.....	3	5	.....	Storemen .....	.....	55	60	49
Mining surveyors .....	.....	1	.....	.....	Stove makers .....	.....	.....	.....	.....
Modellers .....	.....	.....	.....	.....	Strikers .....	.....	.....	.....	16
Musicians	6	5	7	2	Sugar-mill hands .....	.....	.....	1	3
Naturalists .....	.....	1	.....	1	Surgeons .....	.....	.....	1	3
Navvys .....	.....	.....	.....	.....	Surveyors	2	10	7	.....
Oilmakers .....	.....	.....	1	.....	Tailors	50	71	47	24
Oliver smiths .....	.....	.....	.....	.....	Tailors' pressers	1	4	2	3
Opticians	1	2	1	.....	Tallow-makers	1	1	5	1
Orchard hands	14	25	24	10	Tanners	8	14	15	17
Organ-tuners .....	.....	.....	.....	1	Teachers of singing .....	.....	.....	.....	.....
Ovenmakers .....	.....	.....	4	.....	Tea merchants .....	.....	.....	1	.....
Overseers	8	.....	1	1	Teamsters .....	.....	1	.....	.....
Packers	13	8	13	4	Telegraph operators	1	4	3	2
Painters and paperhangers	245	196	185	95	Tentmakers	9	4	11	1
Paper-makers	1	.....	.....	.....	Ticket-writers .....	.....	1	.....	.....
Paper-rulers .....	.....	.....	3	1	Tile hands .....	.....	2	2	.....
Pastrycooks .....	.....	8	9	.....	Timber yardsmen .....	.....	3	3	.....
Pattern-makers	5	2	2	.....	Timekeepers .....	.....	.....	.....	2
Photo-engravers .....	.....	.....	.....	.....	Tinsmiths	41	31	31	16
Photographers	1	12	10	5	Tobacco hands	3	.....	8	1
Piano-tuners	2	.....	2	1	Tobacconists .....	.....	.....	.....	.....
Picture framers (see frame makers).	.....	.....	.....	.....	Tram conductors .....	.....	.....	.....	.....
Pile-drivers	1	.....	.....	2	Tuck-pointers .....	.....	.....	.....	.....
Pipe-layers .....	.....	1	2	2	Tutors	22	14	19	8
Plasterers	117	81	96	17	Typefounders .....	.....	.....	1	.....
Plate-layers	2	1	.....	8	Typewriters .....	.....	.....	.....	.....
Plumbers	112	86	70	38	Umbrella-makers	1	1	.....	2
Porters	6	11	5	6	Undertakers .....	.....	.....	2	.....
Portmanteau-makers	1	1	1	.....	Upholsterers	11	19	13	4
Potters	6	5	5	1	Valuators .....	.....	.....	.....	.....
Poultry-farmers .....	.....	.....	.....	1	Vegetable gardeners .....	.....	1	.....	.....
Printers	87	59	52	24	Venetian-blind makers	2	3	3	.....
Quarrymen	56	110	112	14	Veterinary surgeons .....	.....	1	.....	2
Riveters .....	.....	.....	3	.....	Vicemen .....	.....	.....	.....	1
Ropemakers .....	.....	2	3	1	Viguerous	2	1	.....	.....
Rubble masons	1	.....	1	.....	Vocalists	1	.....	1	.....
Rulers (machine) .....	.....	.....	.....	.....	Waiters	31	38	37	16
Saddle and harness makers	54	43	40	18	Wardsmen	11	2	3	4
Sailmakers .....	.....	.....	1	.....	Warehousemen	3	23	9	3
Salesmen	21	40	27	10	Watchmakers	5	10	6	5
Sawmakers .....	.....	1	.....	1	Watchmen .....	.....	.....	.....	1
Saw-sharpeners .....	.....	.....	1	.....	Weavers .....	.....	.....	.....	1
Saw-mill hands .....	.....	.....	.....	3	Wheelwrights	27	22	26	5
Sawyers	38	32	39	10	Whipmakers .....	.....	2	3	.....
Scenic artists .....	.....	1	.....	.....	Whitesmiths .....	.....	1	.....	.....
Seamen	20	135	189	50	Wicker-furniture-makers .....	.....	.....	.....	1
Shearers	29	158	165	72	Wiremakers .....	.....	.....	.....	.....
Shearing-machinists .....	.....	1	.....	.....	Wire-mattress-makers .....	.....	3	2	.....
Ship's caulkers .....	.....	1	.....	.....	Wire-workers	6	4	7	.....
Ship's plumbers .....	.....	.....	2	.....	Wood-carvers	1	2	.....	.....
Shipwrights	26	27	30	7	Wood-furners	5	5	10	.....
Shorthand writers .....	.....	.....	.....	.....	Wool-classers .....	.....	.....	12	2
Showmen .....	.....	.....	1	.....	Wool-hands .....	.....	.....	.....	16
Signwriters	6	3	3	5	Wool-pressers	52	22	14	5
Silver polishers .....	.....	.....	.....	1	Zinc-workers .....	.....	.....	3	.....
Slaters	3	7	5	1	Callings not classified	76	53	3	.....
Slaughtermen .....	.....	3	.....	.....	Totals	12,145	13,575	14,062	6,427

DETAIL Summary of Registrations for the year ending 30th June, 1897.

Local registrations ..	.....	.....	.....	.....	.....	3,444
Arrivals ..	From the Colonies	North.	South.	West.	.....	2,983
		700	885	722	2,307	
Total registrations...	.....	.....	.....	.....	.....	6,427
Married men ..	.....	.....	.....	.....	.....	2,498
Single men ..	.....	.....	.....	.....	.....	3,929
Children self-supporting ..	.....	.....	.....	.....	.....	2,259
Children dependent ..	.....	.....	.....	.....	.....	4,608
Children represented ..	.....	.....	.....	.....	.....	6,867

REPORT showing the number of arrivals from the other Colonies, the United Kingdom, and Foreign parts, and residents here, all within six months during the year ending 30th June, 1897; and a comparison of same with previous years:—

From.	1892-1893.	1893-1894.	1894-1895.	1895-1896.	1896-1897.
Queensland	332	188	170	204	204
Victoria	508	413	200	177	91
South Australia	67	34	37	42	17
Western Australia	20	21	130	66	85
Tasmania	110	60	51	40	12
New Zealand	196	104	289	306	94
United Kingdom	301	142	114	94	81
Foreign parts	147	95	110	67	82
Totals	1,771	1,057	1,101	996	676

RETURN of Police Reports for the year ending 30th June, 1897; and a comparison with previous years:—

Offences.	1892-1893.	1893-1894.	1894-1895.	1895-1896.	1896-1897.
Artillery desertion .....	.....	1	.....	.....	.....
Begging and vagrancy	11	9	5	4	9
Breaking, &c. (suspected)	6	4	1	3	4
Drunkenness	290	118	114	228	136
Embezzlement	2	.....	.....	.....	.....
False pretence	6	2	4	1	1
Gambling	6	1	.....	.....	.....
Indecency	8	2	.....	5	5
Language	11	11	11	16	17
Lunacy .....	.....	.....	1	1	.....
Riotous and assault	21	22	8	20	12
Theft	31	25	9	27	24
Uttering .....	.....	.....	.....	.....	1
Wife desertion	4	.....	.....	2	1
Totals	399	195	153	307	210

COMPARATIVE STATEMENT.

Showing results for the years ending 17th February, 1893-4-5-6, and 30th June, 1897.

TABLE giving the number registered for each of the above years; number assisted and sent to work for the same periods; amounts refunded for railway passes and miners' rights; number of fossickers sent out from Sydney and Country (inclusive), together with increase or decrease under each head. NOTE.—This return does not include those men who were employed on the different Relief Works for rations only, and it will be noted there is a broken period accounted for owing to altering the date of our annual reports to suit the financial year, viz., 1st July to 30th June.

Years.	Number registered.	Increase or decrease.	Number assisted and sent to work.	Increase or decrease.	Refunded for railway passes and miners' rights.	Increase or decrease.	Number of fossickers.	Increase or decrease.	Remarks.
1893	18,600	8,154	£ s. d. 1,135 16 1	£ s. d.	Fossickers were not sent out the first year.
1894	12,145	D. 6,455	10,349	I. 2,195	2,676 10 0	I. 1,540 13 11	4,516	.....
1895	13,575	I. 1,430	16,380	I. 6,031	2,477 15 8	D. 198 14 4	10,718	I. 6,202	
1896	14,062	I. 487	20,576	I. 4,196	4,235 19 6	I. 1,758 3 10	7,093	D. 3,625	
Intermediate 18 Feb. to 30 June	3,283	.....	5,327	.....	1,227 7 7	.....	1,733	.....
1897	6,427	D. 7,635	13,718	D. 6,853	2,864 19 6	D. 1,371 0 0	1,647	D. 5,446	
Total	68,092	74,504	14,618 8 4	25,707	

GOVERNMENT LABOUR BUREAU.

TABLE showing various trades and callings to which persons have been assisted and sent to work in town and country; summary of wages recorded; together with comparative figures for twelve months ending 17th February, 1896, and twelve months ending 30th June, 1897.

Trades and Callings.	Year ending 17th Feb., 1896.			Year ending 30th June, 1897.			Increase.		Decrease.		Wages Recorded.	
	Town.	Country.	Total.	Town.	Country.	Total.	Town.	Country.	Town.	Country.	1896.	1897.
Accountants	1	3	4	...	3	3	...	...	1	...	.....	.....
Artists' models	2	...	2	...	...	...	...	...	2	...	.....	.....
Asphalters	7	...	7	2	...	2	...	...	5	...	Contract	Contract.
Bakers	2	54	56	4	55	59	2	1	...	...	25s. to 50s. per week	20s. to 50s. per week.
Barbers	...	8	8	...	4	4	...	...	...	4	15s. to 30s. per week	15s. to 30s. per week
Barmen	1	1	2	...	...	...	...	...	1	1	.....	.....
Bee-farmer	...	...	...	1	...	1	1	...	...	...	.....	Not stated.
Billiard-markers	...	...	...	3	...	3	3	...	...	...	.....	15s. to 20s. & found.
Bird-trappers	...	...	...	2	...	2	...	2	...	...	.....	Own account.
Blacksmiths	33	25	58	26	31	57	...	6	7	...	25s. to 50s. per week	20s. to 50s. per week.
Boatbuilders	...	...	...	1	1	1	...	1	...	...	.....	Not stated.
Boiler-makers	10	4	14	8	3	11	...	...	2	1	1s. per hour	1s. per hour.
Boot-makers	2	22	24	2	12	14	...	...	...	10	Current.	Current.
Brass-finishers	2	...	2	4	1	5	2	1	...	...	1s. per hour	1s. per hour.
Brass-moulders	1	...	1	...	...	...	...	...	1	...	1s. per hour	1s. per hour.
Brewers' hands	...	...	...	1	3	4	1	3	...	...	.....	25s. to 30s.
Bricklayers	77	45	122	73	35	108	...	...	4	10	7s. to 9s. per day	7s. to 9s. per day.
Brickmakers	...	14	14	...	5	5	...	...	...	9	Contract	Contract & 7s. p.day.
Bridge hands	2	11	13	4	4	8	2	...	...	7	6s. to 8s. per day	1s. per hour.
Brushmakers	1	...	1	...	...	...	...	...	1	...	.....	.....
Bullock-drivers	...	...	...	1	1	1	...	1	...	...	20s. per week, found.	20s. per week, found.
Bushmen	29	55	84	24	82	106	...	27	5	...	10s. to 17s. Gd.	15s. 6d. to 20s.
Butchers	14	89	103	8	91	99	...	2	6	...	15s. to 40s.	15s. to 40s.
Cabinet-makers	7	...	7	1	1	1	...	...	6	...	1s. per hour	1s. per hour.
Canvassers	58	9	67	17	1	18	...	...	41	8	Salary & commission	Salary & commission
Caretakers	2	5	7	2	...	2	...	...	...	5	5s. to 15s.	5s. to 12s. 6d.
Carpenters and joiners.	194	84	278	117	69	186	...	...	77	15	6s. to 8s.	6s. to 9s. per day.
Carpenters (bridge)	6	24	30	3	45	48	...	21	3	...	1s. per hour	6s. to 9s. per day.
Carpenters (ship)	...	5	5	...	2	2	...	...	...	3	1s. per hour	1s. per hour.
Carpet-layers	...	...	...	1	1	1	1	...	...	...	.....	1s. per hour.
Cask-makers	...	2	2	2	...	2	2	...	...	2	.....	Piecework.
Chemists	...	1	1	...	...	...	...	...	...	1	.....	.....
Clerks	3	16	19	...	13	13	...	...	3	3	.....	15s. to 50s.
Coach trades	11	2	13	4	2	6	...	...	7	...	7s. to 9s.	1s. per hour & piece.
Concrete hands	...	...	...	5	...	5	5	...	...	...	.....	10d. p. hour & piece.
Confectioners	1	...	1	...	...	...	...	...	1	...	.....	.....
Cooks	30	122	152	7	81	88	...	...	23	41	10s. to 40s.	12s. 6d. to 35s.
Coopers	4	4	8	2	...	2	...	...	2	4	1s. hour and piece.	1s. hour and piece.
Coppersmiths	...	1	1	...	...	...	...	...	...	1	1s. hour and piece.	.....
Curriers and tanners.	5	6	11	1	1	2	...	...	4	5	.....	.....
Dairy hands	...	...	...	9	7	16	9	7	...	...	.....	8s. to 15s.
Doctors	...	1	1	...	...	...	...	...	...	1	.....	.....
Draftsmen	...	...	...	1	...	1	1	...	...	...	.....	Not stated.
Drainers	...	...	...	5	...	5	5	...	...	...	.....	1s. per hour.
Drapers	2	6	8	...	7	7	...	1	2	...	15s., found to 40s.	£1. found to 40s.
Drivers	134	10	144	31	13	44	...	3	103	...	10s. to 20s., found	12s. 6d. to 25s., found
Drovers	...	1	1	...	7	7	...	6	...	...	.....	15s. to 20s., found.
Dyers	3	...	3	...	...	...	...	...	3	...	.....	.....
Engine-drivers	7	30	37	3	15	18	...	...	4	15	.....	25s. to 35s.
Engineers	6	8	14	3	11	14	...	3	3	...	.....	—to 70s.
" electric	...	8	8	...	...	...	...	...	...	8	.....	.....
" refrigerating	...	1	1	...	...	...	...	...	...	1	.....	.....
" mining	...	3	3	...	...	...	...	...	...	3	.....	.....
Factory hands	1	...	1	...	...	...	...	...	1	...	.....	.....
Farm and orchard hands	37	149	186	12	110	122	...	...	25	39	8s. to 20s.	8s. to 20s.
Fellmongers	2	63	65	...	34	34	...	...	2	29	.....	6s. to 7s.
Fencers	4	3	7	9	...	9	5	...	...	3	Contract	Contract, & 6s. to 7s.
Firemen	5	3	8	3	...	3	...	...	2	3	.....	6s. per day.
Fishermen	...	1	1	...	4	4	...	3	...	...	.....	On own account.
Flour-mill hands	...	...	...	...	5	5	...	5	...	...	.....	£1 to 25s., found.
French-polishers	2	1	3	1	...	1	...	...	1	1	.....	1s. per hour.
Furnacemen	...	...	...	1	12	13	1	12	...	...	.....	6s. per day.
Galvanised-iron workers	5	2	7	...	...	...	...	...	5	2	.....	.....
Gardeners	50	38	88	20	15	35	...	...	30	23	8s. to 20s.	10s. to 27s. 6d.
General usefuls	228	233	461	187	112	299	...	...	41	121	5s. to 20s.	5s. to 20s.
Glaziers	...	...	...	1	1	1	...	1	...	...	.....	.....
Governesses & female servants, &c.	10	227	237	1	93	94	...	...	9	134	.....	8s. to 15s.
Grocers	1	5	6	...	4	4	...	...	1	1	.....	15s. to 35s.
Grooms	26	23	49	37	22	59	11	...	...	1	.....	10s. to 20s.
Gun-pickers	...	...	...	1	1	1	...	1	...	...	.....	Piece.
Hawkers	2	1	3	...	...	...	...	...	2	1	.....	.....
Horse-breakers	...	...	...	1	1	1	...	1	...	...	.....	Per head.
Horse-clippers	8	...	8	...	...	...	...	...	8	...	.....	Per head.
Hospital attendants	5	2	7	2	3	5	...	1	3	...	.....	£50 to £70 pr. ann.
Iron-fitters	6	3	9	18	10	23	7	7	...	...	.....	1s. per hour.
Ironmongers	...	...	...	1	1	1	...	1	...	...	.....	.....
Ironmoulders	1	4	5	...	2	2	...	...	1	2	.....	1s. per hour.
Ironturners	10	6	16	3	3	6	...	...	7	3	1s. per hour	1s. per hour.

* This includes a number of wives, with children, going to join their husbands, who had preceded them and made homes in the country.

Trades and Callings.	Year ending 17th Feb, 1896.			Year ending 30th June, 1897.			Increase.		Decrease.		Wages Recorded.	
	Town.	Country	Total.	Town.	Country	Total.	Town.	Country	Town.	Country	1896.	1897.
Ironworkers	2	1	3	...	2	2	...	1	2	...	.....	1s. per hour.
Jammakers	4	...	4	...	...	...	...	...	4	...	.....	.....
Jewellers	...	3	3	...	...	...	...	...	...	3	.....	.....
Journalist	...	...	...	...	1	1	...	1	...	...	.....	Not stated.
Kitchenmen	25	...	25	5	5	10	...	5	20	...	8s. to 15s.	7s. to 15s.
Labourers	731	699	1,430	177	247	424	...	...	554	452	4s. p. day, 1s. p. hour	5s. to 7s. & 1s. p. hour
" Bogan Scrub	...	...	...	...	905	905	...	905	...	...	.....	per acre
" Botany Sewage Farm.	...	...	...	2,920	...	2,920	2,920	...	...	...	.....	6s. per day.
" Cent. Park & Kensington.	2,662	...	2,662	1,003	...	1,003	...	...	1,659	...	.....	5s. per day.
" Forest Dept.	...	1,367	1,367	...	27	27	...	...	...	1,340	.....	6s. per day.
" Railway Department.	...	...	...	...	49	49	...	49	...	...	.....	6s. per day.
" Randwick on Church and School Lands	1,282	...	1,282	1,034	...	1,034	...	...	243	...	piece work	piece work.
" Quarries	...	...	...	32	...	32	32	...	...	...	.....	piece work.
" Rifle Range	...	...	...	177	...	177	177	...	...	...	.....	piece work.
" Shea's Cr.	2,415	...	2,415	2,442	...	2,442	27	...	...	...	7s. per day	7s. per day.
" Stock Routes	...	...	...	...	69	69	...	60	...	...	.....	6s. per day.
Laundry hands	...	...	...	...	2	2	...	2	...	...	.....	Not stated.
Locksmiths	2	...	2	...	...	...	...	...	2	...	.....	.....
Machinists (Iron)	...	...	...	...	4	4	...	4	...	...	.....	1s. per hour.
Married couples	6-12	90-180	192	5-10	51-102	112	...	...	2	78	£40 to £75 pr. ann.	£40 to £80 pr. ann.
Masons, marble	3	5	8	1	...	1	...	...	2	5	1s per hour	1s. per hour.
" rubble	...	...	...	10	8	18	10	8	...	...	.....	5s. 6d. to 8s.
" stone	16	19	35	29	2	31	13	...	...	17	7s. to 8s.	7s. to 8s.
Meat preservers	...	...	...	...	1	1	...	1	...	...	.....	.....
Millers	...	...	...	...	1	1	...	1	...	...	.....	.....
Millwrights	...	...	...	...	2	2	...	2	...	...	.....	7s. pr. day, £1 & fnd.
Miners	...	184	184	7	148	155	7	...	...	36	.....	35s. to 50s.
" Fossickers from City.	...	3,917	3,917	...	1,326	1,326	...	...	...	2,591	.....	On own account.
" Fossickers from Country.	...	2,749	2,749	...	208	208	...	...	...	2,541	.....	On own account.
" Rights only	...	427	427	...	113	113	...	...	...	314	.....	On own account.
Mine managers	...	...	...	...	2	2	...	2	...	...	.....	Not stated.
Oilmakers (Eucalyptus)	...	...	...	...	1	1	...	1	...	...	.....	Contract.
Painters and paper-hangers.	109	29	138	68	19	87	...	...	41	10	6s. to 8s.	5s. to 8s.
Pattern-makers (Iron)	8	3	11	2	1	3	...	...	6	2	1s. per hour	1s. per hour.
Photographers	...	1	1	...	...	...	...	...	...	1	.....	.....
Pipe-layers	5	3	8	6	...	6	1	...	...	3	.....	6s. to 7s.
Pisé-builders	...	2	2	...	...	...	...	...	...	2	.....	.....
Plasterers	10	5	15	15	6	21	5	1	...	...	.....	1s. per hour.
Plate-layers	...	15	15	5	9	14	5	...	...	6	.....	6s. 6d. to 7s.
Plumbers	12	6	18	12	9	21	...	3	...	...	.....	7s. to 8s.
Printers & compositors	2	7	9	2	3	5	...	...	...	4	.....	piece.
Quarrymen	50	6	56	18	7	25	...	1	32	...	6s. to 8s.	6s., 8s., & picce.
Riveters (Iron)	...	16	16	...	...	...	...	...	...	16	.....	.....
Saddle and harness makers.	1	6	7	1	8	9	...	2	...	...	.....	25s. to 40s.
Sandwich-men	22	...	22	...	...	...	...	...	22	...	.....	.....
Sawyers	3	17	20	3	13	16	...	...	...	4	.....	piece.
Scubblers	...	...	...	5	...	5	...	...	...	...	.....	5s. 6d. to 6s. 6d.
Shearers	...	310	310	...	103	103	...	...	...	207	.....	per 100.
Shipwrights	...	6	6	4	1	5	4	...	...	5	.....	1s. per hour.
Signwriters	...	2	2	3	...	3	3	...	...	2	.....	piece.
Slaters	4	...	4	1	...	1	...	...	3	...	.....	piece.
Slaughtermen	...	3	3	...	5	5	...	2	...	...	.....	piece.
Sleeper-squarers	...	34	34	...	11	11	...	...	...	23	.....	piece.
Smelters	...	3	3	2	4	6	2	1	...	...	.....	Not stated.
Station hands	...	385	385	...	345	345	...	...	...	40	10s. to 20s.	10s., 15s., 20s.
" overseers	...	...	...	...	3	3	...	3	...	...	.....	Not stated.
Stonebreakers	40	34	74	57	9	66	17	...	...	25	.....	Per yard.
Store hands	...	6	6	...	3	3	...	...	...	3	.....	.....
Sugar-cane hands	...	2	2	...	...	...	...	...	...	2	.....	Piece and per day.
Surveyors' hands	...	15	15	...	9	9	...	...	...	6	.....	15s. to 20s. per week.
Tailors	2	25	27	1	7	8	...	...	1	18	.....	Piece.
Tank-sinkers	...	3	3	...	...	...	...	...	...	3	.....	Piece.
Tinsmiths	13	7	20	3	5	8	...	...	10	2	.....	1s. per hour & piece.
Tutors	1	9	10	...	4	4	...	...	1	5	.....	10s. to 17s. 6d. p. week
Upholsterers	2	...	2	1	...	1	...	...	...	1	.....	.....
Village settlers	...	1	1	...	...	...	...	...	...	1	.....	.....
Waiters	5	3	8	...	1	1	...	...	5	2	.....	15s. to 20s. per week.
Watchmen	1	...	1	1	...	1	...	...	...	...	.....	.....
Weavers	...	5	5	...	...	...	...	...	...	5	.....	.....
Well-borers	...	2	2	...	...	...	...	...	...	2	.....	.....
Wheelwrights	22	11	33	11	4	15	...	...	11	7	.....	20s. found & 7s. day.
Wood-turners	...	...	...	1	...	1	1	...	...	...	.....	.....
Wool-classers	...	17	17	...	10	10	...	...	...	7	.....	Per 1,000.
Wool-hands	32	...	32	55	69	124	23	69	...	...	.....	.....
Wool-pressers	...	15	15	...	3	3	...	...	...	12	.....	6s. per day and contract.
Wool-sorters	...	9	9	...	4	4	...	...	...	5	.....	.....
	8,558	12,018	20,576	8,787	4,931	13,718	3,310	1,241	3,081	8,328	.....	.....

CENTENNIAL PARK Relief Works, and relief granted to destitute families for Year ended 30 June, 1897.

Month.	Centennial Park Relief Works.						Free Rations.				Total Cost of Rations.
	Number of Men employed.	Number of Rations issued.	Cost per Ration.	Cost of Rations.	Cost of Extras.	Cost of Rations and Extras.	Families relieved.		Rations, at 1/10 ^d .	Cost of Rations.	
							Adults.	Children.			
July	821	2,646	1/3 ¹ / ₁₆	£ s. d. 175 14 2 ¹ / ₂	£ s. d. 44 8 7 ¹ / ₂	£ s. d. 220 2 10	...	...	...	£ s. d. 220 2 10
August	677	2,201	1/3 ¹ / ₁₆	146 3 2 ¹ / ₂	36 19 4 ¹ / ₂	183 2 7	...	...	...	183 2 7
September ..	665	2,114	...	140 7 8	35 11 9 ¹ / ₂	175 19 5 ¹ / ₂	...	...	...	175 19 5 ¹ / ₂
October	993	3,198	...	212 7 3 ¹ / ₂	53 18 10	266 6 1 ¹ / ₂	...	...	...	266 6 1 ¹ / ₂
November ..	990	3,246	...	215 11 0 ¹ / ₂	54 11 8 ¹ / ₂	270 2 9	15	74	36	3 7 6	
December ..	798	2,570	...	170 13 3 ¹ / ₂	43 4 9 ¹ / ₂	213 18 1	87	370	212 ¹ / ₂	19 18 5 ¹ / ₂	
January	58	154	...	10 4 6 ¹ / ₂	2 11 3 ¹ / ₂	12 15 9 ¹ / ₂	40	177	99 ¹ / ₂	9 6 6 ¹ / ₂	
February ...	25	80	...	5 6 3	1 5 11 ¹ / ₂	6 12 2 ¹ / ₂	33	158	85 ¹ / ₂	8 0 3 ¹ / ₂	
March .....	...	...	...	...	...	...	34	150	86	8 1 3
April .....	...	...	...	...	...	...	54	209	122 ¹ / ₂	11 9 8 ¹ / ₂
May .....	...	...	...	...	...	...	61	222	123 ¹ / ₂	11 11 6 ¹ / ₂
June .....	...	...	...	...	...	...	45	135	91	8 10 7 ¹ / ₂
	5,027	16,209		1,076 7 6	272 12 4 ¹ / ₂	1,348 19 10 ¹ / ₂	369	1,504	556 ¹ / ₂	80 5 11 ¹ / ₂	

Country Branches.

COASTAL.—Lismore, Grafton, Bega, Nowra, Newcastle, Wollongong, Kempsey.
 WESTERN.—Lithgow, Dubbo, Bathurst, Coonamble, Nyngan, Broken Hill, Mudgee, Molong, Wilcannia, Cowra, Walgett, Cobar, Forbes, Bourke, Orange, Billston.
 NORTHERN.—Maitland, Glen Innes, Moree, Armidale, Narrabri, Muswellbrook, Tamworth, Tentersfield.
 SOUTHERN.—Goulburn, Brindwood, Junee, Cooma, Hay, Queanbeyan, Cootamundra, Wagga Wagga, Jerilderie, Albury, Young.

The Labour Agent, Bega, to The Superintendent, Government Labour Bureau, Sydney.

Sir, Department of Labour and Industry, Bega, 3 July, 1897.

I have the honor to report that during the past year five applicants for work have been registered at this branch, comprising 1 butcher, 1 farmer, 1 saddler, and 2 labourers, their respective ages being 50, 34, 55, 48, and 33 years. Their dependents numbered 6, 3, 7, nil, and 2. One came from Maitland, two live in Bega, one from Sydney, and one from Goulburn. They reported themselves as being out of employment from three to twelve months. Only one applicant had been previously assisted by the Bureau, and he obtained a miner's right from me for six months. So far I have not received a refund.

The average rate of wages paid during the year is given below —

- Watchmakers, from £2 10s. to £3 per week.
- Blacksmiths, 7s. per day.
- Carpenters, 7s. 6d. per day.
- Bricklayers, 8s. per day.
- Plasterers, 8s. per day.
- Wheelwrights, 7s. per day.
- Storeman, 7s. to 10s. per week.
- Shop hands, 7s. per day.
- Labourers, 6s. per day.
- Labourers on dairy farms, from 12s. to 15s. per week, with rations.
- Road workmen, 5s. to 5s. 6d. per day.
- Loughmen, about 20s. per week, with rations.

One employer required a hand to milk, but as no one registered capable of this work, he was compelled to do the best he could himself.

Throughout the year the trades have been slack and buildings have not been of such a class that would require other than an ordinary carpenter to erect them, the material used being mostly wood.

Roadmaking has been fairly active. The different contractors, however, employ but few outsiders, as they keep their regular hands fairly well employed.

The ordinary labourers required on the farms work for a few days erecting fences, yards, cow-hails, &c., but after a few shillings have been earned, throw the job up and leave. This applies particularly to the class called "swagmen," as I am informed.

In conclusion, I may state that although this office is well known throughout the district as a labour agency, but few people avail themselves of it, as the returns will show.

I have, &c.,
 W. E. O'BRIEN,
 Agent.

The Labour Agent, Grafton, to The Superintendent, Government Labour Bureau, Sydney.

Sir, Court House, Grafton, 8 July, 1897.

Referring to your telegram of yesterday's date, I have the honor to state that owing to the press of work lately, and at the present time being daily engaged in the Courts—Quarter Sessions and District Court—it is impossible for me to furnish the full report intended.

I may state that during the year only two applicants for employment have been registered. I enclose letters received from the largest employers of labour in the district, giving information respecting rates of wage, &c., and upon which I purposed basing my report, had an opportunity occurred.

The following are extracts from the letters referred to:—

"In the mining industry, the rates of wage are from 6s. 4d. to 8s. per day, according to the kind of work performed, and, so far as I can judge, there are not many about here who are willing to work that have not got it to do. I do not intend this as an inducement for men to come to the district, as I am convinced that the supply as at present is equal to the demand."

In

In the sugar growing industry, the manager of the Harwood Mill reports, "That they are likely to employ about 450 hands at the mill and cane-cutting, preference being given to the old hands. The minimum wage is 20s. and rations. No trouble, I think, will be experienced in getting the men required."

In the timber trade, an employer states that, "For the last two or three years the supply of labour has been far in excess of the demand, a large number of men being out of employment. I have numerous applications for work almost daily, some offering to work for almost any rate of wages, and if I were in want of 100 men at present, I believe I could get same at two days notice. The prevailing rates of wage are as follows, viz.:—Clerks, 4s. 2d. per day; firemen and engine-drivers, 6s. 8d. to 7s. per day; machinists and benchmen, 7s. per day; assistant benchmen, puntmen, yardmen, and labourers, 6s. per day."

Another employer states that, "The prospects of the timber trade are very fair, and should keep a goodly number of men employed for the next twelve months. The prevailing rates of wage are from 6s. to 9s. per day.

I have, &c.,
A. GATES,

Agent.

The Labour Agent, Kempsey, to The Superintendent, Government Labour Bureau,
Sydney.

Sir, Department of Labour and Industry, Kempsey, 30 June, 1897.

In forwarding the Annual Report I have the honor to inform you that no miners' rights, passes, or other forms of assistance have issued from this Office, and no persons have been registered.

The local labour market is well supplied with labour, in fact the supply exceeds the demand.

The accompanying schedule sets forth the approximate current rate of wage.

I have, &c.,

H. NEWMAN,

Agent, Kempsey.

APPROXIMATE Current Rate of Wage.

Carpenter	...	...	...	8s. per diem.	Wheelwrights	...	...	...	9s. per diem.
Bricklayer	...	...	...	10s. "	Sawmill Hands	...	...	...	6s. "
Plasterer	...	...	...	10s. "	Carters	...	...	...	5s. "
Painter	...	...	...	8s. "	Labourers	...	...	...	6s. "
Blacksmith	...	...	...	9s. "	Farm Labourers	...	...	...	8s. to 15s. per week and rations.

The Labour Agent, Lismore, to The Superintendent, Government Labour Bureau,
Sydney.

ANNUAL REPORT.

Sir, Department of Labour and Industry, Lismore, 3 July, 1897.

In submitting my annual report for the year ended 30th June last, I have the honor to inform you that very little use is being made of this branch of the Labour Bureau, there being only three persons registered during the year, viz., 2 labourers and 1 bookkeeper. No applications have been made for assistance or railway passes, and but one application from an employer for carpenters in connection with the building of the new post-office at Byron Bay.

I have made inquiries from the Resident Engineer, the Council Clerk, and the police concerning the condition of the labour market, besides making numerous personal inquiries, and have ascertained that the supply of labour has been just about equal to the demand. At the present time there are a few men unemployed, most of the road contracts having been let in order that they would be completed and paid for by the 30th June; but as funds will be again available early in July, activity in roadwork will recommence. Besides this, the cane season is approaching. Some of the men are waiting for this, when many hands will be employed, though there is very considerable uneasiness felt in consequence of the influx, during the last few months, of hundreds of Hindoos. I believe there are considerably over 1,000 of these foreign people in the district now, and as they live upon so little, it is expected they will cut down the price of labour in the cane-cutting this year. Through the reduction of the duty on sugar, the millowners are this year to pay 1s. 8d. per ton less than last year, and have announced that, in consequence, the price for cutting and punting will be also reduced. Dairy-farming is being very largely taken up all over this district, many of the South Coast farmers coming over and settling down, and it is expected that this industry will entirely supersede cane-growing in the future, especially should the sugar duties be all removed. There are many inquiries about farms, but little business being done by way of selecting. In my position of Crown Land Agent, I can say that there is a deal of valuable agricultural land in the district yet to be taken up; but, because of there being no roads, it is not suitable for occupation. The Government have set apart a lot of country for homestead selections, but for the same reason there are no applicants. Most of the land on and close to the Richmond River has been selected, and for miles around there are certain evidences of progress, and a splendid future is in store for the district. At the present time, £1,100 worth of additions are being made to the court-house, a new post-office is just being commenced, to cost £3,340, a new residence for the Sub-Inspector of Police is to be erected, tenders to close this month. There are several new and important residences going up; new brick premises are being erected in the main street; the Bank of New South Wales have just moved into their new building, the cost of which was over £3,000; new creameries are going up throughout the district; all pointing to the fact that it is a progressive place. At the same time, I would quote the Council Clerk's remarks here, viz.: "In my opinion this is a very unsuitable district to send surplus labour to from the metropolis, for the reason that all contractors have their regular hands available and working on small farms."

The average number of men employed during the year, according to the Resident Engineer's opinion, from personal observation, in connection with roads and bridges, has been 155. The largest number were employed during April and May, when 228 and 245, respectively, were at work. The rate of wages paid by the department for unskilled labour has been 7s. per day, and good men have received the same rate from contractors under the department, though, in some cases, the wages paid are 20s. per week and provisions, or 5s. per day without. At certain times, when a large amount of contract work was out, such as during April and May, there was a scarcity of labour in the district, and contractors could not get a sufficient number of the right class of men. More particularly has this been the case

with

with stonebreakers; there have been a limited number of these in the district, so that they have been able to pick and choose their work, and, consequently, some contractors had to wait several weeks to get metal broken to a 2½-inch gauge, at 2s. 6d. per cubic yard, the men preferring to break 3-inch gauge, at 2s. per cubic yard, of which there was a large amount to be done in the district. The Council Clerk informs me that within the municipal district the supply of labour has been equal to the demand. The rate of wages paid has been 6s. to 7s. per day, metal breakers a trifle under 6s. per day. He says there were only about twenty really good labourers, and they chiefly strangers, applied for work during the year.

The Sergeant of Police says that the current rate of wages for men, principally employed in road-work, has been from 5s. to 7s. per day; farm labourers, 12s. to 15s. per week, with board and lodging.

The farmers themselves say that the greatest demand is for men who can milk and understand dairy work, that being the chief thing now; and, as stated in my last monthly report, the late rains have improved matters wonderfully, and the prospects of the coming season are cheering.

All tradesmen in the town say they are full handed. Mechanics seem to be fully occupied. Trusting the foregoing will be deemed satisfactory.

I have, &c.,
ANDREW T. COCHRANE,
C.P.S., Labour Agent.

The Labour Agent, Newcastle, to The Superintendent, Government Labour Bureau, Sydney.

NEWCASTLE being the largest centre at which a Labour Agency is established, the work of the agency requires an explanation, beyond a mere statement of figures.

During the year the registration of unemployed persons has been limited. Names have been principally registered in connection with the Bogan work, and applications for passes to the country. The Bogan work, as far as Newcastle is concerned, has been the cause, not the consequence, of such registration, the persons forwarded to the Bogan being men who registered subsequent to the notification of such work, and who, probably, but for such notification, would not have registered at all.

The majority of other names in the Annual Return attached of unemployed are those of persons proceeding to the country to employment secured by their own efforts, a letter from their employer being, in the majority of cases, a condition precedent to the issue of a pass.

Schedule A annexed, will show the value of the passes issued, and the small amount of refunds paid through the local agency.

The object for which the agency has been founded, to bring the employers and the unemployed together, has not been fulfilled. The unemployed, apparently, do not register unless they want to get to another district, and the employers of labour never come near the Agency.

T. G. ADRIAN, C.P.S., Agent.

SCHEDULE "A."

List of passes issued at Newcastle, from 1st July, 1896, to 30th June, 1897, and cost of same, as per Railway List of Passenger Fares:—

	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.				
Armidale 5 passes at	0	17	3	...	4	6	3	Meitland 4 passes at	0	1	11	...	0	7	8	
Bathurst 6	1	6	3	...	7	17	6	Mudgee... .. 2	1	12	3	...	3	4	6	
Cockle Creek 1	0	1	0	...	0	1	0	Nyngan 26	2	13	6	...	69	11	0	
Capertee 2	1	3	9	...	2	7	6	Newbridge 1	1	18	9	...	1	18	9	
Carathool 1	2	13	0	...	2	13	0	Narrabri 13	1	13	0	...	21	18	9	
Cobar 23	3	4	3	...	73	17	9	Orange... .. 2	1	12	6	...	3	5	0	
Cobar 2 half fare	1	12	0	...	3	4	0	Parkes 1	2	2	9	...	2	2	9	
Deepwater 1 pass at	2	4	0	...	2	4	0	Scene 1	0	12	11	...	0	12	11	
Farley 2 passes at	0	2	2	...	0	4	4	Singleton 1	0	5	10	...	0	5	10	
Fassifern 3	0	1	4	...	0	4	0	Tenterfeld 11	2	8	0	...	26	8	0	
Glen Innes 5	2	19	0	...	10	8	9	Tamworth 16	1	4	9	...	19	16	0	
Gundagai 3	2	4	3	...	6	12	9	Temora 1	2	5	3	...	2	5	3	
Gunnedah 4	1	6	6	...	5	6	0	Uralla 1	1	12	9	...	1	12	9	
Hermidale 2	1	10	9	...	3	1	6									
Total	...	...	...	...	...	...	...	140	...	...	...	...	£275	7	6
Refunds received through the Newcastle Agency	10	7	8
																£264 19 10

SCHEDULE "B."

Rates of wages at Newcastle for year ending 30th June, 1897.

Class of Employment.	Rates of Wages.
Wharf Labourers	1/- per hour.
Carters	40/- per week.
Shop Assistants	35/- "
Clerks	35/- "
Miners... ..	2/11 per ton (hewing rate).
Carpenters	9/- per day.
Joiners	9/- "
Bricklayers	9/- to 11/- per day.
Plasterers	9/- to 11/- per day.
Bricklayer's Labourers	1/- per hour
Printers	8/- per day.
Plumbers	9/- to 11/- per day.
Stonemasons	10/- per day.

SCHEDULE "C."

Summary for year ending 30th June, 1897.

Number of persons registered as unemployed	...	...	...	...	...	215
Number of passes issued	...	...	...	...	...	140
Value of passes	...	...	...	...	...	£275 7 6
Refunds paid through Agency	...	...	...	...	...	£10 7 8

The Labour Agent, Nowra, to The Superintendent, Government Labour Bureau,
Sydney.

Sir, Department of Labour and Industry, Nowra, 8 July, 1897.

I beg to report that, during the year ending 30th June last, fourteen men registered their names at this office for employment. These were chiefly comprised of men who passed through the town in search of work.

A few of the men applied to be sent to the Bogan Scrub work, but subsequently withdrew.

As far as I can gather, from information received by me, the number of unemployed in all the district would not reach eighty. Numbers of men do not get constant work, but they cannot be classed among the unemployed.

The numbers of men employed at farming and mining have greatly decreased owing to the severity of the drought; and at Yalwal, one of the principal mining places in the district, several men have left for New Zealand and the other colonies. At present, at Yalwal, I believe, over thirty men are out of employment.

During the year numerous men have found employment in connection with the erection of bridges and in connection with road contracts, but builders or carpenters find it very difficult to obtain any employment.

I might state that, owing to most of the farmers and their families doing the work on the farms, it is very difficult for labourers and others to find work in this district. The wages offered are, as a rule, very small.

The following is the average rate of wages:—

Carpenters and builders	...	...	...	...	...	...	8s. per diem.
General labourers	...	...	...	...	...	...	3s. 6d. per diem.
Farm labourers...	...	...	...	...	...	...	12s. per week.

I have, &c.,
W. F. MARKS,
Agent.

The Labour Agent, Wollongong, to The Superintendent, Government Labour
Bureau, Sydney.

Wollongong, 7 July, 1897.

I, HARRY S. BINGLE, District Labour Agent, Wollongong, beg to report that for the year ending 30th June, 1897, there were fifteen railway passes granted to persons seeking employment, but in very few cases has any refund been received; in some cases the order upon the future employer has been returned, no such person being known in the district. To guard against fraud in this way, it would be safer if the agent wired to the address given before issuing any railway pass, and ascertain if such a person really did exist. There were also six passes granted to the families of applicants.

There is absolutely no demand for labour, nor is there likely to be.

No men have been engaged here for employment during the year, and there have been but very few registrations.

The ruling rate of wages (current) is as follows:—Carpenters, 6s. to 8s. per day; blacksmiths, 8s. per day; strikers, 6s. per day; coal-miners, £1 10s. to £2 per week; navvies, 6s. per day; labourers, 6s. per day; bricklayers, 8s. per day; farm labourers, 8s. to 12s. per week, and board; bushmen and fencers, about 30s. per week; butchers, 30s. per week; bakers, £2 10s. per week; barbers, 15s. per week; grooms, 10s. per week, and board; wharf labourers, 5s. per day; coal-trimmers, about 15s. to £1 per day; compositors, £1 to £1 15s. per week.

Those registered during the year were:—Miners, 8; labourers, 4; shearers, 1; gangers, 1; clerks, 1.

H. S. BINGLE,
Labour Agent.

The Labour Agent, Bathurst, to The Superintendent, Government Labour Bureau,
Sydney.

Sir, Court House, Bathurst, 7 July, 1897.

I have the honor to report, for the year ended 30 June last, in connection with the work of the local branch of the Labor Bureau, as follows:—The number registered during the year was sixty-eight, to which should be added thirty-six, being number of passes issued to shearers and others who did not register, but whose names it would now appear should have been shown in my register. I regret to state that I have not received any applications from the employers of labour in this district, for either skilled or unskilled workmen, nor has one employer requested me to submit to him the list of unemployed. I can, therefore, safely assume that when the employers require workmen they seem to be able to obtain them without seeking the assistance of this office. I desire to state, I have come to the conclusion, that the main object in connection with the establishment of the country branches, viz, procuring work for the unemployed, has, at any rate, so far as this branch is concerned, been a failure. The branch is useful for the purpose of issuing passes to those who have obtained employment elsewhere and also for despatching various gangs to works inaugurated by the Government. I attach hereto a list showing the rate of wages paid in this district, and might add that there is little or no demand for labour at present.

I have, &c.,
W. G. B. SMITH,
Labour Agent.

RATES of wage prevailing.

Accountants } 35s. to 45s. per week.	Engine-drivers... .. 45s. to 60s. per week.
Clerks } 35s. to 40s. "	Farm-hands 15s. to 20s. per week and keep.
Bakers } 20s. to 30s. "	Fellmongers 30s. to 45s. per week.
Barmen } 40s. to 50s. "	Fencers 42s. "
Blacksmiths... .. } 35s. to 45s. "	Gardeners 15s. to 25s. "
Bootmakers } 8s. to 9s. per day.	Grooms... .. 15s. to 20s. "
Bricklayers } 7s. to 8s. "	Grocers... .. 35s. to 60s. "
Brickmakers } 30s. to 40s. per week.	Ironworkers 50s. to 60s. "
Butchers } 8s. to 10s. per day.	Labourers 6s. to 7s. per day.
Carpenters } 15s. to 25s. per week.	Miners 7s. to 8s. "
Cooks } 15s. to 20s. "	Navvies... .. 7s. to 8s. "
Coachmen } 40s. to 48s. "	Ploughmen 20s. per week and keep.
Coachbuilders } 2 ^o s. to 30s. "	Shearers 20s. per 100.
Draymen } 15s. to 30s. "	Station-hands 15s. to 20s. per week and keep.
Drivers } 25s. to 65s. "	Stonemasons 8s. to 10s. per day.
Drapers }	Wheelwrights 45s. to 55s. per week.

The Labour Agent, Bourke, to The Superintendent, Government Labour Bureau, Sydney.

Sir,

Bourke, 2 July, 1897.

During the year ending 30th June last, 154 persons have registered their names at this Branch, forty of whom were sent to the Bogan scrub-cutting works.

This Branch has not been used by employers of labour, and no engagements have been made directly through me, though I have afterwards heard that numbers registered soon got employment.

I attach Sergeant Miller's report as to the general condition of labour during last year, which, I think, will concur with my monthly reports.

The rates of wages have not materially altered during the past twelve months. Ordinary labour varies from 6s. to 8s. per day, and skilled, from 9s. to 12s. Shearers are paid 20s. per hundred. Shed labourers, 20s. to 25s. per week, with rations. Station-hands, from 20s. per week, with rations, according to their usefulness.

As the labour portion of the district is a moving one, it is impossible to work the Branch with satisfaction; men register and never present themselves again. As a rule, they cannot afford to wait in the town, and necessity compels them to seek work where they think they are most likely to find it, or where they can live most cheaply. If I had work for, say, twenty men to-day it would be some days before I could get suitable hands, and before that time my order might be countermanded.

If further particulars are required, I will try to furnish them.

I am, &c.,

GEORGE ATKIN,

Agent.

Bourke Police Station, 30 June, 1897.

SENIOR-CONSTABLE MILLER reports:—During the past year the labour market in the Bourke district has been well supplied. During the shearing season of last year the demand was quite up to the supply, and until near the end of the season there did not appear to be any surplus labour. During the off season, *i.e.*, between shearing, there have been as usual a number of men travelling in search of employment, but not so many as in former years.

The current rate of wages for ordinary labour—including rouseabouts on stations—is about £1 per week, and board or rations. Of course there are, doubtless, men in the district obtaining a higher wage, and again, probably, others are working for less, but taken all round £1 may be considered the current weekly wage of an ordinary labourer. Men engaged as navvies, on such works as, say, the Bourke weir, get from 7s. to 8s. per day, out of which they have to provide themselves with board.

G. Atkin, Esq., C. P. S.,

Bourke.

I am, &c.,

J. G. MILLER,

Senior-Constable.

The Labour Agent, Broken Hill, to The Superintendent, Government Labour Bureau, Sydney.

Sir,

Broken Hill, 30 June, 1897.

I have the honor to submit my annual report of the transactions of this branch for the year ending 30th June, 1897, with particulars as required by your memorandum of the 19th of May, 1897.

Only three men were registered by me in this Bureau during the past twelve months; of these, two were general labourers and one a baker. After registering the names of these men, I never again heard from them; but I have no doubt that, if they were sober and hard-working, they obtained employment. No tickets have ever been returned to me.

As each of the large mines has a Labour Bureau of its own, the transactions of this branch do not in any way show the very large field of labour in this district; and I regret to say that from the very first the employers were not disposed to make use of this office in the direction of employing men.

Unskilled labourers here, as elsewhere, have the most difficulty in obtaining regular employment, although the mines and municipality absorb a very large number. I would not recommend that any men of this description be sent here.

The permanency of Broken Hill as a silver-field being now assured, buildings of a more substantial character than those at present existing are being erected. Carpenters and stonemasons are at present in demand; but these are obtainable from Adelaide, which city keeps our local labour market supplied with tradesmen. Good practical miners are always in demand, and high-class men of all trades find no difficulty in getting employment here.

I would point out, however, that, although the general rate of wage appears high, the cost of living here is very much higher than in the cities and other more favoured localities. House rent is a large item, especially with men with large families.

Broken Hill presents no attractions as a permanent place of residence for persons in any walk of life, and the population is a shifting one.

I attach hereto the schedule showing the rate of wages obtaining here in the several departments of industry.

I have, &c.,

JAMES WATT,

Labour Agent.

RATES per day at Broken Hill.

Mines—		Engineering—		Engine-drivers—	
	s. d.		s. d.		s. d.
Miners	9 0	Fitters, 1st grade	10 6	Winding	10 0
Magazine-keepers	8 4	" 2nd "	10 0	Locomotive	10 0
Bracemen	8 4	" 3rd "	9 0	Stationary	9 0
Platmen	8 4	Turners, 1st grade	10 6	<i>Winch-drivers—</i>	
<i>Smelters—</i>		Machinists (other), 1st grade	10 0	Underground	9 0
Feeders	9 0	" " 2nd "	9 0	Surface	8 0
Tappers	9 0	" " 3rd "	8 4	<i>Boilers—</i>	
Charge wheelers	8 4	Boilermakers, 1st grade	10 6	Firemen	8 4
Furnace hands	8 4	" 2nd "	9 0	Cleaners	8 4
Dumpmen	8 4	Blacksmiths, 1st grade	10 6	Assistant	5 0
<i>Ore-dressing Mill—</i>		" 2nd "	10 0	<i>Boys—</i>	
Jig washers	9 0	" 3rd "	9 0	Smelter coke screeners	3 6
<i>Chlorodising Mill—</i>		Toolsmiths, machine	9 0	Ore-dressing mill	4 0
Firemen	9 0	" hand	8 4	Chlorodising	4 0
Tappers	8 4	Tinsmiths	10 0	Quarry—Assistant ore classers	3 6
Crushers, feeders	8 4	Carpenters, 1st grade	10 6	Tramway traffic	4 0
<i>Leaching—</i>		" 2nd "	10 0	Engine-cleaners	4 0
Precipitators	8 4	" 3rd "	9 0	Engineering apprentices, } to increase at the rate } to { of 1s. per day per year } { Errand boys	2 6 7 6 2 6
Pressers	8 4	Masons, 1st grade	10 6	<i>Station Employees—</i>	
<i>Stables—</i>		" 2nd "	10 0	Station shepherds, rouseabouts	15 0
Stablemen	8 4	Patternmakers	10 6		per week, with rations.
Horse-drivers	8 0	Moulders	10 0	Boundary rider	20 0
" smelters	8 4	" "	9 0		per week, with rations.
<i>Saw-mill—</i>		Fettlers	9 0	Overseers	25 0
Saw-sharpeners	10 0	Furnacemen, foundry	9 0		per week, with rations.
Sawyers	8 4	Electricians, mechanical, 1st grade	10 6	Manual labourers	7 6
<i>Tramway—</i>		Electricians, mechanical, 2nd grade	9 0		per day.
Gungers	9 0	Electricians, mechanical, 3rd grade	8 4		
Porters	8 0	Electricians, mechanical, &c... ..	7 6		

The Labour Agent, Coonamble, to The Superintendent, Government Labour Bureau, Sydney.

Sir,

Court-house, Coonamble, 16 July, 1897.

In accordance with the request contained in your memo. of the 19th May last, I have the honor to inform you that, during the year ended 30th June, 1897, the work done at this branch of the Government Labour Bureau, when summed up, amounted to almost nil.

About half a dozen applications were made at this office for work by general hands, but in no instance was the applicant successful in obtaining employment. Two names were added to my roll of persons seeking work.

The condition of the labour market in this district, since my last annual report, appears to me to be, generally speaking, unaltered; but I would add within the last couple of months a large number of unemployed persons may be seen daily loafing around the streets of Coonamble; a circumstance which would lead one to believe that the supply of labourers in this district is considerably in excess of the demand for same. This influx of unemployed may, however, be attributable to the fact that very shortly shearing will be in full swing in this district, and the majority of these persons may be waiting here until their particular "shed" commences work, when, no doubt, they will be able to obtain a "stand."

From inquiries, I have ascertained that the rate of wage current in this district is—as nearly as possible—as follows:—Carpenters and builders, 8s. to 10s. per day; coachbuilders, wheelwrights, and blacksmiths, from 1s. to 1s. 3d. per hour; saddlers, from £2 to £2 10s. per week; bakers, £2 per week; and labourers and station-hands at no fixed rate.

I have, &c.,

C. DILLON,

C.P.S. and Local Agent.

The Labour Agent, Cowra, to The Superintendent, Government Labour Bureau, Sydney.

Sir,

Cowra Branch, Government Labour Bureau, 21 July, 1897.

I have the honor to inform you that for the year ending 30th June, 1897, only one person registered his name at this office, a cook and baker by trade, who obtained a pass to Culcairn, where he was to obtain employment at Mr. A. M'Bain's Station, Kerndeen.

The schedule hereunder will show the rate of wage given in the various occupations common to this district:—

- Station-hands, from 15s. to 25s. per week.
- Cooks, from 10s. to 20s. per week.
- Wheelwrights, from 50s. to 55s. per week.
- Blacksmiths, from 50s. to £3 per week.
- Carpenters, from 50s. to £3 per week.
- Shearers, from 18s. to 20s. per 100.
- Rouseabouts, from 15s. to 20s. per week.
- Drapers, from £4 to 30s. per week.
- Grocers, from £3 10s. to 25s. per week.

These occupations are invariably filled by local people, and there seems to be little or no demand for outside labour, casual labourers being employed in road contracts, grubbing and clearing land, and farm labour, in nearly every case at contract rates agreed upon.

I have, &c.,

JAMES MILLER,

Agent.

The

The Labour Agent, Cobar, to The Superintendent, Government Labour Bureau,
Sydney.

Sir,

Department of Labour and Industry, Cobar, 2 July, 1897.

I have the honor to report that during the past twelve months, the condition of the local labour market has been much improved by the great advance of the mining industry in this locality.

From careful inquiries made I estimate that the different mining companies alone give employment to about 700 men, whilst the current daily rate of wages for the above period has averaged as follows:—Miners, 8s. 4d.; engine-drivers, 9s. to 10s. 6d.; carpenters, 9s. to 10s. 6d.; and general labourers, 7s. to 7s. 6d.

As may be seen from my monthly returns, only one person has been registered on my books. Since the establishment of this branch I find that the unemployed are in the habit of camping near to the different mining companies' works, and prefer to make personal application for employment, as vacancies occur.

Altogether the past year has shown a decided improvement in the state of our labour market, whilst the mining industry, upon which this town is dependent, has so rapidly advanced, that Cobar field is, to-day, one of the most flourishing in New South Wales.

Trusting that this report contains all the information that you require,

I have, &c.,

O. B. C. BURKE,

Bureau Agent.

The Labour Agent, Dubbo, to The Superintendent, Government Labour Bureau,
Sydney.

Sir,

Dubbo, 5 July, 1897.

I have the honor to report for the year ending 30th June, as follows:—

This district has suffered from a prolonged drought, which has recently broken up. During its continuance nearly all agricultural operations were stopped, and men were discharged in numbers. The advent of rain has caused the re-employment of ploughmen; there is, however, no demand outside, as the local supply is more than sufficient.

Wages.—The usual rate for farm hands (good) is £1 weekly, with rations. Inferior men receive less, down to nominal pay. Day labourers earn from 5s. to 6s. per diem.

State of the Labour Market.—This may be described as overstocked, and numbers of men are to be met with, travelling in search of employment.

Contract Work.—Scrub-cutting, ring-barking, timber-getting are mainly done by contract; the amount earned varies a good deal, according to the capability of the men.

Town Industries.—These comprise flour-milling, coach-building, saw-milling, brewing, &c. The hands employed as an average get 8s. per diem.

Wool-washing and Boiling-down.—These industries are intermittent; at present they are stopped. Wages on these are from 7s. to 8s. daily. I have issued, with approval of Head Office, passes for ten persons. As far as I know, two obtained work. £4 17s. have been received at this office as refunds for passes issued.

The majority of the men who registered did so to obtain work at scrub-cutting, but when instructions came to enrol gangs, the men had dispersed in order to seek work in the country. Since the inception of the Labour Bureau Branches in the country, only one employer has made an application to me for labour. I am of opinion that when these men register it is with the intention of obtaining work under Government, to which they appear to think their registration tickets will entitle them.

I may state that I have made all possible inquiries from employers in town as to the foregoing details. In regard to the pastoral and agricultural rates, I am largely indebted to information supplied me by Mr. W. Stuart, Agent for the Equitable Life Assurance Society, who is intimately acquainted with the state of the district, on account of his visits to all parts of it.

I have, &c.,

R. T. MACNEVIN,

Labour Agent, Dubbo.

The Labour Agent, Forbes, to The Superintendent Government Labour Bureau,
Sydney.

Sir,

Forbes, 21 July, 1897.

I have the honor to report that during the twelve months ended 30th June ultimo, 7 men were registered for employment at this office, 6 being labourers and 1 a cook. No inquiries have been made by employers for workmen. The drought seriously interfered with the employment of workmen, miners more especially in this district. The usual rate of wages given is 15s. per week, and found. One railway pass has been issued. The receipts or refunds are nil.

There is at present more labour offering than is apparently required.

I have, &c.,

N. BLACK,

Local Agent.

The Labour Agent, Hillston, to The Superintendent Government Labour Bureau,
Sydney.

Sir,

Hillston, 6 July, 1897.

I have honor to submit my annual report for the year ended 30th June ultimo.

This Branch was opened in the beginning of November last, and I regret to state that absolutely no advantage has been taken of it, either by employers or those in search of employment. This is, perhaps, owing to the long distance from railway communication, and the fact that the town occupies such an isolated position. The industries are few, principally pastoral and farming, and the class of employment offered is mostly of a labouring character, and then only during the shearing and harvesting seasons,

seasons, and the ruling wage would average about £1 per week, the employer providing the necessary rations, &c. There is no labour to be had in the district, other than for general labourers, and employers are able to engage men who are permanently settled in the community.

The unemployed, generally speaking, are seldom met with in this district since the Branch was opened.

I have not received a single application for employment of any kind, and no other business has been transacted at this Branch.

I have, &c.,

ROBERT HUGHES,

Labour Agent.

The Labour Agent, Lithgow, to The Superintendent Government Labour Bureau,
Sydney.

Sir,

Lithgow, 3 July, 1897.

In accordance with the instructions contained in your letter 19th May last, I herewith beg to make an annual report of the work done at this Branch, as well as the industries in this district, and the current rate of wages.

There has been 37 persons names registered for employment, and 29 railway passes granted in order to go to and seek employment, out of which 12 fares have been refunded, representing the amount of £14 11s. 9d.

With reference to the industries, there are 7 collieries at work, which give employment to about 200 men. The Cobar Copper-smelting Company employ about 80 men. The ironworks about 150 men. Two breweries employ about 15 men. The Coverwell Tweed Factory about 10 men, besides a number of women and boys. The Lithgow Pottery Company, who employed between 30 and 40 men, have stopped work, and the managing director attributes the cause to the fiscal policy.

All the industries in this district at work appear to be in a flourishing condition, and the men employed are making fair wages, and with a prospect of continuing to do so.

The ironworks are working with two shifts of men night and day. The local unemployed I should not estimate at above 50. The most of the applicants for work are from men tramping through the town, and even these have considerably diminished of late.

The current rates of wages are—Coalminers, 1s. 8d. per ton hewing rate, their earnings averaging 7s. 6d. per day; copper-smelters earn from 7s. to 8s. 6d. per day; ironworkers, from 7s. to 9s. per day; labourers, from 6s. to 7s. 6d. per day; bricklayers, from 8s. to 9s. per day; carpenters, 7s. to 8s. per day; engine-drivers and engineers, from 8s. to 10s. per day; and farm hands, from 10s. to 20s. per week, and found.

I have, &c.,

E. M. COHEN,

Labour Agent.

The Labour Agent, Mudgee, to The Superintendent, Government Labour Bureau,
Sydney.

Sir,

Court-house, Mudgee, 6 July, 1897.

I have the honor to state that my annual report for the year ending the 30th June last will be very unfavourable on account of the severe drought experienced in this district—stock dying and not a blade of grass to be seen, therefore no work for the unemployed. During that period no applications were received for registration by persons seeking employment.

The rate of wages were—miners, 8s.; labourers, 5s. to 7s.; mechanics and others, £1 to £3 10s. per week.

As we have had abundance of rain of late and farmers are now ploughing, have no doubt that things will improve in this district, especially mining, as they now have plenty of water for washing purposes and for prospecting.

I have, &c.,

F. S. OSBORNE,

Agent.

The Labour Agent, Molong, to The Superintendent, Government Labour Bureau,
Sydney.

Department of Labour and Industry, Molong, 3 July, 1897.

I HAVE the honor to report that no applications, either by employers or persons seeking employment, have been made at this office during the year ending 30th of June, 1897.

The current rate of wages for class of labour usually required in this district, namely, station and farm hands, is from 10s. to 15s. per week with rations.

It is only at harvest time that extra labour is required in the farming business, which can be fully supplied locally. To my knowledge there are several useful and reliable men in this town who are not more than half the year employed, simply because graziers and farmers are compelled, owing to the depressed times, to employ as little labour as possible.

I have, &c.,

H. H. CHIPPENDALL,

Labour Agent.

The Acting Labour Agent, Nyngan, to The Superintendent, Government Labour
Bureau.

Sir,

Department of Labour and Industry, Nyngan, 21 July, 1897.

I have the honor to submit herewith report for year ending 30th June, 1897.

In reading over the reports furnished by this office, and from what I could ascertain from the police, I find that there has been little or no demand for labour in this district. The average rate of wages has been from 6s. to 8s. per day, the class of labour mostly required being "station-hands" and general labourers. The only industry in this district is a boiling down and meat preserving works, and this has only been periodically working. The number of unemployed in the district has varied considerably monthly, but the *bonâ fide* unemployed here now are less than in previous months of the past year.

I have, &c.,

W. IRONSIDE PERRY,

Acting Labour Agent.

The

The Labour Agent, Orange, to The Superintendent, Government Labour Bureau,
Sydney.

Sir,

Orange, 1 July, 1897.

I do myself the honor to submit my report for the year ended 30th June, 1897.

Men Registered.—Forty-three men were registered during the year; of these 23 were sent to the West Bogan.

Railway Passes.—Twenty-nine railway passes were issued under instructions from Head Office.

Miners' Rights.—One miner's right was issued from Sydney.

Demand for Labour.—There has been very little demand for labour. Only two applications were sent to me—one for a cook, and the other for a gardener. I sent men out to both places, but I was informed the parties could not come to terms. A few men were sent here from the Head Office. Two of these left after working for one day.

Rate of Wages.—Farm labourers (local and known to be good working men), from 15s. to 20s. per week with rations; miners, from 30s. to 45s. per week.

Refunds.—No refunds for railway passes or miners' rights have been made during the year.

I have, &c.,

H. P. LEARY,
Local Agent.

The Labour Agent, Walgett, to The Superintendent, Government Labour Bureau,
Sydney.

Sir,

Court-house, Walgett, 8 July, 1897.

I have the honor to forward you my annual report in connection with the Government Labour Bureau in this district. Since my term of office as Agent no applications have been made, and, on account of the multiplicity of my duties, I have been unable to ascertain the number of men out of work scattered round this vast district. Those who are, apparently, out of work are waiting for the shearing season. Others can obtain the ordinary rate of wages which is to be obtained in the western districts.

I have, &c.,

W. HURROCK,
Government Labour Agent.

The Labour Agent, Wilcannia, to The Superintendent, Government Labour Bureau,
Sydney.

Sir,

Wilcannia, 8 July, 1897.

I do myself the honor to report that since the Government Labour Bureau Agency has been established here there have been no applications registered either by employers or employee. In up-country districts applications are always made either to the storekeepers or local private agents.

The principal labour employed in this district is station-hands, and the current rate of wages is—

Married couples, £65 to £75 per annum.

Teamsters, 25s. per week.

Cooks, 20s. to 25s. per week.

Boundary-riders, 15s. to 20s. per week.

General hands, 15s. to 20s. per week.

Shearers, 20s. per 100 sheep.

Shed-hands and rouseabouts during shearing, 20s. to 25s. per week.

The demand, generally speaking, is far less than the supply.

Owing to the small shearing this year the number of hands employed during the next few months will be very much less than usual during shearing season.

I have, &c.,

WALTERUS BROWN,
Labour Bureau Agent.

The Labour Agent, Armidale, to The Superintendent, Government Labour Bureau,
Sydney.

Sir,

Armidale, 7 July, 1897.

I have the honor to report as follows for the past twelve months, *i.e.*, 1st July, 1896, to 30th June, 1897.

There have only been 4 registrations, *viz.*, 1 miner, 1 compositor, 1 groom, and 1 general hand. A few others applied for work in the district, but would not register, as they were only passing through. In a couple of instances labour was applied for. I posted up notice outside the office, and wrote to previous applicants on my books, but letters were returned unclaimed, applicants having left the district. No passes have been issued, as no applicants having any certain show of work applied. No refunds have been made to me during the time specified herein. There is no increased demand for labour since 1st July, 1896. Wages remain the same. Miners, about £2 per week; bootmakers the same; farm labourers, 10s. to 15s. per week and rations.

The principal industries are agricultural, mining, and bootmaking.

I have, &c.,

B. P. P. KEMP,
Agent.

The Clerk of Petty Sessions, Glen Innes, to The Superintendent, Government
Labour Bureau, Sydney.

Sir,

Glen Innes, 21 July, 1897.

Referring to your telegram of the 20th instant, I have the honor to inform you that, according to the local agent's records for the year ending 30th June last, no applications for employment or from persons requiring employees were received at this office during the period named. Having been in the district only since May last, I am not in a position to speak as to the state of the labour market during the last twelve months.

At

At the present time any surplus labour that might have been is absorbed in the chaff industry, which has been favoured by the protracted drought and high prices, and it may be said the district is devoid of unemployed. There are no industries or other avenues of employment in the district likely to afford an outlet for the surplus labour of other parts.

The average rate of wages for farm and other labourers is about 25s. to 30s. per week.

I have, &c.,

M. J. McMAHON, C.P.S.

The Labour Agent, Maitland, to The Superintendent, Government Labour Bureau,
Sydney.

Annual Report.

Sir,

Court-house, Maitland, 7 July, 1897.

I have the honor to report for your information that there are still in my district a considerable number of persons unemployed, quite as many, and even more, than there were at the date of my report made in April of last year. The principal reason for the scarcity of employment has been that the district has suffered very much from the effects of drought in the first six months of the year 1897. However, as rain has within the past month fallen, and the farmers' crops are looking very well, I have no doubt that the surplus labour will be employed within the next few months, but there is not likely to be any demand for labour beyond that which is available locally during the ensuing year. The rate of wages during the year have been as follows:—Ordinary labourers, 5s. to 6s. per day; miners, 6s. to 8s. per day; mechanics (other than carpenters), 6s. to 8s. per day; carpenters, 7s. to 8s. per day; bricklayers, plasterers, and masons, 8s. to 9s. per day; farm labourers, 10s. to 12s. 6d. per week and keep.

The principal industries in the district are mining and farming, and these are well supplied with all the labour that they are likely to require during the ensuing year.

I have registered 350 persons since my branch of the Bureau was opened in March of last year, but much the larger proportion of those were tramps.

I have, &c.,

W. ROBERTSON, C.P.S.,
Agent.

Senior-Sergeant Pountney, Moree, to The Superintendent, Government Labour
Bureau, Sydney.

Police Station, Moree, 8 July, 1897.

SENIOR-SERGEANT POUNTNEY begs to report no work has been done by men from the Labour Bureau in this district. Moree is a pastoral district, and men from the Bureau are not required in the district.

Nearly all old and new selectors do all improvements on the selections themselves, and at shearing time employ a few shearers that visit the district from other parts.

Current rates of wages are:—

Shearers, 20s. per 100 sheep.
Shed-hands, 6s. per day.
Station-hands, 15s. per week.
Burr cutters, 10s. per week.
Clerks on stations, £25 and rations.
Boys on stations, 5s. per week.
Domestic servants, 10s. per week.
Butcher and stable man, £40 per annum.
Carpenters in town, 8s. per day.
Bricklayers, 10s. per day.
Grooms in town, 20s. per week.
Farmer and wife, £40 per annum.
Private clerks in town, £15 per annum.
Butchers, 45s. per week.
Paper editors, 40s. per week.

W. M. POUNTNEY,

Senior-Sergeant.

The Labour Agent, Muswellbrook, to The Superintendent, Government Labour
Bureau, Sydney.

Sir,

Department of Labour and Industry, Muswellbrook, 3 July, 1897.

I have the honor to submit my report for the year ended 30th June, 1897.

During the year there were twenty-five registrations of unemployed made at my branch. Of these twenty were granted passes as approved by you, and five were refused.

Refunds of railway fares were made amounting to £4 2s. 2d., representing assistance rendered to three applicants.

The labour market in this district is on the whole quiet, and, but for travellers passing through, many of whom I know personally for a fact have no desire when work is offered them of performing it. No demand either one way or the other exists.

The current rate of wages for the period has been from £1 to £1 10s. per week all round.

I have, &c.,

O. A. S. FITZPATRICK, C.P.S.,
Agent.

The

The Labour Agent, Narrabri, to The Superintendent, Government Labour Bureau,
Sydney.

Annual Report for the year ending 30th June, 1897.

Narrabri, 19 July, 1897.

The following particulars show the work done at this branch during the period above mentioned.

Passes issued, three (3)

Refunds received, three (3) = £4 9s. 6d.

No registrations have been made except to those persons to whom assistance has been given.

The labour market for the year has been fully supplied locally—that is, for the classes of labour which the pursuits of the district generally require.

The district is chiefly pastoral, and the rate of wage to station hands is as follows:—

Boundary riders, 20s. per week with rations.
General hands, 15s. to 20s. per week with rations.
Scrub cutters, 12s. 6d. to 15s. per week with rations.

At the meat-preserving works the rate of wages is as follows:—

Slaughtermen,—

Carcasses for boiling-down, 10s. per 100.
" preserving, 11s. 6d. "
" chilling, 20s. "

Other general hands receive from 4d. to 10d. per hour, according to the nature of the work.

Carpenters, rough work, 5s. per day; others, from 7s. to 8s. per day; store hands or shop assistants, drapers assistants, from 70s. per week downwards; grocers assistants, from 50s. per week downwards.

WALTER SCOTT,
Labour Agent.

The Labour Agent, Tamworth, to The Superintendent, Government Labour Bureau,
Sydney.

Sir,

Tamworth, 3 July, 1897.

In compliance with instructions contained in your letter of the 19th May last, I have the honor to report that during the year ending 30th June ultimo, thirteen persons have been registered at this office.

No applications have been made by employers to obtain labourers. Twelve passes have been granted to nine men and one woman and her two children, at a cost of £12 5s. The sum of 16s. 3d. only has been refunded to this office.

There are many men—perhaps, say, 100—in this locality without work, and many have barely sufficient to maintain their families and keep them from starvation.

If the Municipal Council could see its way to construct a weir on the Peel River, it would be a vast improvement to the town and give employment to many, as also would a Government Experimental Farm. I am of opinion the latter would be a great inducement to landowners here to improve their methods of farming, fruit-growing, and drying, &c., and much more labour would be required.

The current rate of wages is for—Saddlers and harness-makers, 40s. to 60s. per week (mostly piece-work); grocers, 40s. to 60s.; drapers, 50s. to 70s.; butchers, 42s. to 50s. per week; bootmakers, 40s. to 60s. per week (mostly piece-work); painters and finishers, 40s. to 60s.; blacksmiths, 30s. to 50s. per week; and hairdressers, 42s. to 50s. per week; municipal labourers, 6s. per day.

I have, &c.,

L. W. BROUGHTON,
Labour Agent.

The Labour Agent, Tenterfield, to The Superintendent, Government Labour Bureau,
Sydney.

Sir,

Department of Labour and Industry, Tenterfield, 3 July, 1897.

I have the honor herewith to submit my annual report for the year ending 30th June, 1897,
viz. :—

Number of persons registered.

One man only has registered his name during the past 12 months—a bootmaker by trade. He has received no assistance, nor has he obtained employment through this office.

Works undertaken in district.

The usual work under the supervision of the Superintendent of Roads has been carried out both by contract and day-labour. Such work has only been the means of absorbing those resident in and about the district together with the men in regular employment. Between £7,000 and £7,500 has been expended on roads and bridges during the past twelve months.

The Chilled Meat Works Company have been at work intermittently for the past twelve months, employing only a few hands.

The Boot Factory is also only working with half the number of men usually employed.

The

The rates of wages ruling in the district for all kinds of labour is as follows, viz. :—

Butchers, 25s. to 30s. per week.
 Bakers, 25s. to 30s. per week.
 Carpenters, 8s. per day.
 Tinsmiths, 8s. per day.
 Blacksmiths, 8s. per day.
 Labourers (ordinary), 7s. per day.
 „ (farm), 5s. per day to 15s. per week and rations.
 Drapers, 40s. to 50s. per week.
 Compositors, 40s. per week.
 Bootmakers, 40s. per week.
 Domestic servants, 7s. to 10s. per week and keep.
 Grocers, 50s. per week.
 Carters, 15s. per week and rations.
 Stockmen, 20s. per week and rations.
 Grooms, 15s. to 20s. per week and keep.
 Saddlers, 40s. to 50s. per week.

I have, &c.,
 F. BURNE,
 Labour Agent.

The Labour Agent, Albury, to The Superintendent, Government Labour Bureau,
 Sydney.

Sir, Albury, 12 July, 1897.

I have the honor to submit the following report on the operations of this Branch for the year ended 30th June, 1897.

One registration was effected during the period stated, one pass issued, no refunds received, and no inquiries made by employers or unemployed.

The police report that there are no unemployed persons in the district that they know of, excepting a few "loafers" and swagsmen passing through on their way to or from employment.

The principal industries of the district are the wine-making, wool-growing, agriculture, and gold-mining. The three former absorb the most labour; the latter is not in a flourishing condition.

During the year the following rates of wages have been paid :—

Miners	50/- per week.
Agricultural and vine labourers	20/- per week and board.
Ordinary labourers	6/- per day.
Carpenters, bricklayers, plasterers, and painters ..	7/- to 9/- per day.
Coachbuilders	7/- to 8/- per day.
Blacksmiths and wheelwrights	50/- per week.

I have, &c.,
 W. JAMIESON,
 Local Agent.

The Labour Agent, Braidwood, to The Superintendent, Government Labour Bureau,
 Sydney.

Sir, Braidwood, 2 July, 1897.

I have the honor to submit my annual report on this Branch for the year ending 30th June last.

During the year only three names were registered at this Branch, which is accounted for by there being so few unemployed resident within this district.

Owing to the severe drought experienced during the year, which interfered materially with the agricultural and mining industries, the demand for labour was small. A fair number of men who were travelling from one district to another were content to work for their keep and a few shillings a week for temporary employment.

The following is a list of the average rates of wages ruling in this district, viz. :—Mechanics, 5s. to 10s. per day; miners, 30s. per week; stockmen and cooks, 20s. per week and keep; grooms, 15s.; shepherds, 5s.; and labourers, from 15s. to 20s. per week and keep.

A large number of men are employed in different parts of the district fossicking for gold; some make good wages and others only a living. Since the break up of the drought both farming and mining operations are being pushed ahead, but there are sufficient men in the district to cope with the demand for labour.

I have, &c.,
 L. A. McDOUGALL,
 Labour Agent.

The Labour Agent, Cooma, to The Superintendent, Government Labour Bureau,
 Sydney.

Sir, Department of Labour and Industry, Cooma, 3 July, 1897.

I have the honor to submit my report, as follows :—

Forty-four (44) persons have registered themselves at this office during the past twelve months, of whom twelve proceeded to the West Bogan to cut scrub.

The amounts paid direct to this office as refunds of railway fares totalled £27 3s. 11d.

Labour market.—At the present time there are very few unemployed in this district. One reason for this improvement, which may be only temporary, is that the winter here is too severe for men looking for work who have to camp out. I am informed that many men leave this district for Sydney and the warmer parts of the Colony as soon as the cold weather sets in here. Work in connection with the building trade and road making has been fairly brisk, which, no doubt, accounts for the absorption of a good many men; in fact there is some difficulty in obtaining suitable men for builders. Grazing

Grazing is the principal industry; agriculture and mining give employment to comparatively few men.

Wages.—I am informed that the rates range from about 4s. for unskilled to about 8s. for skilled labour per diem. Miners as a rule obtain about 6s.

The busiest time of the year on Monaro is from November to the end of February, when shearing and harvesting operations are carried on.

I have, &c.,
EDWARD GOMM,
Local Agent.

The Labour Agent, Cootamundra, to The Superintendent, Government Labour Bureau, Sydney.

27 July, 1897.

WITH regard to the working of this branch for the twelve months ending 30th June, 1897, I have the honor to report as follows:—Some 14 men applied for registration, and in 6 of these cases passes were applied for and granted to travel on the railway line to reach certain work. Twelve out of the 14 men mentioned above were general labourers, and 2 of the 14 shearers. The branch has not been largely used, as there has not been a great demand for labour, nor, on the whole, has there been employment sought. There have been occasional tramps in the town, who have not sought permanent work, but have been content with odd jobs and then moved on. I find that a great many of these tramps do not really wish to work, but as long as they can beg tucker are quite content. I need hardly say there are exceptions. There has been little demand for labour. For instance, there has been little or no building going on in this district; and as to general labour, such as harvesting, ploughing, &c., although occasional hands are wanted, yet the farmers and their families manage to do this kind of work themselves. I may mention that within the last week very important work has been started some 6 miles from here, viz., the deviation of the railway line at Frampton, and I understand some few hundreds of men will be employed for some three or four months; but the greater part of the labour required has been introduced from other parts of the Colony. However, I can speak more fully of this matter in my next monthly report. There are labourers seeking work there at the present time. The list given below will show the current rates of wages for various trades, &c., in this district:—

	£	s.	d.	
Labourers (with board)	0	15	0	per week.
Blacksmiths	2	10	0	"
" strikers	0	15	0	"
Coach-builders	2	10	0	"
Painters ... ..	..			Piecework.
Tailors ... ..	..			"
Drapers	2	10	0	per week.
" assistants	from	0	5	0
Shoemakers	2	5	0	"
Bricklayers	3	0	0	"
Plasterers	3	0	0	"
Carpenters	3	0	0	"
Grocers' assistants	2	10	0	"
Grooms (with board)	0	15	0	"
General labourers	0	6	0	per day.

I have, &c.,
G. ADDISON,
Labour Agent.

The Clerk of Petty Sessions, Goulburn, to The Superintendent, Government Labour Bureau, Sydney.

Sir,

Court-house, Goulburn, 7 July, 1897.

Nothing of any importance took place at the Goulburn Branch of the Government Labour Bureau during the year ended 30th June, 1897.

The usual registrations were made, and returns furnished to you monthly. From time to time men reported that they had no work, and were unable to obtain any.

Three gangs of ten men each were sent to the Bogan scrub clearing works, but no men were found private work, with the exception of a few.

Generally speaking, this district is in a most poverty-stricken condition, owing to a great extent to the protracted drought.

The rates of wage did not vary very much, the following being what was usually paid:—Miners, 30s. to 45s. per week; bootmakers, 30s. per week; carters, 30s. to 35s.; slaughtermen, 25s. to 27s.; labourers, 25s. to 30s.; and cooks, 20s. to 40s. per week; drovers, 15s. per week and keep; millers, 50s. to 65s.; wheelwrights, 40s. to 50s.; and shop assistants, 30s. to 70s. per week.

I have, &c.,
W. D. STAFFORD,
Clerk of Petty Sessions.

The Labour Agent, Hay, to The Superintendent, Government Labour Bureau, Sydney.

Sir,

Department of Labour and Industry, Hay, 10 July, 1897.

I have the honor to report that the operations at this branch for the past year have been of a very limited character. *The only registration was of a man who was granted a pass to another district.* No employers have applied to me for men. I have received £7 0s. 9d. on account of refunds for railway passes.

As far as I can ascertain there have not been any considerable number of men out of employment. An irrigation scheme near Hay has provided work for from thirty to forty men during the past three months, and, as it is not yet completed, will carry most of them on through the winter, which is usually a slack time. These men all appear to be residents of the town and district, and I may say that, except at shearing time, there is seldom any influx from other places.

Avenues of employment outside the town are confined to the pastoral and agricultural industries. There is no mining of any kind in the district. The general rates of wages are approximated as follows:—

	s.	d.	s.	d.
Bricklayers, per day	...	...	10	0
Carpenters	...	...	9	0
Wheelwrights	8	0	to	9
Blacksmiths	8	0	to	9
Horse drivers, per week (with rations)	20	0	to	25
Station-hands	15	0	to	25
Labourers, per day	6	0	to	7

I have, &c.,

J. BURNETT,

Agent.

The Labour Agent, Junee, to The Superintendent, Government Labour Bureau, Sydney.

Sir, Department of Labour and Industry, Junee, 6 July, 1897.

In reply to your circular of the 19th May last, I have the honor to submit herewith my report of the business transacted at this office for the year ending 30th June, 1897.

During the half-year ending 31st December, 1896, I registered nine men, and for the remaining half-year four men were registered, but could not obtain employment for them. Three out of the last four were registered to go to work for a Mr. M'Nicholls, of Ganmain, on a clearing job, but their intended employer wrote me to say on account of the protracted drought he was knocking off work. I have never had a satisfactory reply from him since.

All the men, as far as I can ascertain, with the exception of the one last registered, have left the district, the bulk of them being ordinary tramps.

The principal industries are Cohoe and Walster's foundry, blacksmiths, wheelwrights, &c., and farming, also the railway locomotive sheds. The latter, the railway authorities declined to give any information about, stating they were all permanent hands there, with the exception of casual labourers, who were paid, when required coal-heaving, &c., at 6s. per day.

In farming, first-class ploughmen get on an average 20s. per week, inferior, 15s. per week, and their keep in each case. At Messrs. Cohoe and Walster's foundry the wages are as follows:—Blacksmiths, from 35s. to 60s. per week; moulders average 1s. per hour, first-class men 1s. 3d. per hour; woodworkers, from 30s. per week to 1s. per hour; labourers, 25s. per week; and boiler-makers (when employed), 11s. per day. Up to 31st March last thirty men were employed, but since then only twenty-two men are employed, this being a slack time until about September, when harvest machinery of every description comes in for repairs, &c., and the full complement of hands will be again required. General blacksmiths average from 30s. to 60s. per week; wheelwrights, 30s. to 60s. per week; painters, about 22s. per week. The rates of wages have averaged about the same during the year. Employers appear to have no difficulty in obtaining men to suit them without applying to this office; and when asked they invariably reply that they would sooner not have men from the Bureau.

I have, &c.,

K. THEO. GARLAND,

Labour Agent.

The Acting Clerk of Petty Sessions to The Superintendent, Government Labour Bureau, Sydney.

Sir, Police Office, Jerilderie, 5 July, 1897.

I have the honor to furnish a report of the work done at the Jerilderie branch of the Government Labour Bureau during the past year. During the period fifty-one persons registered, eighteen railway passes were issued to persons *en route* to the Bogon relief works, nine found employment in the district, and the remainder left the district without aid.

Refunds for railway passes have been received from eight persons, amounting to £16 14s. 8d.

Applications for employment have been in excess of the requirements.

The principal work carried out during the past twelve months has been scrub cutting for starving stock and clearing land for agriculture, for which the current rate of wages was £1 per week and rations.

I have, &c.,

JOHN CURRY,

Acting Clerk of Petty Sessions.

The Labour Agent, Queanbeyan, to The Superintendent, Government Labour Bureau, Sydney.

Sir, Queanbeyan, 2 July, 1897.

In compliance with the request contained in yours of the 19th May last, I have the honor to forward herewith a summary of work transacted at this branch for the year ending 30th June ult.

The state of the labour market has been considerably dull during the past twelve months, as is evinced by the fact that in the case of the whole six persons registered as per above return, railway passes were issued to other districts, and in the case of four persons to private employment, and in the remaining two in search of employment.

The rate of wages prevailing in the district is somewhat about as follows:—From 5s. to 6s. per day and rations.

The

The labour is confined chiefly to road contracts. With the late rains the district may now be said to be on the eve of better times and a good spring is anticipated, and during the ensuing year the demand for labour is likely to be considerably increased.

There have been no refunds to this branch during the year.

I have, &c.,

C. W. THOMAS,
C.P.S. and Labour Agent.

The Labour Agent, Wagga Wagga, to The Superintendent, Government Labour Bureau, Sydney.

Sir,

Court House, Wagga Wagga, 1 July, 1897.

With reference to the labour market in this district, I have the honor to inform you that for the past twelve months the supply of labour has been greater than the demand; the principal demand for labourers is that coming from farmers who have been and are paying from 15s. to 20s. per week. At shearing time, which is about August and September in each year, there is a good demand for shearers and rouseabouts, and good men have no difficulty in obtaining employment. The prevailing drought was the principal cause of a slackness in employment.

I have, &c.,

PHILIP E. ELDERSHAU,
C.P.S., Labour Agent, &c.

The Labour Agent, Young, to The Superintendent, Labour Bureau, Sydney.

Sir,

Labour Agency, Young, 3 July, 1897.

In forwarding my report for the year ending 30th June, I have the honor to inform you that the operations of this branch have been confined principally to the issue of nineteen passes to persons leaving the district for employment elsewhere, as follows:—

1 to Bourke, 1 to Sydney, 7 to Cobar, and 10 to Nyngan.

The conditions of the labour market have fluctuated but little during the past year. As a result of the good prices obtained for wheat after last harvest, a decided upward tendency was experienced, and matters looked most promising. Selectors and others were enabled to meet their engagements, and, in numerous instances, discharged their mortgages, and looked forward to a continuance of good seasons and a larger area under wheat.

But the drought which followed has been so severely felt, and has extended so far into the winter, that a limited area only will be under wheat, owing to the lateness of the season and the difficulty experienced in ploughing. The effect of these circumstances on the labour market are not only felt now, but will also be apparent next harvest. The heavy losses in stock also will seriously limit the number of shearers required this season.

The rates of wages ruling in this district for the past year are the same as quoted in my report of the 7th June last. I am informed that there has been little or no fluctuation in those prices.

I have, &c.,

R. W. COLLINS,
Labour Agent.

ANNUAL Report, Country Branches, year ending June 30th, 1897.

Principal Industries.	Rates of Wage.
COASTAL DISTRICT. Dairy-farming, Coal-mining, Cane-growing, Agricultural.	Farm and dairy hands 10s. to 20s. per week and keep. Cane-cutters 20s. per week and keep Coal-miners 1s. 10d. to 2s. 11d. per ton hewing rate. Mechanics 7s. to 10s. per day. Labourers..... 5s. to 7s. "
WESTERN DISTRICT. Pastoral, Agricultural, Mining, Meat-preserving, Flour and Saw Mills, and Boot Manufactory.	Station-hands 15s. to 25s. per week and keep. Farm-hands..... 10s. to 20s. " " Flour-mill hands 45s. to 55s. " Saw-mill hands 6s. to 8s. 4d. per day. Meat-work hands 30s. to 40s. per week. Shearers 17s. to 20s. per 100. Mixerers 30s. to 45s. per week. Mechanics 30s. to 70s. " Labourers..... 5s. to 7s. 6d. per day.
NORTHERN DISTRICT. Pastoral, Agricultural, Mining, Meat-preserving, Boot Manufactory, &c.	Station-hands 15s. to 20s. per week and keep. Shearers 18s. to 20s. per 100. Farm-hands..... 5s. to 20s. per week and keep. Meat-work hands 25s. to 50s. " Bootmakers 40s. to 60s. " Miners 40s. per week. Mechanics 6s. to 10s. per day. Labourers 5s. to 7s. "
SOUTHERN DISTRICT. Agricultural, Pastoral, Meat-preserving, Wine- making, Dairy-farming, &c.	Farm and vine labourers ... 15s. to 20s. per week and keep. Station-hands 15s. to 25s. " " Meat-works hands 25s. to 40s. " Mechanics 30s. to 60s. " Miners 30s. to 45s. " Labourers..... 4s. to 6s. per day.

NUMBER of men Registered and number found Employment at the Country Branches for the year ending 30th June, 1897.

Branches.	July.		August.		September.		October.		November.		December.		January.		February.		March.		April.		May.		June.		Total Number of Men		Principal Industries.									
	No. Registered.	Found Employment.	Registered and	Found Employment.																																
Boga.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	Dairy-farming and Road-making.		
Grafton.....	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	Agricultural, Pastoral, Mining, and Sugar-growing.			
Kempsey.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	Agricultural.		
Lismore.....	2	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	Cane-growing and Dairy-farming.		
Newcastle.....	..	..	26	..	..	..	16	..	40	..	9	30	..	..	..	..	..	..	..	..	4	4	6	6	101	40	Coal-mining.		
Nowra.....	..	..	1	..	..	..	..	..	1	..	10	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	Agricultural.		
Wollongong.....	2	2	2	2	4	3	1	..	..	..	1	1	4	..	..	..	..	..	..	2	..	4	4	..	..	14	..	Coal-mining and Agricultural.	
Bathurst.....	1	4	13	2	24	..	..	..	8	12	11	10	..	..	..	..	..	..	..	..	..	..	..	1	1	14	8	Agricultural and Boot Manufactory.	
Bourke.....	2	2	3	..	34	..	18	10	46	20	24	22	3	..	4	..	1	..	1	..	..	..	..	..	..	68	30	Pastoral, Meat Preserving, &c.		
Broken Hill.....	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	143	54	Pastoral and Mining.	
Coonamble.....	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3	..	Pastoral.	
Cowra.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	Pastoral.
Cobar.....	1	1	..	Pastoral and Mining.						
Dubbo.....	..	..	2	2	66	..	..	..	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	75	2	Pastoral and Mining.
Forbes.....	1	..	..	..	2	..	2	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	..	Pastoral, Agricultural, Flour, and Timber Mills.
Hillston.....	Pastoral and Mining.						
Lithgow.....	1	..	2	..	4	..	2	12	1	1	3	Pastoral and Agricultural.						
Mudgee.....	3	3	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	16	13	Agricultural, Mining, Pottery, and Iron Works.
Molong.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	6	Pastoral, Mining, and Agricultural.
Nyngan.....	1	1	73	12	52	20	9	2	46	46	16	11	8	8	1	..	2	Pastoral and Agricultural.						
Orange.....	..	..	..	..	1	..	8	..	7	..	14	10	..	..	..	..	..	..	..	..	..	..	..	..	..	..	208	100	Pastoral, Meat Preserving, &c.
Walgett.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	44	20	Agricultural and Mining.
Wilcannia.....	Pastoral.					
Armidale.....	2	Pastoral, Meat Preserving, &c.					
Glen Innes.....	1	1	4	..	Mining, Agricultural, and Boot Manufactory.						
Maitland.....	9	2	36	24	20	20	16	14	18	12	20	17	33	31	17	15	13	2	9	7	5	3	20	19	216	160	Agricultural and Mining.									
Moree.....	Coal-mining and Agricultural.					
Muswellbrook.....	Pastoral.				
Narrabri.....	4	..	Pastoral and Agricultural.						
Tamworth.....	4	..	1	..	1	1	Pastoral, &c.				
Tenterfield.....	1	Agricultural, Pastoral, Tannery, Soap, and Boot Factory, &c.				
Albury.....	1	1	1	Pastoral, Mining, and Agricultural.				
Braidwood.....	1	1	1	1	Agricultural, Pastoral, Mining, and Wine-making.				
Cooma.....	12	..	7	..	6	..	10	..	2	..	1	10	1	1	3	3	1	Pastoral, Mining, and Agricultural.				
Cootamundra.....	Dairy-farming, Pastoral, and Agricultural.			
Goulburn.....	16	..	5	4	2	..	25	..	12	19	3	Agricultural.			
Hay.....	Agricultural, Mining, and Boot Manufactory.		
Junee.....	6	..	3	Pastoral and Agricultural.		
Jerilderie.....	2	2	..	6	5	28	24	15	3	Pastoral, Mining, and Agricultural.		
Queanbeyan.....	Pastoral.	
Wagga Wagga.....	3	..	1	18	..	3	..	7	..	11	..	4	2	1	3	3	1	Agricultural and Pastoral.	
Young.....	Agricultural and Pastoral.
	68	14	102	38	244	35	152	46	181	52	192	201	94	43	55	34	28	6	22	11	58	17	57	37	1,253	634	10	10	Agricultural, Fruit-growing, and Meat Preserving.			

Sydney: William Applegate Gullick, Government Printer—1897.

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

GOVERNMENT LABOUR BUREAU.
(PETITION FROM CERTAIN ELECTORS AND CITIZENS OF THE COLONY AGAINST.)

Received by the Legislative Assembly, 17 November, 1897.

To the Honorable the Speaker and the Honorable the Members of the Legislative Assembly, in Parliament assembled.

The humble Petition of the undersigned electors and citizens of the Colony of New South Wales,—

RESPECTFULLY SHOWETH:—

That your Petitioners are firmly of the opinion that the further maintenance of the Government Labour Bureau is prejudicial to the best interests of the *bonâ fide* workers of the Colony, inasmuch that as an institution it pauperises labour and reduces wages.

That as an institution it has utterly failed to ameliorate the conditions of the workers in whose interests it was ostensibly established.

Your Petitioners, therefore, humbly pray that your Honorable House in its wisdom will see fit to refuse to pass the estimate granting the necessary supply to further maintain the Government Labour Bureau, and saving thereby a large sum of the taxpayers money annually.

And your Petitioners, as in duty bound, will ever pray.

[Here follow 1,051 signatures.]

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

THE UNEMPLOYED.

(CORRESPONDENCE RESPECTING A SCHEME FOR THE TEMPORARY EMPLOYMENT OF, BY MR. CHAS. O'NEILL, M.I.C.E., DURING 1894-5.)

Printed under No. 11 Report from Printing Committee, 15 July, 1897.

C. O'Neill, Esq., M.I.C.E., to The Hon. G. H. Reid, M.P., Premier.

Sir,

16, Elizabeth-street, Sydney, 15 November, 1895.

I have the honor to call your attention to a letter, with enclosures, which I sent to you on the 24th November, 1894, referring for work for the unemployed, by making a wide road or promenade from near the Man-o'-war Stairs round by Mrs. Macquarie's Chair to the head of Woolloomooloo Bay, and to respectfully request that you would give the matter your further consideration.

The road might be named "The Reid Promenade," and I humbly think the work would do a large amount of good and be satisfactory to the people generally.

I have, &c.,

CHARLES O'NEILL, M.I.C.E.

Acknowledge. Mr. Ross.—F.K., 20/11/95. Done.—M.R., 21/11/95.

C. O'Neill, Esq., M.I.C.E., to The Hon. G. H. Reid, M.P., Premier.

Sir,

16, Elizabeth-street, Sydney, 24 November, 1894.

I have the honor to send you herewith copy of a letter written by me to the Honorable Sir George Dibbs, late Premier, suggesting what seemed to me a wise means of helping the unemployed, humbly but earnestly hoping that you may view the suggestion in a different light from that expressed in the late Premier's reply, a copy of which is attached hereto.

I may mention that when Mr. F. N. Charrington, the great English philanthropist, was in Sydney in March last, among his impressions of Australia, as reported in the *Daily Telegraph* of March 3rd, were "he admired our beautiful harbour, and thought on the whole that Sydney was the most charmingly-situated town in the world. But what a pity that the early architects of the place had not laid out a public promenade round every bay and creek. What a pity that the Government were not doing more at the present time to preserve the foreshores in their native loveliness."

I also enclose report of the "Surplus Labour Committee" to the Trades and Labour Council of New South Wales, showing various works proposed by me, viz. :—

1. The filling in of Darling Harbour above Pyrmont Bridge.
2. Tunnels for proposed City Railway from Darling Harbour direct to Circular Quay.
3. Tunnels to North Shore.
4. Esplanade and Quay-walk from Pyrmont Bridge by Dawes and Miller's Points to Circular Quay, with Tramways, &c.

I have, &c.,

CHARLES O'NEILL, M.I.C.E.

Acknowledged.—28/11.

C. O'Neill, Esq., M.I.C.E., to The Hon. Sir George Dibbs, M.P., K.C.M.G., Premier.

Sir,

16, Elizabeth-street, Sydney, 22 February, 1894.

I beg respectfully to make a suggestion for the public good by giving useful employment to the starving men now in Sydney. It is as follows:—Order the construction of a road, say, 200 feet wide, with a belt of trees in the centre, and seats, &c., from near the Man-o'-war Stairs (widening only), Mrs. Macquarie's Chair, and along Woolloomooloo Bay to Bourke-street. (The baths would be interfered with, but they could be extended further into the bay.) This would be a truly useful work, and, if authorised, I could place a thousand men on at once, and by changing hands every fortnight the immediate unemployed difficulty would be to a great extent overcome, and a ray of happiness forced into many desolate

desolate homes. This is a terrible time, and the work I have suggested would, I believe, satisfy the people generally, whilst you, as head of the Government, by affording an honorable means for the unemployed men to obtain an independent livelihood, I humbly think should be brave enough to take the responsibility of carrying out a work which would reflect the highest credit on you and the Government. The good you would accomplish would be incalculable, and perhaps one of the most meritorious works a Premier could undertake, and practically begin an era of prosperity in New South Wales.

The road when completed would form a magnificent sea-shore promenade and carriage-drive.

I may give you an example of my own experience when I was Engineer-in-Chief at Auckland, New Zealand. There was a heavy wave of depression came over the Thames Gold-field district, and one day many thousands of men appeared in the streets of Shortland who met me going to my office and demanded some means to prevent starvation. They were very much excited, and I was in the middle of them. I asked a few to come with me. When at the office, and after hearing of the serious state of affairs, I said I would put on a thousand men that afternoon at half the usual wage (five shillings per day) until other work would require their service.

I started the making of a wide road along the sea from Shortland to Tararu, a distance of about 2 miles; then I obtained the approval of the Provincial Government, and in a very short time the depression left the district, prosperity again reigned, and a grand, wide, useful road was completed, called "O'Neill's Esplanade."

I have, &c.,

CHARLES O'NEILL,
M. Inst. C.E.

The Private Secretary to The Premier to C. O'Neill, Esq., M.I.C.E.

Dear Sir,

Chief Secretary's Office, New South Wales, 6 March, 1894.

The Hon. Sir George Dibbs desires me to acknowledge the receipt of your letter of 22nd February, and to inform you that he considers your proposal to construct a road round Farm Cove, as a means of employing 1,000 men who are now out of work, one that is perfectly impracticable and unjustifiable.

Yours faithfully,

H. TENNENT DONALDSON,
Private Secretary.

1897.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

THE UNEMPLOYED.

(RETURN RESPECTING.)

Printed under No. 18 Report from Printing Committee, 7 October, 1897.

RETURN to an *Order* made by the Honorable the Legislative Assembly of New South Wales, dated 23rd June, 1897, That there be laid upon the Table of this House a Return showing,—

- “ (1.) The total expenditure for the months of January, February, March, and April this year for the unemployed.
 “ (2.) The work done by the Unemployed during those months in incurring the expenditure.
 “ (3.) The expenditure incurred in employing the Unemployed outside of Sydney (if any).
 “ (4.) The portion of the expenditure which has been given as charity, and that for which work has been executed.”

(Mr. Affleck.)

DEPARTMENT OF LABOUR AND INDUSTRY.

- (1.) £2,474 8s. 4½d., less £878 9s. 7d. refund of railway fares.
 (2.) Expenditure was incurred in sending men to private employment (including “fossicking”), and to Government works at Shea’s Creek, Botany Sewage Farm, Church and School Lands, Rifle Butts, and Bogan Scrub.
 (3.) £281 6s. 5½d., being cost of railway passes issued by country branches of the Labour Bureau.
 (4.) £36 17s. 9½d.

NOTE.—These replies bear only on the cost of railway passes, miners’ rights, and rations granted by this Department, but have nothing to do with the cost of the different works on which the Unemployed have been engaged.

Department of Public Works, Account Branch,
 15 June, 1897.

STATEMENT showing Amount Expended, under the Public Works Department, on Work done by the Unemployed during January, February, March, and April, 1897.

Locality.	January.	February.	March.	April.	Total.
Church and School Lands	£ s. d. 245 7 7	£ s. d. 153 1 4	£ s. d. 157 2 2	£ s. d. 61 7 9	£ s. d. 616 18 10

J.C., 15/6/97.

THOMAS R. STEELE,
 Accountant, Public Works.

[3d.]

320—

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

THE UNEMPLOYED.

(EMPLOYMENT OF, SINCE 1st MAY, 1897.)

Printed under No. 8 Report from Printing Committee, 17 June, 1897.

[Laid upon the Table of the House in reply to Question by Mr. Whiddon, 15 June, 1897.]

Question.

MR. WHIDDON asked THE MINISTER OF PUBLIC INSTRUCTION,—

- (1.) Will he be good enough to inform the House how many men from the unemployed have been put on to work since the 1st May?
- (2.) The nature of such work, and the districts to which they have been sent, up to date?

Answer.

SCHEDULE of Particulars.

- (1.) 1,179. In that number are included labourers selected for the Botany Sewage Farm; men put on at Shea's Creek, also old men to clear at the Raudwick Rifle Butts; fossickers recommended by the Mines Department; clearers, by the Department of Mines and Agriculture; and wives, with children, going to join their husbands in the country, who had preceded them, and made homes.
- (2a.) Accountant, brewer, brickmakers, bricklayers, bakers, butchers, blacksmiths, carpenters (house and bridge), cooks (male and female), carters, clerk, concrete-workers, cabinet-makers, drivers (horse), drover, engineer, engine-drivers, engineer's smith, fossickers, farm hands, flour-mill hands, fellmongers, fisherman, generally usefuls, gardeners, grooms, hospital attendant, iron-planer, kitchenmen, labourers, miners (silver, gold, coal, and shale), married couples, milkmen, painters, plumbers, paper-hangers, plasterers, quarrymen, station-hands, shearers, salesman, sleeper-cutters, shoemaker, tutor, timber squarers and cutters, tinsmith, wood-cutters (fire), wheelwrights, wool-scourers, watchman, bushmen

(2b.)

City and Suburbs.

Northern District.

Narrabri, Tenterfield, Boggabri, Gunnedah, Wyong, Armidale, Glen Innes, East Maitland, Werris Creek, Tamworth, Port Stephens.

Southern District.

Albury, Mandurama, Bulli, Young, The Rock, Cootamundra, Yass, Junee, Temora, Wyalong, Bredbo, Goulburn, Carcoar, Cooma, Gundagai, Tarago.

Western District.

Katoomba, Bourke, Wanaaring, Wilcannia, Nevertire, Nyngan, Cobar, Hermitdale, Parkes, Dubbo, Mumbil, Capertee, Wellington, Byrock, Mudgee, Stuart Town, Forbes, Molong, Bathurst, Newbridge.

NOTE.—The above particulars are compiled from 1st May to 10th June inclusive.

1897.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

FIRE BRIGADES BOARD, SYDNEY.

(REPORT FOR 1896.)

Presented to Parliament, pursuant to Act 47 Vic. No. 3, sec. 7.

Printed under No. 12 Report from Printing Committee, 22 July, 1897.

The Chairman to The Chief Secretary.

Sir,

Fire Brigades Board, Head-quarters Fire-station, Sydney, 14 April, 1897.

I have the honor, by direction of the Fire Brigades Board for the Metropolitan District, to forward herewith, in compliance with the 7th section of the Fire Brigades Act, 1884, the Board's Report upon its administration during the year 1896.

I have, &c.,

CHARLES BOWN,

Chairman.

REPORT OF THE FIRE BRIGADES BOARD FOR THE YEAR 1896.

WITH regard to the year 1896, the Fire Brigades Board for the Metropolitan District has the honor to report upon the matters within the scope of its administrative duties under the Fire Brigades Act, 1884, pursuant to the direction of section 7.

The only alterations effected in the personnel of the Board at the biennial election, which took place in March, were the unopposed elections of Messrs. F. J. Jackson, J.P., and T. M. Tinley, J.P., respectively by the Insurance Companies having their headquarters in and outside the Colony, to the seats formerly occupied by Messrs. Walter Church, J.P., and J. St. Vincent Welch, J.P., the other elective members being re-elected. At the first meeting of the newly constituted Board, Alderman J. C. Beare, J.P., was elected Vice-Chairman, in the room of Mr. Church, who had retired from the Board after continuously holding a seat upon it since the passing of the Act in 1884.

To the contributing Insurance Companies, the Lancashire Insurance Company and the London Assurance Corporation were added, while the Mutual Union Insurance Company disappeared from the list. (*Appendix II*). The sum of the risks was £59,720,282, an increase of £380,186 on that of the antecedent year. The contribution levied was equal to 2½d. (2½d.) in every £100 of risk held.

As shown in the balance-sheet (*Appendix IV*) the year closed with an overdraft. For the probable expenditure of this Department during the current twelve months, £20,100 was the estimate adopted. This sum, in view of the claims being urged by various districts for the establishment of fire stations and increased protection, and of varied requirements over an enlarged area, must be very carefully husbanded.

In the last Report a large shrinkage was recorded in the assessed value of ratable property in the Municipalities [*Appendix I*], and for the year under review a further contraction of £269,167 is apparent, despite the addition of two Boroughs, whose assessments amount to £27,682. Of this reduction, no less than £161,589 was in the city. Forty-two Municipalities were on the contributory list, the additional being Penrith and Richmond. These are distant from Sydney about 35 and 39 miles, respectively, but being in the county of Cumberland are in the Metropolitan District under the Fire Brigades' Act. As remarked last year, these are the first instances of the extension of the Act to districts so distant from Sydney, and yet within the Metropolitan area. During the year the provisions of the Act were extended to Liverpool, which consequently became contributory at the beginning of the year current. The contribution levied upon the Municipalities amounted to half-a-crown for every £100 of assessed value of ratable property.

It may be mentioned that although the Fire Brigades' Act, in section 22, authorises a Council to increase its city or municipal rate, notwithstanding any statutory limit of such rate, by sufficient to recoup the amount of the contribution paid in the previous year for the maintenance of the Fire Brigades Department, no Council within the Metropolitan District has yet adopted that course; yet the contribution is drawn for the protection of the lives and property of the ratepayers, who, no doubt, would cheerfully pay the small tax of half-a-crown per £100, rather than be without such a safeguard. Councils, however, have hitherto preferred to pay the contribution levies out of their own funds

At the same time several of the Borough Councils have complained of having to make the payments ; and it is remarkable that frequently those which have protested most strongly have also been those which most strenuously urged the Board to increase the expenditure in their own particular districts. Since the passing of the Act pressure has been continually brought to bear by one or another Council for an increase of the Fire Brigade establishment within the boundaries of its own parish, coupled with the installation of telephone fire alarms, and the erection of costly fire stations ; yet those very Councils complain of an increase of contribution which must be a sequence to compliance with even a portion of their requests. On the other hand, Councils are dissatisfied because the Board has declined to accede to applications for extensions of which the advantage could not be commensurate with the cost.

In the United States of America the whole cost of the Fire Brigades establishments is borne municipally—not merely one-third of it as here ; while in the Melbourne Metropolitan District, where the revenue is drawn from three sources, on lines very similar to ours, the levies upon the municipalities are heavier than in Sydney, being 4s. 1d. for every £100 of ratable property, against 2s. 6d. here.

The sum appropriated for the maintenance of the Fire Department of San Francisco for the twelve months ending 30th June, 1896, is set down in that Department's Report at 718,000 dollars (about £147,500). The appropriation on account of this department for last year was £18,900, of which the municipalities were called upon for £6,300. Yet the population of San Francisco cannot much exceed 300,000 persons, while that of Sydney is estimated at 410,000, which number would be increased to upwards of 440,000, if there were included the population of the whole district of no less than 176,247 square miles, over which the jurisdiction of the Board extended last year. Similarly favourable comparisons may be drawn with regard to the Fire Brigade Departments of Chicago, Kansas City, and other cities.

While emulation of the American scale of expenditure is not advocated, the figures are quoted to show that the Borough Councils here are called upon for only about a twenty-third of the amount contributed by the San Franciscan municipal authorities, and are also much more favourably treated in this respect than the other cities of which we have any information.

Taking the figures given above, the expenditure per head of the population here is 10'3d., while that of San Francisco approximates 9s. 10d., and of Chicago about 3s. 9d., the last-named city having a great population of over 1,700,000 persons.

Water.

Hurstville, Kogarah, Rockdale, and other districts, are to receive the benefit of a much improved water supply under pressure from the 1,000,000 gallon reservoir which the Department of Water Supply and Sewerage has almost completed at Penshurst. On the north side of the harbour the Hornsby-Chatswood water supply scheme has given the rapidly growing suburbs upon the heights a supply which for fire protection purposes alone must be of yearly increasing value. The Board has pleasure in acknowledging the courtesy with which the Board of Water Supply has continued to respond to requests from this Department, where possible, when any deficiency in the flow or pressure of water for fire purposes has been brought under its notice.

Fires.

During the year 451 alarms of fire were responded to, of which 91 were false alarms. Of the others, exclusive of 69 chimney fires, 291 turned out to be actual outbreaks of fire. These figures compared with the returns of the previous year represent a decrease of 82 calls, and of 76 fires, other than those in chimneys. The Superintendent reports that the destruction of property by fire has not been extensive, considering the area covered, and that is high testimony to the continued good work which the firemen have performed. Six of the fires were upon vessels lying at wharves in the harbour.

Port Jackson,
Fires on ship-
ping, and
necessary
Amendment of
Fire Brigades
Act.

In connection with the oft-urged desirability for special protection being provided for vessels in this port, which is becoming the great commercial *entrepot* of Australasia, attention is again invited to the remarks upon the subject on the second page of the last Report. Among the difficulties there enumerated was the omission of power from the existing Act for the extension of its provisions to Port Jackson. This view has since been entirely supported by counsel's opinion, a copy of which was forwarded to the Principal Under Secretary on 30th September last. Other communications have also passed, setting forth the very invidious position in which this Department is placed with regard to vessels afloat, but so far nothing definite has resulted.

The Fire Brigades Act, 1884, under which the Department is worked, continues in its pristine imperfect state. In some of its provisions it is absolutely unworkable, and fails to carry out its admittedly express intention. With reference to the difficulties which arise in connection with it, communication has been made from time to time, and it is understood that its need for amendment is even more necessary as regards the country outside the Metropolitan District. Under counsel's opinion, before-mentioned, the Board has "neither duties nor powers upon the waters of Port Jackson," and considerable risk is incurred by any attempt to extinguish fire there. The opinion concludes with a recommendation "that the sooner the Board obtains an Act giving them jurisdiction over the Harbour, the better for themselves and the shipping public." In that respect, as in others, the continued appeals for a more satisfactory and workable Act have so far been profitless. In the meantime the Department has not stood by and allowed ships to be destroyed by fire ; but has undertaken the risk, and vessels and cargoes of great value have been preserved. The unreasonable position in which the Department is placed by the imperfection of the Act in that respect requires immediate rectification. There are other serious difficulties affecting the administration of the Act concerning which communication has frequently been made.

With further regard to the question of the amendment of the Act, it may be mentioned that in the sister colony of Victoria the Metropolitan District is under the jurisdiction of one Board and the country under that of another, both of which governing bodies sit in the capital. Under the South Australian Fire Brigades Act, which is of later date than either the Victorian or our own, one Board sitting in Adelaide controls the whole colony, and the system appears to have worked well. Three systems, therefore, are in operation with regard to town and country—in South Australia, Victoria, and this Colony ; and in any alteration of the existing Act it would be well to consider which would be most advantageous for adoption. Recently, as has been said, Penrith and Richmond, situated upon the confines of the county of Cumberland, have been included in our Metropolitan District, a matter with regard to which the Board had no option. To supervise fire-extinguishing organisations at such distances would present little more difficulty than to control them still further away. The question, therefore, arises whether

whether enlarged powers should be given under which the central Board would have jurisdiction over the whole Colony, or whether its operation should be circumscribed to a more purely metropolitan area, on somewhat similar lines to the district of the Metropolitan Fire Brigade of Victoria. As it exists at present, the Metropolitan District here is either too large or too small.

As yet there has been no legislative action to regulate the traffic in explosives and in inflammable liquids, nor to introduce a proper Building Act—subjects upon which the Board has so frequently submitted its views that there can be no necessity for further comment.

On the 1st May, in a commanding position in Darlinghurst, overlooking William-street, a detachment of the Metropolitan Fire Brigade, assisted by auxiliaries, was stationed in premises secured upon lease for twenty-one years. A hose carriage and other suitable equipment were placed there, and telephone fire alarms were run from it as far as Darling Point, and also down Potts' Point, and in other directions. The anticipated establishment of a fire station in Redfern has not yet been accomplished, but it is believed that the Government is favourably disposed towards the desired dedication of the present Court-house and Police-station for that purpose when those premises are vacated for the buildings in course of erection. The position is admirably situated for a permanent fire station from whence to radiate protection throughout the surrounding district. The provision of more suitable fire stations in Paddington and Burwood has not yet been accomplished, but it is hoped that they will not be much longer delayed. It has been decided to build a station in Parramatta upon a site provided by the Government, the premises hitherto in possession of the Parramatta Volunteer Fire Company, No. 1, being required for other purposes. When the building is occupied the necessity for two volunteer fire brigades in that town will have passed away, and the district be better protected by one powerful company with improved equipment. The claims of Manly have not been overlooked, and negotiations, since completed, were entered into for the purchase of a suitable site in Fountain-street, whereon it is proposed to place a station as soon as funds permit, in which to more comfortably house the local volunteer firemen and their appliances. That district, in consequence of its isolated position, must rely entirely upon the services of the local brigade for protection in time of fire. A station, just completed, has been built in Rockdale, and the requirements of Granville and other localities are subjects for future consideration. In Drummoyne the local Volunteer Fire Brigade, assisted by a Government grant, has provided itself with a most creditable station on a good site, which together cost about £500.

The building of stations and properly equipping them constitutes a seriously heavy drain upon our resources, and under present circumstances it would be impossible for every district requiring them to be immediately supplied. Those of most pressing necessity must, therefore, be taken first, and the others dealt with seriatim, as can be afforded. The Superintendent of Fire Brigades has urged with frequent reiteration that the whole matter should be dealt with, without such delay, by the issue of a loan of £25,000 for the purpose. The Fire Brigades Act, however, gives no authority for borrowing, and other considerations make such a course undesirable, even if an enabling clause were added to the Act. In Victoria the Metropolitan Board has borrowed largely, and consequently the contributing bodies have to pay considerably enlarged contributions to provide a sinking fund in addition to the interest. Many Municipal Councils and other elective administrative bodies, here and elsewhere, have borrowed freely in the past, with the result that they are now overweighted with a crushing load of interest. Where there is facility for borrowing, it unfortunately happens that there is grave danger of extravagance; and this is especially the case with organisations whose frequent changes of membership leave the ultimate burden to others. No such corporation can hope to always escape from what in a higher sphere is known as "log-rolling," nor from varied pressure for the expenditure of moneys, when large amounts are in hand, as various influences are brought to bear from time to time. To carry out the desired works, and yet to avoid the evils of which there are so many object lessons in this and other Colonies, the Board suggested that the Government should advance a special annual allowance; but the proposal was not entertained.

The number of telephone fire-alarms has now been increased from 139 to 162, distributed throughout the city and suburbs at the points of greatest vantage. As the system adopted here has proved so eminently satisfactory others will be annually added. These alarms have involved the erection of 135 miles of wire—an addition of 13 miles since our last year's Report—representing an increase of potential protection over a large area, including portions of the city, Balmain, Newtown, North Sydney, and other suburbs.

At the close of the year the Metropolitan Fire Brigade numbered sixty-two of all ranks, the authorised strength being sixty-four—in all, making an increase of four on the previous year's return—and the standard of efficiency is most creditable to officers and men. It appears, however, to be increasingly difficult to obtain recruits of the required physique and other qualifications to fill any vacancies. Three hose waggons have been added to the Brigade's plant during the year, and an order has been forwarded to London for an additional steam fire-engine, capable of delivering 600 gallons a minute at 200 revolutions. The renewals of hose and repair of and additions to other material have been exceptionally heavy.

The authorised strength of the Auxiliary Fire Corps has been raised to twenty, but the number on the roll on the 31st December, 1896, was only fourteen. The difficulty alluded to as being felt with regard to obtaining suitable candidates for the permanent force is accentuated with regard to the Auxiliary Corps, a number of changes taking place in its ranks in consequence of many of its members having from time to time to retire from it, as their work takes them to districts where their services are not readily available at stations to which they are attached. As the applications of members of the corps for service in the Brigade receive preference over those of others, it is necessary that their standard of physique, of attainments, and of character, should be maintained.

Very heavy, but necessary, outlay has been incurred during the year in supplying the Volunteer Fire Companies with hose; and the Superintendent is endeavouring to regulate the branches, nozzles, &c., so that they shall be of uniform pattern. At the close of the year the Standard Brewery Volunteer Fire Brigade retired from service in accordance with the resolution mentioned in last year's Report—to discontinue to maintain Volunteer Fire Brigades within the city. The Company had been in existence some years, and had in its time performed much useful service. The Randwick Volunteer Fire Company having become moribund, the appliances entrusted to its charge have

Explosives.
Inflammable
Liquids.
Building Act.

Stations.

Darlinghurst.

Redfern.

Paddington.
Burwood.

Parramatta.

Manly.

Rockdale, Gran-
ville, &c.

Drummoyne.

Proposal to
borrow £25,000
undesirable.Refusal of
Government to
grant a special
annual allow-
ance to provide
fire stationsTelephone fire
alarms.Metropolitan
Fire Brigade.

Auxiliaries.

Volunteer Fire
Companies.

have been withdrawn. The subsidies, &c., shown on page 10-11, to have been paid to the Volunteer Companies, amounted to £2,567; but that amount does not include the expenditure on their behalf for hose, horses, repairs to stations and plant, and various other items. The renewals of hose, and repair of and additions to other material, have been exceptionally heavy.

In the city the Metropolitan Fire Brigade has superseded the necessity for the Volunteer Fire Brigade stations, to which in past years the city was greatly indebted for the protection afforded, but the suburbs and more distant towns must long look to Volunteer Companies as their first line of defence. The Superintendent of Fire Brigades, in his Report, hereto appended, expresses his gratitude for the services they have rendered, and the Board has pleasure in acknowledging the value of their assistance, which has been the means of saving much valuable property beyond the reach of the permanent force.

The practice of making grants of sums of money from the public revenue to different volunteer fire companies without the cognizance of the Board, and irrespective of whether the companies have been passed by the Superintendent of Fire Brigades as efficient, has been continued, although, as pointed out in the last Report, the system can scarcely tend to the advantage of the Brigades, from a utilitarian point of view.

Correction.

Attention is called to an error which crept into the concluding lines of the last Annual Report,—in the mention of the Mayor of Deniliquin as *ex officio* Chairman of the local Fire Brigade Board. Now, the Mayor of a district, other than the Metropolitan, is *ex officio* a member of the local Fire Brigade Board, but although usually Chairman, is not so by virtue of his office. While making this correction, which in no way affects the conclusion then drawn, it may be added that the Act appears to be as indistinct as to the appointment or election of a Chairman of a country Board, as it most unfortunately is in many other respects, whether with regard to Metropolitan or country districts.

The usual returns, giving details of the departmental work during the twelve months, together with the Report of the Superintendent of Fire Brigades, are added hereto.

CHARLES BOWN,
Chairman.

Adopted at a meeting of the Metropolitan Fire Brigades Board, at Sydney, on the 14th April, 1897.

APPENDIX I.
MUNICIPALITIES.

Municipality.	Area in sq. miles.	Assessment, 1896.	Contribution, 1896.	Municipality.	Area sq. mile	Assessment, 1896.	Contribution, 1896.
		£	£ s. d.			£	£ s. d.
City of Sydney	4.5	2,125,162	2,700 19 8	Marrickville	3.14	136,206	173 2 2
Alexandria	1.6	56,640	71 19 9	Mosman	3.2	34,833	44 5 5
Annandale	0.525	45,738	58 2 7	Newtown	0.69	154,265	196 1 3
Ashfield	3.2	122,795	156 1 4	North Botany	3.4	19,741	25 1 9
Auburn	3.2	23,250	20 11 0	North Sydney	3.23	196,258	249 8 8
Balmain	0.9	176,940	224 17 8	Paddington	0.63	165,120	209 17 2
Botany	3.38	18,667	23 14 6	Parramatta	8.4	65,133	82 15 7
Burwood	1.64	79,407	100 18 5	Penrith	39.6	19,784	25 2 11
Camperdown	0.687	41,328	52 10 6	Petersham	1.19	116,630	148 4 7
Canterbury	11.1	36,080	45 17 1	Randwick	12.5	99,312	126 4 5
Concord	4.0	26,986	34 5 11	Redfern	0.68	157,210	199 16 1
Darlington	0.04	24,680	31 7 4	Richmond	0.62	7,898	10 0 9
Drummoyne	0.8	23,844	30 6 11	Rockdale	6.94	69,771	75 19 4
Enfield	2.65	20,669	26 5 5	Rookwood	8.4	18,497	23 10 2
Erskineville	0.26	30,690	39 0 1	Strathfield	2.73	43,143	54 16 8
Five Dock	2.2	13,800	17 10 9	St. Peters	1.4	30,559	38 16 9
Glebe	0.72	142,809	181 10 1	Waterloo	1.26	62,593	79 11 0
Granville	4.42	40,336	51 5 3	Waverley	3.07	116,275	147 15 7
Hurstville	12.11	45,297	58 16 10	Willoughby	8.26	42,991	54 12 9
Kogarah	5.7	36,290	46 2 5	Woollahra	2.97	183,176	175 12 3
Leichhardt	1.755	92,293	117 6 0				
Manly	3.55	47,809	60 15 3	Totals	£ 176.247	4,956,905	6,300 0 0

APPENDIX II.
INSURANCE COMPANIES.

Contributory Company.	Local or Foreign	Amount at risk, 31 Dec., 1895.	Contribution, 1896.	Contributory Company.	Local or Foreign	Amount at risk, 31 Dec., 1895.	Contribution, 1896.
		£	£ s. d.			£	£ s. d.
The Alliance Assurance Co.	F	1,683,084	177 11 0	The Mercantile Mutual Insurance Co.	L	8,360,090	881 18 5
Atlas Assurance Co.	"	450,087	47 9 7	National Fire and Marine Insurance Co. of New Zealand	F	1,185,612	125 1 5
Australian Alliance Assurance Co.	"	439,590	46 7 6	Netherlands-India Sea and Fire Insurance Co. (Ltd.)	"	120,500	12 14 3
Australian Mutual Fire Insurance Society	L	8,166,680	861 10 4	New Zealand Insurance Co.	"	1,991,107	210 0 11
Batavia Sea and Fire Insurance Co.	F	251,038	26 9 8	North British and Mercantile Insurance Co.	"	1,108,084	116 17 10
Caledonian Insurance Co.	"	408,912	43 2 9	North Queensland Insurance Co. (Ltd.)	L	584,142	61 12 5
City Mutual Fire Insurance Co. (Ltd.)	L	3,219,675	339 13 0	Northern Assurance Co.	F	781,363	82 8 7
Colonial Mutual Fire Insurance Co. (Ltd.)	F	979,200	103 5 11	Notwich Union Fire Insurance Society	"	2,220,479	234 4 10
Commercial Union Assurance Co. (Ltd.)	"	6,059,496	639 4 6	Pacific Insurance Co. (Ltd.)	"	474,434	50 1 0
Cornwall Fire and Marine Insurance Co. (Ltd.)	"	320,142	33 15 5	Phoenix Assurance Co. of London	"	1,069,728	112 16 11
Derwent and Tamar Fire and Marine Assurance Co.	"	258,728	27 5 10	Queensland Mutual Insurance Co. (Ltd.)	"	223,775	23 12 2
Fire Underwriters' Association of N.S.W. — for offices outside N.S.W.	"	334,960	35 6 9	Royal Insurance Co.	"	2,098,935	221 8 5
Guardian Fire and Life Assurance Co. (Ltd.)	"	548,579	57 17 5	Royal Exchange Assurance Corporation	"	407,835	43 0 6
Imperial Insurance Co. (Ltd.) of London	"	1,372,202	144 15 1	Scottish Union and National Insurance Co.	"	416,762	43 19 4
Indemnity Fire and Marine Insurance Co. of Australasia (Ltd.)	"	109,656	11 11 4	South British Fire and Marine Insurance Co. of New Zealand	"	1,489,723	157 3 1
Lancashire Insurance Co.	"	114,558	12 1 8	Standard Fire and Marine Insurance Co. of New Zealand	"	912,113	96 4 5
Lion Fire Insurance Co. (Ltd.)	"	280,574	29 12 0	Sun Insurance Office of London	"	871,442	91 18 7
Liverpool and London and Globe Insurance Co.	"	2,566,454	270 14 10	United Insurance Co. (Ltd.)	L	4,211,845	444 6 4
London and Lancashire Fire Insurance Co.	"	1,198,846	126 9 4	United Australian Mutual Fire Insurance Co. (Ltd.)	F	390,659	41 4 3
London Assurance Corporation	"	78,314	8 5 3	Victoria Insurance Co. (Ltd.)	"	1,643,130	173 6 9
Manchester Fire Assurance Co.	"	317,750	33 10 5	Totals	£	59,720,282	6,300 0 0

APPENDIX III.

SUMMARY of ATTENDANCES at Board Meetings during the year 1896.—(Number of Meetings, exclusive of Committee Meetings, 26.)

Names.	Meetings.	
	Present.	Absent.
Charles Bown, J.P. (Chairman)	26	0
Alderman J. C. Beare, J.P. (Vice-Chairman)	26	0
Alderman Wm. Taylor	26	0
Edward J. Love	26	0
* Frederick J. Jackson, J.P.	19	0
* Thomas Matthew Tunley, J.P.	19	0
† Walter Church, J.P.	7	0
† J. St. Vincent Welch, J.P.	6	1

* Elected in March

† Retired in March.

APPENDIX IV.

FIRE BRIGADES' BOARD, SYDNEY.

ABSTRACT of RECEIPTS and EXPENDITURE for the year ending 31st December, 1896.

RECEIPTS.		EXPENDITURE.	
	£ s. d.		£ s. d.
1 January, 1896.			
To Balance—		By Miscellaneous—	
Commercial Banking Co. of Sydney (Ltd.) ..	155 4 11	Hose	623 7 0
Superintendent's Petty Cash	50 0 0	Plant, stores, &c.	1,725 8 9
To Insurance Companies—	205 4 11	Clothing	653 13 0
Alliance	177 11 0	Printing, postage, stationery, &c.	250 7 8
Atlas	47 9 7	Rates	324 3 4
Australian Alliance	46 7 6	Life premiums	857 9 8
Australian Mutual	591 10 4	Car-hire and cartage	37 10 11
Batavia	26 9 8	Rewards for calls	10 3 0
Caledonian	43 2 9	Rewards to turncocks	5 8 0
City Mutual	339 13 0	Petty expenses	19 18 10
Colonial Mutual	103 5 11	Services rendered	14 8 3
Commercial Union	619 4 6	Law costs	39 16 4
Cornwall	33 15 5	Miscellaneous	123 3 11
Derwent and Tamar	27 5 10	Rent	180 13 0
Fire Underwriters' Association	35 6 9	M.F.B. Benefit Club	8 12 0
Guardian	57 17 5		4,334 0 8
Imperial	144 16 1	By Buildings—	
Indemnity	11 11 4	No. 4, M.F.B. Station, Darlinghurst	153 3 10
Lancashire	12 1 3	Fire Station, Rockdale	468 2 1
Lion	29 12 0	No. 2, M.F.B. Station	388 16 7
Liverpool and London and Globe	270 14 10	Repairs to other stations	157 15 3
London and Lancashire	126 9 4		1,167 17 9
London	8 5 3	By Salaries and Fees—	
Manchester	33 10 5	Salaries	9,729 12 11
Mercantile Mutual	881 19 5	Board fees	300 0 0
National of New Zealand	125 1 5	Auditor's fees	35 0 0
Netherlands-India	12 14 3	Medical fees	24 3 0
New Zealand	210 0 11		10,083 15 11
North British	116 17 10	By Lighting and Fuel—	
North Queensland	61 12 5	Lighting	478 18 8
Northern	82 8 7	Fuel	81 7 4
Norwich Union	234 4 10		560
Palatine	50 1 0	By Horses—	
Phoenix	112 16 11	Purchase	143 18 0
Queensland Mutual	23 12 2	Fodder	497 16 9
Royal	221 8 5	Harness	77 16 3
Royal Exchange	43 0 6		719 11 0
Scottish Union and National	43 19 4	By Electrical Work—	
South British of New Zealand	157 3 1	Postal and Electric Telegraph Depart-	
Standard of New Zealand	96 4 5	ment—For erection of lines, and main-	
Sun	91 18 7	tenance	354 3 8
United	444 6 4	Telephone, fire-alarms, &c.	531 10 7
United Australian Mutual	41 4 3		885 14
Victoria	173 6 9	By Volunteer Fire Companies—Subsidies—	
To Government of New South Wales—	6,300 0 0	Alexandria	120 0 0
Colonial Treasurer	6,300 0 0	Ashfield	120 0 0
To Municipalities—		Balmah	350 0 0
City of Sydney	2,700 10 8	Burwood	120 0 0
Alexandria	71 19 9	Drummoyno	50 0 0
Annandale	53 2 7	Glebe	150 0 0
Ashfield	150 1 4	Granville	69 0 0
Auburn	20 11 0	Kogarah	50 0 0
Balmah	224 17 8	Leichhardt	75 0 0
Botany	23 14 6	Manly	90 0 0
Burwood	99 12 3	North Botany	60 0 0
Camperdown	51 17 6	Paddington	175 0 0
Camberbury .....		.. Brewery	212 10 0
Concord	66 11 4	Parramatta (No. 1)	85 0 0
Darlington	31 7 4	.. (No. 2)	85 0 0
Drummoyno	14 6 7	Rockdale	70 0 0
Enfield	28 5 5	Rockwood	60 0 0
Erskineville	29 5 1	Standard Brewery	175 0 0
Five Dock		Waterloo	120 0 0
Glebe	224 18 2	Waverley	140 0 0
Granville	51 5 3	Woollahra	200 0 0
Hurstville	58 16 10		2,667 10 0
Kogarah	46 2 5	By Volunteers employed on watching duty ..	39 9 6
Leichhardt	117 6 0		
Manly	69 15 3		
Marrickville	173 2 2		
Mosman	44 5 5		
Newtown	196 1 3		
North Botany	25 1 9		
North Sydney	249 8 8		
Paddington	200 17 2		
Parramatta	82 15 7		
Penrith			
Petersham	148 4 7		
Randwick	126 4 5		
Redfern	199 16 1		
Richmond	19 0 9		
Rockdale	75 19 4		
Rockwood	23 10 2		
Strathfield	52 19 1		
St. Peters	38 16 9		
Waterloo	79 11 0		
Waverley	147 15 7		
Willoughby	54 12 9		
Woollahra	175 12 3		
To Miscellaneous—	6,257 10 8		
Rent of quarters	627 3 2		
Watching duties	27 15 0		
Fines	0 19 8		
Sundry services	195 0 0		
Life premiums	214 5 5		
Sundry credits	17 13 10		
Fire protection books	1 5 0		
To Balance—	1,084 2 1		
Commercial Banking Co. of Sydney (Ltd.) ..	206 7 7		
Superintendent's petty cash	50 0 0		
	156 7 7		
Total	£20,303 5 3	Total	£20,303 6

Z. COLLIS BARRY, Secretary.

Having examined the books and vouchers of the Fire Brigades' Board for the year ending 31st December, 1896, I certify the above-written Abstract of Receipts and Expenditure to be correct.

1 February, 1897.

JAMES ROBERTSON, F.S.I.A., Auditor.

APPENDIX V.

APPENDIX V.

Mr. Superintendent Bear's Report to the Fire Brigades Board.

The Fire Brigades Board, Sydney,—

Gentlemen,—

Headquarters Fire-station, Castlereagh-street, Sydney, 13 February, 1897.

I have the honor to submit my Thirteenth Annual Report on the working and general efficiency of your Brigade and of the several Volunteer Fire Companies, together with the details of fires attended in the city and suburbs, for the year ending 31st December, 1896.

The total number of alarms for fires, or supposed fires, was 395. Of these, 91 were false alarms, 13 proved to be only chimney alarms, and 291 were for actual fires.

Of the fires, 230 were slight or trifling, 27 were serious, and 34 resulted in total destruction.

Of the 291 fires, 164 were insured, 114 not insured, and in 13 instances the insurances on the buildings or contents could not be ascertained.

In addition to the ordinary fires, there have been 56 chimney fires requiring the attendance of firemen with hand-pump only, making an aggregate total of 451 calls for fires, false alarms, and chimney-fires.

The fires of 1896, as compared with those of 1895, show a decrease of 76, the chimney-fires reported as houses on fire a decrease of 5, and those attended by firemen with hand-pump only, a decrease of 8.

In the fires which were slight there has been a decrease of 69; in serious, an increase of 7, and in those which resulted in total destruction, a decrease of 14.

Among the buildings totally destroyed are classed sheds, weatherboard cottages, &c.

The most notable fires of the year are as follows :—

Under the heading of serious—

31st January.—Ship "Thistlebank," at Hoffnung's Wharf.

5th April.—"Quatre Bras" Tannery, Alexandria.

3rd May.—Ship "Ellen A. Read," Double Bay.

17th June.—Warehouse, 226 to 228, Clarence-street, City.

15th August.—Roberts' Hotel, George-street, City.

5th November.—"Quatre Bras" Tannery, Alexandria (second fire).

16th November.—Warehouse, 234, Clarence-street, City.

Under the heading of total—

7th April.—Shops, 103 to 107, King-street, Newtown.

19th May.—Shops, 132, Liverpool-road, Ashfield.

11th September.—Private dwelling, Eve-street, Strathfield.

5th November.—Federal Timber Co., Balmain.

29th December.—Shops, High-street, Penrith.

Out of the 34 fires classed under the heading of total, there were only 4 buildings which were not constructed of weatherboard, wool, &c.

Considering the large area covered by your Board, the destruction of property by fire during the year has not been extensive.

Appended are detailed statements of the fires attended by the Brigade and by the Volunteer Companies, as well as those unattended, but which have been reported to the Brigade from various sources, and a member has been sent to obtain the necessary particulars.

The summaries appended show the particular dates, time of call, time of outbreak, trades, localities, insurances, hourly, daily, weekly, and monthly. There is also appended a summary of the supposed origin or cause of fires for the year.

Referring to the summary of localities it will be noticed that in the city of Sydney there were 193 calls, 110 of which were for actual fires, 41 were false alarms, 7 were for chimney-fires reported as houses on fire, and 35 were for chimney-fires attended by firemen with hand-pump only.

In the suburbs there were 258 calls, 181 of which were for actual fires, 50 were false alarms, 6 were chimney-fires reported as houses on fire, and 21 were for chimney-fires attended by firemen with hand-pump only.

For full details of fires, and for the particular wards of the city, and the municipalities in which the same have occurred, see appendices attached. A summary of trades is also appended.

Full particulars of the strength of the Brigade (members and plant), together with that of the Volunteer Companies, are also given.

The total amount paid by your Board in subsidies and bonuses to the several Volunteer Fire Companies for the year was £2,567 10s. In addition to this four Companies received £12 each for attendance on the telephone fire-alarms connected with their stations.

During the year I have supplied the whole of the Volunteer Fire Companies, with the exception of Paddington, with your Board's hose, in accordance with my recommendation of the 19th of January, 1896. I have also endeavoured to make all the branches, nozzles, and hose and nozzle spanners, of a uniform pattern throughout the whole of the Volunteer stations within your Board's area, and before the end of the present year I hope to have this accomplished. It is most essential in dealing with large fires to have every article of a uniform pattern. I may state that several of the Companies willingly assisted me in this work by readily handing over their hose and other appliances.

Independently of the money grants to the Volunteer Companies your Board has expended a large amount in supplying them with new hose and appliances, as well as in effecting the alterations just mentioned.

The approximate value of the whole of your Board's plant, including the land and stations held in trust by your Board, I estimate at £91,951. The value of the Volunteer Companies' plant, outside of the plant they hold from your Board, is not included in this sum.

Twenty-four telephone fire-alarms have been erected during the year, and one has been removed owing to its proximity to the new station which has been opened at Darlinghurst, making the number of alarms at present in existence 162. Orders have already been given for the erection of four in the district of Alexandria, and I shall recommend the erection of others later on.

The telephone fire-alarm wires have been extended from 122 to 135 miles, or an increase of 13 miles.

Experience has shown that the system of connecting telephone fire-alarms with Volunteer Fire-stations has not proved to be very satisfactory. The instruments are not regularly tested by the members of the Companies, and owing to this neglect the permanent staff are being constantly called upon at all hours to travel long distances to place the instruments in order. This, of course, means that our men and horses are taken away from the city stations. Another great objection to the system is that in many instances there is no one present at the Volunteer stations during the daytime to receive a call of fire transmitted through the telephones.

I trust your Board will continue to increase the number of the telephone fire-alarms. With their increase, and the extension of the Telephone Exchanges to the suburbs we shall be able to get very prompt and early calls of fire, and no doubt our success in the saving of life and property is due in a great measure to our excellent system of fire-alarms.

A complete list of the alarms erected to date is appended.

During the year telephone communication was established between the Drummoyne and Balmain stations, also between Marrickville station and the Stanmore police-station.

With the exception of the Granville, Kogarah, and Rockdale Volunteer stations, the whole of our fire-stations are in telephonic communication with headquarters, either by direct lines, or indirectly through the Exchange.

Headquarters is connected to the Exchange by two lines, and most of the Volunteer Fire-stations are connected to the local Exchange and local police-stations in their respective districts.

During the year the whole of the telephone fire-alarms and some of the fire-stations had to be renumbered in consequence of the opening of a city station at Darlinghurst. This station was numbered 4, and was opened on the 1st of May. It has thirteen telephone fire-alarms in connection with it, and two main lines to headquarters. The total cost of the alteration of lines, &c., was very little, as in many cases the wires existed previously in connection with headquarters, and they had to be merely cut and the alarms added. The extra main line to headquarters will be kept for further extension hereafter.

The station at Darlinghurst has proved a great acquisition to the city in that direction. It was obtained on a twenty-one year's lease at the very low rental of £3 per week. It is supplied with a one-horse hose-carriage, and all necessary apparatus in proportion. There are four permanent men and three auxiliaries stationed there.

Darlinghurst being now well protected, I must again direct the attention of your Board to the necessity for a fire-station at Surry Hills. I have no doubt that a station could be obtained on similar terms to that at Darlinghurst to save your Board the expense of purchasing land and erecting a building at present.

At any rate it is surprising that after the Act has been in operation for thirteen years, this district belonging to the city proper, is without any protection for the saving of life and property by fire. At present there is no fire-station and no fire-alarms, and the water pressure in some parts is so defective as to require a steam fire-engine for ordinary fires. While this is so, our attention, and a great part of our revenue, is diverted to outer districts where the risks are only trifling as compared with Surry Hills.

The same remarks apply to Paddington and Reifern. These districts should be supplied with suitable stations, and manned with a permanent staff. As I have repeatedly pointed out in my reports to your Board, Volunteer firemen cannot be expected to afford proper protection to these thickly-populated and rapidly-growing districts. It is absolutely necessary that permanent men, who are well disciplined and thoroughly trained to the use of ladders and all modern appliances, be stationed in each of these very important suburbs.

Our plant at the Headquarters and No. 2 stations is too much cramped up, and we could well supply steam fire-engines and plant to two more permanent stations without any additional cost to your Board except for horses.

At the commencement of the year the Drummoyne Volunteer Company purchased a site from a Government grant, and built a very good station thereon, partly from designs of my own. By your Board's instructions our own engineer and men made and fixed the door-opening apparatus for both engine-room and stable doors. This station, and the orderly and clean manner in which it is kept, reflects much credit on the Company. The land cost £90 and the building about £400. At present it is mortgaged to the extent of about £200, and this the Company are paying off as quickly as possible.

Your Board's station at Rockdale will shortly be completed, and I trust the Volunteer Company will be able to afford ample protection to the district, which is a very large and scattered one. I must, however, say that I cannot be very sanguine on this subject, unless more discipline is introduced into the Company.

The station has been supplied with the door opening apparatus similar to the other stations. The expenditure, however, has been very heavy for this municipality, viz., £210 for the land, and about £760 for the building, but if it saves the engines at this side of Cook's River from attending fires there it will be well spent.

At the end of the year the Standard Brewery Volunteer Company were disbanded in accordance with your Board's resolution that no more Volunteer Fire Companies would be subsidized in the city after the end of 1896.

I trust your Board will see your way clear to erect a small station at Burwood during the present year, something similar in strength to the Darlinghurst station, viz., three permanent men, and seven or eight auxiliaries recruited from the presented volunteers. This station is very much needed, so as to enable a fire-alarm system to be established throughout the surrounding districts, which embrace a very large area, and are at present without any protection whatever.

The next important stations requiring the attention of your Board are—Granville, Manly, Parramatta No. 1, and Rookwood. In three of these districts sites have been purchased with Government money, and now await the building of proper stations by your Board.

The Randwick Company have not been registered during the year, nor have they attended any fires. On the 21st of January of this year your Board's plant was removed from the Town Hall, as it was being very much neglected. Eventually a telephone fire-alarm will be erected at the corner of Avoca and Allison Streets, in accordance with your Board's instructions. Although the late Company received a grant of £50 from the Government, I have not been able to ascertain what they have done with the money.

Nothing has been done in reference to the registration of Volunteer Fire Companies at Liverpool, Penrith, or Richmond although these municipalities have been for some time gazetted under the Act.

Owing to a young woman being burned to death at a fire which occurred on the 25th January of this year at Botany-road, Waterloo, very severe strictures were passed on the Alexandria Volunteer Company. At the inquest which followed, the Coroner's jury passed an open verdict, but the whole of the members of the Company resigned on the 29th of the same month, and handed over the station and your Board's plant. The station is held on a lease by your Board from the local Council, and it is now worked by four permanent men and an auxiliary. I may state that I feel very contented since the change was effected as I can place reliance on my own men, while previously I had to depend on a class who very readily donned a gaudy uniform but took no interest in the profession or work of firemen. On a former occasion I had to place permanent men in charge of this station owing to the volunteers quarrelling between themselves.

As already stated, orders have been given for the erection of four telephone fire-alarms in connection with this station.

The Botany-road fire should prove a lesson to the other Volunteer Fire Companies who never run ladders to a first call although some of them carry ladders on their apparatus. Their excuse is that the ladders make their reels too heavy.

I trust your Board may be yet able to carry out the substance of my reports dated the 2nd of January and the 1st of July, 1896, in reference to the raising of a loan as a capital account for the purpose of building proper stations and manning these contiguous to the city with permanent men similar to what has been done in the leading cities of the other colonies.

As I have previously pointed out, the rents received from the men would more than cover the interest on the loan; and, if my recommendations are adopted, your revenue could then be used for the proper working of the Brigade instead of using it as at present for the purchase of plant, land, &c., and the erection of stations and telephone fire-alarms, and thereby having to raise more and more each year, and allowing posterity to reap the benefit of it.

Your Board's area has been increased this year from 176,247 to 196,447 square miles. This gradual increase from year to year in your area will in time to come prove a very serious matter for your Board, as, owing to the extension, the city and adjoining suburbs will each year have to pay an additional contribution without deriving any corresponding advantage for it, while in reality they are getting less as the expenditure is being spread over a much larger area. This policy leads to dissatisfaction among the municipalities and to their requiring to know what return they are getting for their extra money.

I can only repeat what I said in my last Annual Report that a Country Towns Fire Brigades Act is very much needed to get over this difficulty. Provision should be made for such towns as Liverpool, Penrith, Richmond, and other places having their Brigades under their own representatives instead of under your Board as at present.

Every encouragement should be given to the Volunteer Companies in the outer districts as long as they are amenable to discipline. I find, however, that owing to the little interest taken by many members, and the short time that some of them remain in the Companies, there is very much difficulty in keeping them up to a reasonable standard of efficiency. I am well aware of the itinerant disposition of the population, and this no doubt accounts in a great measure for the lack of interest taken in the Companies; but it is a great draw on our strength to be continually sending men to train the volunteers.

As evidence of this I may state that there are only 21 members left in the whole of the Volunteer Companies who were members when I took charge in 1884. Only 10 remain of those who joined in 1885, 9 of those who joined in 1886, 6 for 1887, 8 for 1888, and 9 of those who joined in 1889.

Several of these men are too old for the work of firemen, and many of them seldom turn out to a fire. Their names are, however, returned on the fire reports as if they had been present.

When the Alexandria station was taken over at the end of January of this year authority was given for the strength of the Brigade to be increased by four men. This, with the previously authorised number (64), will bring the strength up to 68, including myself.

Besides this number there are two men not on the working strength of the Brigade, viz., the engineer, who is paid by the day, and F. Brooks, who had been a member of the Brigade, but whose services were dispensed with by your Board owing to ill-health. He is now employed at headquarters as telephone operator from 8 a.m. to 6 p.m., at £2 per week. When we are called to a large fire outside these hours he immediately attends the station and takes charge of the switch-board, and thereby releases another man for duty at the fire. I have found this plan to work very well up to the present.

During the year two hose-carriages of an extra size for two horses were built. One is stationed at headquarters and the other at Alexandria, and both are capable of carrying a large quantity of hose in the event of a large fire. There was also a one-horse hose-carriage built for Darlington. Tenders are now being called for the building of a hose-carriage for the Marrickville station, to take the place of the manual engine which is stationed there. One will also be required for Ashfield to replace the 5-inch manual there, which I require for another district.

A new 600-gallon steam fire-engine has been ordered to take the place of the old "Fire King," which was purchased by the Insurance Companies about twenty-seven years ago.

We had a 65-foot ladder built during the year by our own men for the Circular Quay Station, but I fear we have not gained much by not importing it. If we could depend on the manufacturers to supply us with the exact article we require, owing to their experience and their acquaintance with modern appliances, I consider it would be more advantageous to us in the end to import our ladders than to build them here in the limited space at our disposal. Ladder work is a special feature in our business, especially so the balancing for dipping under electrical and other wires, as well as having the latest improvements for hoisting under every difficulty. The ladder referred to took us over twelve months to build; but of course other work, such as the repairing of plant and urgent work connected with our stations, claimed the attention of the men during that period.

New ladders will have to be supplied to the No. 2 and the No. 5 Stations. Large buildings are rapidly growing up in these districts, and ladders are required for the saving of life and property. Other stations, both permanent and volunteer, will also require to be supplied with light ladders for the saving of life and property.

The officers in charge of the Newtown and Marrickville stations have applied for an additional permanent man for each of their stations, as they are very short-handed during the daytime while the auxiliaries are away at their ordinary work. I will report to your Board on this subject later on, and give you the figures for their attendance at fires.

I have to regret that nothing has been done by the Government towards providing a floating steam fire-engine for the protection of the shipping in our harbour. Although I have repeatedly referred to the necessity for action being taken, the matter is still in abeyance.

During the year, the Board of Water Supply and Sewerage have greatly improved the water pressure in the North Sydney suburbs of Willoughby, Chatswood, and along the line to Hornsby, thereby saving your Board the cost of having to import a small steam fire-engine for the protection of these districts.

The new reservoir at Penshurst, in the Mlawarra district, will shortly be finished, and will be the means of largely increasing the pressure in the surrounding Municipalities.

I am anxiously looking forward to the completion of the Centennial Park reservoir, so that the water pressure will be increased in the warehouse portions of the city. At present the supply varies a good deal, Paddington water being in one street and Crown-street water in another, and this makes a great difference at the commencement of a fire, especially when a warehouse runs right through from one street to another, as in the case of the Eagle Tobacco Company's Factory, in Clarence and Kent Streets.

The permanent staff attend to the work in the following departments:—Blacksmithing, carpentering, engineering, electrical, painting, plumbing, horse-shoeing, and hose-repairing.

Considerable repairs have been effected during the year to stations, engines, and appliances by our men, and a large amount of work has been done in repairing stations and plant for the Volunteer Fire Companies. This work keeps the men constantly employed, and saves your Board a good deal of money annually.

I have to thank the officers and members of the Volunteer Companies for their assistance during the year, and also the officers and members of the police force for their valuable assistance. I have also to return my thanks to the turncocks and to the public generally for their valuable co-operation.

The discipline and general efficiency of the Brigade are in all respects satisfactory, and although the duties at times have been severe, the work has been performed cheerfully and well.

In conclusion, I desire to return my most sincere thanks to your Board for the cordial support you have accorded me.

I have, &c.,

WILLIAM D. BEAR,
Superintendent of Fire Brigades and Inspector of Kerosene.

STATIONS and Working Plant of the Metropolitan Fire Brigade and of the Volunteer Fire Companies—continued.

	Permanent Men, including Superintendent.	Auxiliaries.	Horses	Large Steam Fire-engines	Small Steam Fire-engines.	Manual Engines	Water Tower	Large Ladders	Small Ladders.	Scaling Ladders.	Hose Carriages.	Hose Reels.	Curtis and Wagons for Visting and for Hose	Buggies.	Hose Tenders	Hand-pumps, all kinds.	Cars for Hand-pump, Hose, and Engine.	Heaters for Steam Fire-engines	Cans as Cisterns.	Hose, ft. of, 3½ in. Lined.	Hose, ft. of, 2½ in. Lined.	Hose, ft. of, 2½ in. Un-lined.	Suction Pipes, all sizes, ft. of.	Branches, metal or otherwise.	Fire-rod Deliveries, all sizes.	Elbow Deliveries.	Goose-necks.	Nozzles, all sizes	Standpipes, for Ball Hydrants.	Jumping Sheets.	Telephone Fire-alarms.	Fire-alarm Boxes.	Telephone Shutter-boards, all Nos.	Telephones, erected and spare.	Telephone and Fire-alarm Wire, miles of.	Bell-boards, in Station, and spare.	Bells, large.	Buckets, Leather and otherwise.	Lamps, various portable	Respirators.	Spanners, Hose and Nozzle.	Subsidies, &c., to Volunteer Fire Companies.	Remarks.	
VOLUNTEER STATIONS—																					continued.																							
Paddington ..	14		1							2	1	1				2	1				1,150		3	1	2					0	6	1	1			1	1	0	7		175 0 0	Station and land are held on lease. The plant belongs to the Company.		
Paddington Brewery ...	17		3			1				3		1				2	1		1	480	300	28	5	1	2	1	8	3					1			1	0	2		3	212 10 0	Station and land are held on lease. Hose belongs to Board; rest of plant to Company.		
Parramatta, No. 1 ..	16					1				4		1				1	1		1		950	24	6	1		1	8	3						1			1	4	4		16	85 0 0	Station is held on sufferance from the Bank. Hose belongs to Board; rest of plant to the Company.	
Parramatta, No. 2 ..	18					1				6		1				1	1		1		915	24	6	1		1	9	2						1			1	2	4		18	85 0 0	Station belongs to Council; hose to the Board; rest of plant to the Company.	
Randwick ..												1									700		2	1			3	1						1			1		3		9		Company not registered during the year. Plant removed 7th January, 1897.	
Rockdale ..	15					1				4		1				2	1		1	140	740	24	6	1		1	9	4								1		6		15	70 0 0	Station is held on a yearly lease. Hose belongs to Board; rest of plant to the Company.		
Rookwood ..	14					1				2		1				1	1		1		870	21	4	1		1	6	2									1	1	4		12	60 0 0	Land was bought by the Government. The shed and most of the plant belongs to the Company.	
Standard Brewery ..																																								175 0 0	Company disbanded, and plant removed 31st December, 1896.			
Waterloo ..	15		1			1				2	1					1	1		1	120	750	20	3	1	2	1	4	2						1			1	2	4		10	120 0 0	Land is leased by the Board from the Council. Hose belongs to the Board, and rest of plant to the Company.	
*Waverley ..	12		2			1				4		1				1	1		1	385	400	24	3	1	2	1	5	3			8	8	1	1			1	1	4	2		3	140 0 0	Land, station, and plant belong to the Board.
*Woollahra ..	16		3			1				4	1					2	1		1	360	600	24	5	2	2	1	5	2			8	8	1	1			1	1	6	6		16	200 0 0	The station is held on lease. Engine, hose, and branches, &c., belong to the Board, and the rest of plant to the Company.
Total ..	348	14	44	2	6	18	1	2	3	117	9	21	4	2	1	46	49	3	35	4001	20,810	15,000	627	167	44	41	32	396	69	7	191	192	15	77	185	14	23	124	180	4	309	2,567 10 0		

* In addition to their subsidies, these Companies received £12 each for telephone attendance.

† Over 7 miles of hose.

APPENDIX VII.

METROPOLITAN Fire Brigade.

Name.	Rank.	Date of Joining.	Salary.	Where stationed.
William Douglas Bear	Superintendent and Inspector of Kerosene.	1 July, 1884	Government Officer.	Head-quarters.
Alfred Webb	Deputy Superintendent	26 June, 1888	£400	do
John J. Ford	Foreman	1 Aug., 1884	£182	No. 2 Station.
Sydney Watson	do	1 Jan., 1885	£182	No. 3 Station.
John McKnight	Engineer	18 July, 1884	£177	Head-quarters.
George Lang	Assistant Officer	7 Jan., 1885	£162	No. 7 Station.
Thomas P. Gordon	do	3 Jan., 1885	£162	No. 5 Station.
Thomas Gorman	do	18 June, 1885	£162	No. 4 Station.
Samuel Holman	do	11 Feb., 1886	£162	No. 6 Station.
Thomas G. Cutts	do	19 Mar., 1888	£162	Head-quarters.
Harris S. Davis	do	18 April, 1888	£162	No. 3 Station.
Stephen H. Eyre	do	6 Aug., 1888	£162	No. 2 Station.
Frank Jackson	do	7 Feb., 1889	£162	Head-quarters.
John Graham	do	15 April, 1889	£162	do
Joseph Slanchell	Farrier	1 July, 1884	£150	do
George C. Gray	1st-class fireman	1 July, 1884	£150	No. 7 Station.
James Hancock	do	1 Aug., 1884	£150	No. 3 Station.
Robert W. Nash	do	1 Jan., 1887	£150	do
Francis Howard	do	19 April, 1888	£150	No. 5 Station.
George J. Parsons	do	6 Sept., 1889	£150	Head-quarters.
George H. Dadd	do	13 Feb., 1890	£150	No. 2 Station.
Albert E. Pickering	do	18 Sept., 1890	£150	No. 6 Station.
Ernest B. Morris	do	19 Sept., 1890	£150	No. 3 Station.
Charles May	do	3 Oct., 1890	£150	No. 5 Station.
Harrie B. Lee	do	19 Feb., 1891	£150	Head-quarters.
Edward Smith	do	7 May, 1891	£150	do
William T. Corkill	do	25 May, 1891	£150	No. 2 Station.
James W. Morris	do	1 Dec., 1891	£150	do
Harry Skelton	do	24 Mar., 1892	£150	Head-quarters.
Robert Hunter	do	16 April, 1892	£150	No. 2 Station.
John A. Nicoll	do	3 Aug., 1892	£150	No. 4 Station.
Augustus J. Gerard	2nd-class fireman "A"	21 Feb., 1890	£140	do
Alexander Jamieson	do do	18 Nov., 1892	£140	No. 2 Station.
Ephraim Stoneham	do do	6 Jan., 1893	£140	Head-quarters.
Edward J. Roberts	do do	9 Jan., 1893	£140	do
George Alchin	do do	28 April, 1890	£140	No. 7 Station.
Joseph Morris	do do	28 July, 1891	£140	No. 5 Station.
James Jones	2nd-class fireman "B"	1 June, 1893	£130	No. 3 Station.
William Whitnall	do do	19 June, 1893	£130	do
George W. Barry	do do	21 Aug., 1893	£130	Head-quarters.
Christopher C. Digby	3rd-class fireman "A"	30 Mar., 1894	£120	No. 2 Station.
Charles L. Birmingham	do do	30 Mar., 1894	£120	No. 6 Station.
George E. J. Wills	do do	21 May, 1894	£120	Head-quarters.
Arthur Houghton	do do	14 Sept., 1894	£120	do
William Best	3rd-class fireman "B"	9 Oct., 1894	£112	No. 4 Station.
Kenneth Arthurson	do do	8 April, 1895	£112	No. 3 Station.
Thomas L. Thomas	do do	9 April, 1895	£112	No. 2 Station.
Francis A. Tuck	do do	4 May, 1895	£112	Head-quarters.
Archibald Murray	do do	5 Sept., 1895	£112	do
James Carson	do do	9 Oct., 1895	£112	do
James E. Pym	On probation	14 Oct., 1895	£106	No. 2 Station.
Thomas P. Nance	do	6 Dec., 1895	£106	No. 7 Station.
Francis E. Pickering	do	1 Feb., 1896	£106	No. 3 Station.
James Eccleston	do	1 April, 1896	£106	Head-quarters.
James Sorlie	do	1 April, 1896	£106	do
William E. Bernie	do	7 April, 1896	£106	do
John Chambers	do	6 May, 1896	£106	do
John Black	do	18 May, 1896	£106	do
Arthur W. Vigay	do	1 July, 1896	£106	do
Sidney H. Lister	do	27 July, 1896	£106	do
Dan Mouton	do	14 Aug., 1896	£106	do
Charles Andrews	do	14 Sept., 1896	£106	do

NOTE.—Two below the authorised strength of the Brigade.

AUXILIARY CORPS.

Thomas Henry Cook	Auxiliary Fireman	4 Oct., 1893	.....	No. 5 Station.
David Anderson	do	23 Oct., 1893	.....	do
David Vandine	do	17 June, 1895	.....	No. 6 Station.
Ernest Clarke Evans	do	8 July, 1895	.....	do
John Jones	do	23 Sept., 1895	.....	do
George Francis	do	20 Jan., 1896	.....	No. 5 Station
William Francis	do	20 Jan., 1896	.....	do
Arthur G. Reeves	do	1 May, 1896	.....	No. 4 Station.
William B. Thorpe	do	6 Aug., 1896	.....	do
William R. Elders	do	10 Aug., 1896	.....	No. 6 Station.
James D. Moyle	do	3 Sept., 1896	.....	No. 4 Station.
William Matheson	do	28 Sept., 1896	.....	No. 5 Station.
William Vine	do	15 Oct., 1896	.....	No. 6 Station.
Mark Saunders	do	7 Dec., 1896	.....	No. 7 Station.

METROPOLITAN Fire Brigade—continued.

The following have left the Brigade during the year :—

Name.	Rank.	Date of Leaving.
John Snelson	Foreman	4 March.
Edward Pember	1st-class	5 August.
John T. Arnold	2nd-class "B"	15 January.
Francis W. Brooks	do	30 June.
Herbert J. Houghton	do	30 April.
David Killa	3rd-class "A"	26 July.
Joseph E. Chase	3rd-class "B"	30 December.
Walter Haywood	Probationer	16 May.
John Empson	do	8 August.
Sidney J. Digby	do	29 December.

APPENDIX VIII.

TELEPHONE Fire-alarms.

No. of Box.	Fire-station to which the Alarm is connected.	Locality of Alarm.	Approximate Distance from Station; in yards.
1	No. 1 Station, Head-quarters	Corner George and Park Streets	440
2	" " " "	" King and York Streets	1,010
3	" " " "	" King and Pitt Streets	845
4	" " " "	" King and Elizabeth Streets	810
5	" " " "	" Liverpool and College Streets	650
6	" " " "	" Oxford and Riley Streets	845
7	" " " "	" William-street and Boomerang Road	815
8	" " " "	" Crown and Stanley Streets	1,090
9	" " " "	" Park and Elizabeth Streets	320
10	" " " "	In Macquarie-street, opposite Parliament House	1,120
11	" " " " (G.P.O.)	Corner George and Barrack Streets	1,095
12	" " " "	" Pitt and Market Streets	670
13	" " " "	" Sussex and King Streets	1,210
14	" " " "	" Sussex and Erskine Streets	1,445
15	" " " "	" Bathurst and Barker Streets	770
16	" " " "	" Elizabeth and Hay Streets	640
17	" " " "	A. Hordern & Sons, George-street, Haymarket	945
18	" " " "	Corner Sussex and Liverpool Streets	595
19	" " " "	" Kent and Bathurst Streets	460
20	" " " "	" Market and Kent Streets	835
21	" " " "	" Market and York Streets	725
22	" " " "	" Market-street, opposite Wharf Street	975
23	" " " "	" George and Goulburn Streets	605
24	" " " "	" George-street and Union-lane	430
25	" " " "	" Factory and Harbour Streets (J. Bridge & Sons)	900
26	" " " "	" Erskine-street and York-lane	1,275
27	" " " "	" Druitt-street, opposite Weighbridge	800
28	" " " "	" Bourke and Liverpool Streets	1,100
29	" " " "	" Goulburn-street and Macquarie-street South	585
30	" " " "	" Riley and Reservoir Streets	1,190
31	" " " "	" Phillip-street, near St. Stephen's Church	1,030
32	" " " "	" Pitt and Hay Streets	760
33	" " " "	Carlton-street, Kensington Estate	4,400
34	No. 2 Station, George-street West	Opposite the "Tower Inn," George-street	400
35	" " " "	Corner Elizabeth and Devonshire Streets	710
36	" " " "	Elizabeth-street, opposite Hordern's stables, Redfern	1,430
37	" " " "	Corner Regent and Cleveland Streets	550
38	" " " "	" Redfern and Botany Streets	980
39	" " " "	" Abercrombie-place and Cleveland-street	760
40	" " " "	" Abercrombie and Shepherd Streets	1,100
41	" " " "	" Cleveland-street, Darlington Road	1,100
42	" " " "	Opposite Council Chambers, Darlington Road	1,310
43	" " " "	Corner George-street West and Newtown Road	620
44	" " " "	" Old Parramatta Road and Forest-street	1,550
45	" " " "	" Wattle and Mary Ann Streets	550
46	" " " "	" Wattle and Figg Streets	1,320
47	" " " "	" Miller-street and Abattons Road	2,080
48	" " " "	" Harris and M'Arthur Streets	660
49	" " " "	" Harris and Figg Streets	1,210
50	" " " "	" Harris-street and Pyrmont Bridge Road	1,660
51	" " " "	" Harris and Bowman Streets	2,210
52	" " " "	" Mathew and Engine Streets	720
53	No. 3 Station, George-street North	" Hunter and George Streets	505
54	" " " "	" Hunter and Bligh Streets	735

TELEPHONE Fire-alarms—continued.

No. of Box.	Fire-station to which the Alarm is connected.	Locality of Alarm.	Approximate Distance from Station ; in yards.
55	No. 3 Station, George-street North	Corner Kent and Margaret Streets	1,540
56	"	Sussex-street North, near Grafton Wharf	1,305
57	"	Corner Lang-street and Charlotte-place	385
58	"	Kent-street, near Gas-lane	1,275
59	"	Essex-street, near Harrington Street	220
60	"	Corner Watson's Road and Upper Fort-street	840
61	"	" Argyle and Playfair Streets	320
62	"	Foot Bottington-street, near China S. N. Co.'s Wharf	1,010
63	"	Corner Argyle and Kent Streets	770
64	"	Victoria Terrace, opposite Eye Hospital	1,025
65	"	George-street North, opposite Mariners' Church	330
66	"	Corner George-street North and Lower Fort-street	660
67	"	" Lower Fort and Windmill Streets	905
68	"	" Young-street and Circular Quay	330
69	"	" Macquarie-street North and Circular Quay	795
70	"	Bridge and Macquarie Streets	660
71	"	Bent and O'Connell Streets	560
72	"	Bridge and Pitt Streets	350
73	"	Pitt-street, opposite Terry's lane	770
74	"		
75	"		
76	No. 4 Station, Darlinghurst	Left open for proposed additions.	
77	"	Corner Bourke and William Streets	420
78	"	" Bourke and Junction Streets	725
79	"	" Forbes and Bland Streets	925
80	"	" Macleay-street and Elizabeth Bay Road	440
81	"	" Macleay and Wilde Streets, opposite clock	990
82	"	" Victoria and Orwell Streets	395
83	"	" Victoria-street and Challis Avenue	725
84	"	" Victoria and Burton Streets	470
85	"	Intersection Bayswater Road, Barcom and Wonerah Avenues	660
86	"	Corner Elizabeth Bay Road and Onslow Avenue	705
87	"	" Darling Point Road and New South Head Road	1,475
88	"	" Darling Point Road and Yarrabee Road	2,135
89	"	" Darling Point Road and Goomera Crescent	2,885
90	No. 5 Station, Australia-street, Newtown	" King and Hordern Streets, Newtown	505
91	"	" Camden-street and Cook's River Road, Newtown	650
92	"	Intersection of Wells-street, Cook's River Road, and Rochford-street, Newtown	1,090
93	"	Corner Enmore Road and Wilford-street, Newtown	560
94	"	" Enmore and Stanmore Roads, Newtown	980
95	"	" Bishopsgate and Wellington Streets	685
96	"	" Wilson and Burren Streets	800
97	"	Opposite Council Chambers, Erskineville Road, Macdonaldtown	845
98	"	" Margaret and Berndale Streets, Newtown	740
99	"	Intersection Newtown and Darlington Roads and Forbes-street, Newtown	1,235
100	"	Corner Toogood and Munn Streets, Erskineville	1,000
101	"	" Parramatta Road and Park-street, Camperdown	1,510
102	No. 6 Station, Walker-street, North Sydney	" University-street and Missenden Road, Camperdown	1,435
103	"	Intersection Alfred, Junction, and M'Dougal Streets	550
104	"	Corner Alfred and Fitzroy Streets	1,210
105	"	" Blue's Point Road and Blue-street	575
106	"	" Blue's Point Road and Crescent-street North	1,150
107	"	Left open for proposed additions.	
108	"	" Miller and Ridge Streets	790
109	"	" Miller and Falcon Streets	1,275
110	"	" Miller and Anhurst Streets	1,960
111	"	" West-street and Lane Cove Road	880
112	"	Intersection Lane Cove Road, Willoughby Road, and Falcon-street	1,750
113	"	Corner Military and Ben Boyd Roads	1,900
114	"	Intersection Military Road, Glover, Spofforth, and M'Pherson Streets, Mosman	3,100
115	"	Corner Military and Avenue Roads, Mosman	5,050
116	"		
117	"		
118	"	Left open for proposed additions.	
119	"		
120	No. 7 Station, Stanmore Road, Marrickville	Corner Stanmore Road and Holt-street, Petersham	570
121	"	" Cambridge and Merchant Streets	1,100
122	"	" New Canterbury Road and Fraser's Road	970
123	"	" New Canterbury Road and Eltham-street	1,585
124	"	" New Canterbury Road and Marrickville Road, Marrickville	2,200
125	"	" Palace and Norwood Streets, Petersham	1,200
126	"	" Norton-street and Parramatta Road, Leichhardt	1,345
127	"	Council Chambers, Marrickville	1,760
128	"	Corner Marrickville and Illawarra Roads, Marrickville	2,375
129	"	" Illawarra and Warren Roads, Marrickville	3,300
130	"	" Johnston-street and Parramatta Road, Annandale	2,055
131	"	" Johnston and Booth Streets, Annandale	2,870
132	"	" Railway premises and Lackey-street, Summer Hill	2,200
133	"	Council Chambers, St. Peters	3,490
134	"	Cook's River Road and Railway Road, St. Peters	4,050

TELEPHONE Fire-alarms—continued.

No. of Box.	Fire-station to which the Alarm is connected.	Locality of Alarm.	Approximate Distance from Station; in yards.
135	No. 7 Station, Stanmore Road, Marrickville		
136	" " "		
137	" " "		
138	" " "		
139	" " "		
140	" " "		
141	Paddington	Corner Park Road and Regent-street	400
142	"	" Elizabeth and Underwood Streets	500
143	"	" Elizabeth and Hargrave Streets	880
144	"	" Glenmore Road and Gurner-street	700
145	"	" Glenmore Road and Liverpool-street	900
146	"	" Glenmore Road and Oxford-street	630
147	Woollahra	" Old South Head Road and Queen-street	550
148	"	" Old South Head Road and Nelson-street	825
149	"	" Cowper and Oxford Streets, Waverley	1,540
150	"	" Ocean-street and Point Piper Road	770
151	"	" South and Bay Streets	1,790
152	"	" Forth-street and Edgecliff Road	470
153	"	" New South Head Road and Victoria Road	2,780
154	"	Intersection Wolseley Road and Hill-street, Point Piper	3,400
155	Waverley	Corner Birrell and Cowper Streets, Waverley	620
156	"	Intersection Birrell and Watson Streets, Waverley	1,250
157	"	" Penkiville-street, Bennett-street, and Bondi Road, Waverley	1,430
158	"	Corner Bondi Road and Denham Street, Waverley	2,230
159	"	Opposite Council Chambers, Bondi Road, Waverley	1,030
160	"	Intersection Flood and Anglesea Streets and Old South Head Road	1,870
161	"	Corner M'Pherson and Albion Streets, Waverley	660
162	"	Intersection M'Pherson, Carlton, and Arden Streets, Waverley	1,190
163	Balmain	Corner Darling and McDonald Streets, Balmain	660
164	"	" Darling and Johnston Streets, Balmain	1,330
165	"	" Darling and Wise Streets, Balmain	1,170
166	"	" Darling and Cambridge Streets, Balmain	1,610
167	"	" Mullens and Reynolds Streets, Balmain	640
168	"	" Western Road and Hartley-street, Balmain	1,160
169	"	" Rowntree and Bay Streets, Balmain	900
170	Glebe	" Glebe and Cowper Streets, Glebe	340
171	"	" Brougham and Lyndhurst Streets, Glebe	550
172	"	" Glebe and Wigram Roads, Glebe	870
173	"	" Glebe Road and Leichhardt-street, Glebe	1,300
174	"	" Ross-street and Bridge Road, Glebe	880
175	North Botany	" Botany Road and Bay-street, Botany	2,245
176	"	" Botany Road and Stephen Road, Botany	4,550

APPENDIX IX.

DETAILS of Fires which have occurred within the Metropolitan District during the Year ending December, 1896.

Date	When discovered.	Time of enfl.	Locality.	Name of tenant.	How premises occupied.	Construction of premises.	Origin or supposed cause of fire.	Insurances.		Extent of damage, &c.	Extinguished by
								Contents.	Building.		
1896. * Tuesday, 31 December, 1896.	10-20 p.m.	None rec'd.	Kogarah Road, Kogarah	C. Bryant	Sawmiller	Weatherboard, with iron roof.	Light thrown down.	Building and contents, Alliance Insurance Company, £70.		A weatherboard building slightly damaged by fire	Police and inmates, with buckets of water.
Wednesday, 1 January.	12-0 a.m.	12-7 a.m.	120, King-street, City.	W. H. Keen	Confectioner	Brick, with iron roof.	Candle	None	None	Small fire in shop on ground floor	Inmates, with buckets of water.
"	12-0 noon.	12-2 p.m.	Cambridge-street, Petersham.	Maurice Neustadt	Private dwelling	Brick, with slate roof.	Boiling over, fat.	Northern Insurance Co., £700.	Unknown	Skating-board in kitchen on ground slightly damaged by fire.	Inmates and M.F.B., with buckets of water.
Friday, 3 January.	4-33 a.m.	4-40 a.m.	37, Regent-street, City.	L. Thurgood	Carpenter	Wood, with iron roof	Smoking tobacco	Imperial, £300	"	A building in rear of premises, 44 ft. x 24 ft., severely damaged by fire.	M.F.B., assisted by several V. F. Cos., with one hydrant.
Saturday, 4 January.	10-50 a.m.	10-55 a.m.	High-st., North Sydney	J. D. Miller	Private dwelling.	Brick, with slate roof.	Burning rubbish.	None	"	Bush-fire	M.F.B., with one hydrant.
Sunday, 5 January.	4-25 p.m.	4-29 p.m.	Harris-street, City	Thos Elliott	Butcher	Wood, with iron roof.	Light thrown down.	"	Liverpool and London and Globe, £20.	A weatherboard building, 30 ft. x 18 ft., burned out and fallen down.	"
Monday, 6 January.	8-2 p.m.	8-6 p.m.	Waterloo-street, City	James Hanney	Private dwelling.	Brick, with iron and shingle roof.	Candle	"	Unknown	Bedroom fire	Inmates, with buckets of water.
Monday, 6 January.	8-15 p.m.	8-19 p.m.	2, Castlereagh-street, City.	W. S. Lovell	Boarding-house.	Brick, with iron roof.	Gas bracket	Com. Union, £300	Unknown	Window-blind fire	Inmates, with buckets of water.
"	11-8 p.m.	11-10 p.m.	3, King-street, Balmain	Alex. Boyd	Private dwelling.	Weatherboard, with iron roof	Candle	None	None	Bed-curtain fire	"
Tuesday, 7 January.	12-16 a.m.	12-21 a.m.	45, Garden-street, Alexandria.	E. E. Megridge	Boot-maker	Brick, with iron roof.	"	"	Mer. Mutual, £150	A five-roomed cottage damaged by fire and water	Alexandria V. F. Co., assisted by M.F.B., with one hydrant.
Thursday, 9 January.	12-12 a.m.	12-14 a.m.	495, Elizabeth st., City	L. Elvy	Produce merchant	Weatherboard, with iron roof.	Smoking tobacco.	Imperial Ins. Co., £40.	Unknown	A fodder shed damaged by fire	M.F.B., with one hydrant.
Friday, 10 January.	8-20 p.m.	8-25 p.m.	Young-street, Concord.	John Taylor	Private dwelling..	"	Candle	Building and contents, Mercantile Mutual, £100		Bedroom fire	Inmates, with buckets of water.
Saturday, 11 January.	5-36 a.m.	5-40 a.m.	Rear of 64, Fitzroy-st., City.	J. Clancy	Stables	Brick, with slate roof.	Light thrown down	None	None	A quantity of old bedding in stable burned	M.F.B., with one hydrant.
Sunday, 12 January.	12-0 a.m.	12-8 a.m.	121, Campbell-st., City	Jacob Levy	Private dwelling..	Weatherboard, with iron roof	Unknown	Aus. Mutual, £200	Unknown	A six-roomed cottage nearly burned out	M.F.B., with two hydrants.
"	12-50 a.m.	12-51 a.m.	South-street, City	Fred. Marden	"	Brick, with shingle roof.	Candle	None	"	A bedroom fire	Inmates, with buckets of water.
"	4-0 a.m.	None rec'd.	Forest Road, Hurstville	R. Hambrough	"	Weatherboard, with iron roof.	Spark from fire-place.	Building and contents, Mercantile Mutual, £50.		A cottage of two rooms, with contents, burned out	Burned itself out.
Monday, 13 January.	9-30 p.m.	9-31 p.m.	Corner Albert-street and Addison Road, Marriekville.	"	Paddock	"	Light thrown down.	None	None	Rubbish fire	M.F.B., with buckets of water.
Tuesday, 14 January	6-30 a.m.	6-35 a.m.	Botany Road, North Botany.	J. Morrison & Co.	Oil and Grease Works.	Brick, with iron roof.	Tar boiling over..	Alliance Insurance Co., £300.	Unknown	A shed, 90 ft. x 50 ft., with contents, nearly burned out	M.F.B., with two steam fire engines.
"	4-10 p.m.	None rec'd	Corner Church-street and Western Road, Parramatta.	Unoccupied	Shop and dwelling.	Brick, with shingle roof.	Incendiarism	None	Mercantile Mutual, £500.	A portion of shingle roof damaged by fire	Parramatta V. F. Co., with one hydrant.
"	8-25 p.m.	8-30 p.m.	32, Short-street, Balmain	Peter McNaulty	Private dwelling..	Brick, with iron roof.	Candle	"	Unknown	A small fire in bedroom	Inmates, with buckets of water.
Saturday, 18 January	3-58 p.m.	3-59 p.m.	41, Sussex-street, City	Gray and Cray	Ship chandlers	Brick, with iron roof.	Light thrown down.	"	"	A quantity of rubbish burned in area	Police, with buckets of water.
Tuesday, 21 January.	10-53 p.m.	10-56 p.m.	82, Rowntree-street, Balmain.	J. T. Wilstran	Private dwelling..	"	Candle	"	"	A small fire in bedroom	Inmates, with buckets of water.
Wednesday, 22 January.	9-20 p.m.	9-24 p.m.	215, Victoria-street, City	W. E. Ward	Butcher	"	"	City Mutual, £600	City Mutual, £1,800.	Window-curtain fire	"
Thursday, 23 January.	10-20 a.m.	10-24 a.m.	373, Pitt-street, City	E. E. Turner	Boot machinery importer.	"	Vapour of spirit coming in contact with flame	Imperial Insurance Co., £3,100.	Unknown	A quantity of rubber solution damaged by fire	M.F.B., with buckets of water.
Sunday, 26 January.	10-0 p.m.	None rec'd.	Mount street, Redfern.	James Mullen	Private dwelling.	"	Spark from fire-place.	None	"	Flooting in back kitchen slightly damaged by fire	Inmates, with buckets of water.
Monday, 27 January.	8-35 a.m.	8-36 a.m.	Little Belmore st., City.	F. Weaver	"	"	Matches, children playing with.	"	Imperial Insurance Co.	A small fire in bedroom	Standard Brewery V. F. Co., with buckets of water.
"	8-15 a.m.	8-17 a.m.	50ft Dalgety's Wharf, the Harbour	Ship "Ganges," Captain Charles Clough.	Ship	Iron	Unknown	Insured; offices unknown.	Insured; offices unknown	Saloon and store room severely damaged by fire and water	M.F.B., with one steam fire-engine

* This report came in too late for last year's returns.

† Previous fire, 20th January, 1894.

‡ An inquest was held on Thursday, 16th inst., at which the following verdict was returned: "That the premises were wilfully set on fire by some person or persons unknown."

§ Outside M.F.B. area.

DETAILS of Fires which have occurred within the Metropolitan District—continued.

Date.	When discovered.	Time of call	Locality.	Name of tenant.	How premises occupied.	Construction of premises.	Origin or supposed cause of fire.	Insurances.		Extent of damage, &c.	Extinguished by
								Contents.	Building.		
Tuesday, 23 January.	4.0 a.m.	None rec'd.	79, George-street West, City.	A. Roberts	Grocer	Brick, with iron roof.	Matches, rats at.	Unknown	Unknown	A quantity of matches damaged by fire and water	Inmates, with buckets of water.
"	12.15 p.m.	None rec'd.	300, King-street, New-town.	Abel & Co.	Confectioners	"	Overheating of furnace	"	"	Flooring in back room damaged by fire	Employees, with buckets of water.
"	9.34 p.m.	9.40 p.m.	53, King-street, New-town.	R. Doze	Furniture dealer	"	Gas bracket	None	"	Window-curtain burned	Inmates, with buckets of water
Thursday, 30 January.	5.00 p.m.	5.55 p.m.	*Off Hoffnung's Wharf, the Harbour.	Ship "Thistlebank," Captain David Baird.		Iron	Smoking tobacco	Insured; offices unknown.	Insured; offices unknown.	Contents of main hold slightly damaged by fire and water	M.F.B., with one steam fire engine and one hydrant.
Friday, 31 January.	11.55 a.m.	12.2 p.m.	Long Bay Road, Randwick.	Paddock.			Light thrown down.	None	None	A quantity of grass damaged by fire	Randwick and Waverley V. F. Cos., with buckets of water.
"	6.3 p.m.	6.6 p.m.	†Off Hoffnung's Wharf, the Harbour.	†Ship "Thistlebank," Captain David Baird.		Iron	Unknown	Insured; offices unknown.	Insured; offices unknown.	Contents of main hold severely damaged by fire and water; sides and deck damaged by buckling and cutting away.	M.F.B., with four steam fire engines.
"	11.50 p.m.	11.55 p.m.	Wellington-street, Bondi	M. A. Neilson	Private dwelling	Weatherboard, with iron roof	"	Mercantile Mutual, £50.	Mercantile Mutual, £325.	A cottage of five rooms, with contents, damaged by fire and water.	Waverley V. F. Co., with two hydrants.
Sunday, 2 February.	3.50 p.m.	None rec'd.	‡Crown-street, Sherwood	Wm. Burton	"	"	Matches, children playing with.	Manchester Ins. Co., £50.	Manchester Ins. Co., £150.	A cottage of five rooms damaged by fire and water	Inmates and neighbours, with buckets of water.
"	7.35 p.m.	7.40 p.m.	Norton-street, Ashfield	W. W. Routledge	"	Brick, with slate roof.	Gas bracket	None	Unknown	A small fire in bedroom	Inmates, with buckets of water.
"	8.20 p.m.	8.25 p.m.	210, King-street, New-town.	F. S. Jolly	Draper	Brick, with iron roof.	"	City Mutual, £500	"	"	"
Thursday, 6 February.	8.45 p.m.	8.51 p.m.	Evans Road, Woollahra	Paddock.			Light thrown down.	None	None	Bush fire	Paddington V. F. Co., with one hydrant.
Friday, 7 February.	8.53 a.m.	3.55 a.m.	305, Pitt-street, City	Temperance Hall.		Brick, with iron roof.	Matches, careless use of.	"	Unknown	Dressing-room off stage slightly damaged by fire	Employees, with buckets of water.
Sunday, 9 February.	4.25 a.m.	4.28 a.m.	207, Botany Road, Redfern.	Chas. Cloves	Furniture dealer.	Weatherboard, with iron roof	Unknown	Liverpool and London and Globe, £100.	"	A building of one floor, with contents, burned out and fallen down.	M.F.B., with one hydrant.
Wednesday, 12 February.	2.23 a.m.	2.34 a.m.	Spring-street, Burwood	Unoccupied	Private dwelling.	"	Light thrown down.	None	Australian Mutual, £150.	Flooring of middle room damaged by fire	Burwood V. F. Co., with buckets of water.
Thursday, 13 February.	5.30 a.m.	None rec'd.	Auburn	City Bank—M. M. Colly, Manager.		Brick, with iron roof.	Incendiarism	Royal Insurance Co., £100.	Unknown	Flooring in front office damaged by fire	Neighbours, with buckets of water.
Friday, 14 February.	12.55 a.m.	None rec'd.	Corner Ashburna-street and East Steyne, Manly.	Sarah Crosland	Confectioner	Weatherboard, with iron roof.	Fireplace, spark from.	Liverpool and London and Globe, £25 10s.	Liverpool and London and Globe, £75 10s.	A cottage of four rooms, with contents, burnt out and fallen down.	Mainly V. F. Co., with one hydrant.
Monday, 17 February.	6.43 p.m.	6.45 p.m.	407 and 409, Kent-street, City	A. J. Selig & Co.	Boot Manufacturers.	Brick, with iron roof.	Matches, careless use of	Imperial Insurance Co., £4,850	Imperial Insurance Co., £3,000	Stock on shelf under staircase, and staircase from ground-floor to first floor, damaged by fire.	M.F.B., with one hydrant.
"	7.26 p.m.	7.30 p.m.	*McKenzie-street, Leichhardt.	W. Sampson	Private dwelling.	"	Candle	None	None	Rubbish fire	Inmates, with buckets of water.
"	9.45 p.m.	None rec'd.	§Cook's River Road, St. Peters.	F. Waites	Butcher	"	Gas, explosion of	Building and contents, Commercial Union Insurance Co., £500.	Commercial Union, £700.	Bath-room on first floor slightly damaged by heat and smoke.	Inmates.
Wednesday, 19 February.	11.28 a.m.	11.30 a.m.	†Bennett-street, Bondi.	Holdsworth, McPherson & Co.	Soap Works	Wood, with iron roof.	Resin, boiling over.	None	None	A shed, 4 ft. by 6 ft., damaged by fire	Employees, with sand.
Friday, 21 February.	2.40 a.m.	2.44 a.m.	165, King-st., Newtown	E. L. Lee	Furniture dealer.	Brick, with iron roof.	Unknown	City Mutual, £100	Commercial Union, £700.	Shop and dwelling severely damaged by fire and water	M.F.B., with one hydrant.
"	"	"	157, King-st., Newtown	R. Elliott	Licensed victualler	"	"	Col. Mutual, £200; Aust. Mutual, £200—£400.	None	Front wall of building damaged by heat and smoke	"
"	4.40 p.m.	4.44 p.m.	Hercules-lane, Ashfield	J. N. Ferguson	Asphalt yard	Yard	Tar boiling over.	None	"	A quantity of tar burned	Employees, with sand.
"	7.35 p.m.	7.37 p.m.	Oxford-street, Waverley	R. Bratton	Jeweller	Brick, with slate roof.	Gas bracket	Imperial Insurance Co., £350.	Caledonian Insurance Co., £400.	A small fire in bedroom	Inmates, with buckets of water.
Wednesday, 26 February.	10.13 p.m.	10.16 p.m.	161, Palmer-street, City	A. Steenbohm	Coach-builder	Wood, with iron roof.	Unknown	Mercantile Mutual, £200.	Unknown	Building and contents severely damaged by fire	M.F.B., with one hydrant.
Thursday, 27 February.	12.30 a.m.	None rec'd.	Oatley Parade, Oatley	J. Pearsall	Private dwelling.	Brick, with iron roof.	Kerosene lamp, explosion of.	Building and contents, Royal Insurance Co., £200.	Phoenix Insurance Co., £3,000.	A small fire in bedroom	Inmates, with buckets of water.
"	12.35 p.m.	12.40 p.m.	¶Hamilton-street, City	J. Scott & Co.	Stationers	"	Varnish boiling over.	Colonial Mutual, £50.	Unknown	Printers' materials in basement slightly damaged by fire	Employees, with buckets of water.
Friday, 28 February.	3.15 p.m.	None rec'd.	Harrow Road, Kogarah	J. Cook	Private dwelling	"	Kerosene lamp, upsetting of.	Colonial Mutual, £100.	Colonial Mutual, £100.	A small fire in bedroom	Rockdale V. F. Co., with one hydrant.
Saturday, 29 February.	8.40 p.m.	8.44 p.m.	Fletcher-street, Marrickville.	W. Bell	"	Weatherboard, with iron roof.	Candle	None	Aust. Mutual, £75.	"	Inmates and M.F.B., with buckets of water.
Tuesday, 3 March.	1.30 a.m.	None rec'd.	98, King-street, Newtown	M. Earls	Bootmaker	"	Matches, careless use of.	"	Unknown	Shop window, with contents, slightly damaged by fire	Inmates, with buckets of water.
Thursday, 5 March.	6.3 p.m.	6.6 p.m.	*56, York-street, City	Briscoe, Drysdale, & Co.	Ironmongers	Brick, with iron roof.	Smoking tobacco	Several offices, £45,000	Several offices, £10,000.	Empty cases in basement damaged by fire	Employees, with buckets of water.

* Subsequent fire, 31st inst. Outside M.F.B. area. † Outside M.F.B. area. Previous fire 30th January, 1896. An inquest was held on the 3rd and 4th inst., and an open verdict was returned. ‡ Outside M.F.B. area. § Elizabeth Waites, aged 51 years, and Catherine Lane, aged 21 years, burned about the hands and face, sent to Prince Alfred Hospital for treatment. ¶ Previous fire, 21st August, 1895. ¶ Previous fire, 22nd December, 1888. ** Previous fire, 28th January, 1890

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DETAILS of Fires which have occurred within the Metropolitan District—continued.

Date.	When discovered.	Time of call.	Locality.	Name of tenant.	How premises occupied.	Construction of premises.	Origin or supposed cause of fire.	Insurances.		Extent of damage, &c.	Extinguished by
								Contents.	Building.		
Friday, 6 March.	6:35 a.m.	6:40 a.m.	Darlinghurst Road, City	E. Cook, "Royal Sovereign Hotel."	Licensed victualler.	Brick, with iron roof.	Matches, children playing with.	None	None	A small fire in bedroom	Inmates, with buckets of water.
"	3:48 p.m.	3:50 p.m.	Darling Point Road, Woollahra.	A. Dight	Private dwelling.	Brick, with slate roof.	Rubbish burning	"	"	A quantity of rubbish burned	Inmates and neighbours, with buckets of water.
Saturday, 7 March.	4:50 a.m.	None rec'd.	Auburn-street, Auburn.	J. F. Christmas.	Grocer	Brick, with iron roof.	Unknown	"	"	Empty cases in yard burned	S.M.P. Co.'s V.F. Company, with one hydrant.
Sunday, 8 March.	10:32 p.m.	10:35 p.m.	14, Oxford-square, City.	Roberts Bros	Grocers	"	"	Aust. Mut'l., £500; United, £1,000; —£1,500.	Manchester, £150.	A small quantity of stock in basement damaged by fire and water.	M.F.B., with buckets of water.
"	11:10 p.m.	None rec'd.	Rocky Point Rd., Rockdale.	Oliver Heydon	Grocer	Weatherboard, with iron roof	"	"	Mer. Mut'l., £100	Shop and contents slightly damaged by fire and water	Kogarah V. F. Company, with one hydrant.
Tuesday, 10 March.	1:30 a.m.	"	Booth and Nelson Streets, Annanvale	R. Long	Blacksmith	"	Lime slaking	None	None	A shed, with contents, damaged by fire	Inmates and neighbours, with buckets of water.
Thursday, 12 March.	4:45 p.m.	4:47 p.m.	346, Upper Brougham-street, City.	A. Giles	Carpenter	Wood, with iron roof.	Light thrown down.	"	"	A shed nearly burned out.	Paddington Brewery V.F. Company, assisted by M.F.B., with one hydrant.
Tuesday, 17 March	3:7 p.m.	3:8 p.m.	Railway Gas Works, Redfern.	Railway Commissioners	Shed	"	Gas pipe, defect in.	"	"	A shed slightly damaged by fire.	Redfern R.V.F. Company, with one hydrant.
"	10:12 p.m.	10:16 p.m.	Rear of 540, George street, City.	Curton & Co.	Importers and manufacturers.	Stone, with iron roof.	Unknown	United Insurance Co., £225.	Unknown	First floor and contents nearly burned out; rest of building damaged by heat and smoke.	M.F.B., with one hydrant.
Thursday, 19 March.	2:10 a.m.	None rec'd.	Victor-street, Burwood.	James Rutherford	Contractor	Weatherboard, with iron roof.	"	Colonial Mutual, £250.	Commercial Union, £325.	A cottage of six rooms burned out and fallen down.	Rockwood Vol. Fire Co., with one hydrant.
Sunday, 22 March.	1:33 a.m.	1:33 a.m.	65, Hunter-street, Clt	J. Grogan	Boarding-house.	Brick, with iron roof.	Candle	City Mutual, £200	Unknown	A small fire in bedroom	Inmates, with buckets of water.
Tuesday, 24 March.	1:17 a.m.	1:20 a.m.	112, Mary street, City.	J. Gallagher	Grocer	Brick, with slate roof.	Unknown	City Mutual, £225	"	Shop and contents burned out.	Employees of Standard Brewery, with two private hydrants.
Saturday, 23 March.	8:35 p.m.	8:40 p.m.	30, Dawson-street, City	Jane Harding	"	"	Candle	None	"	A small fire in bedroom	Inmates, with buckets of water.
Sunday, 29 March	6:22 p.m.	6:25 p.m.	625, King-street, Newtown.	C. Peate	Hairdresser	Brick, with iron roof	"	National Ins. Co., £300.	United Insurance Co., £300.	"	"
Tuesday, 31 March.	1:35 a.m.	1:37 a.m.	304, Elizabeth-street, City.	J. and E. Carroll	Hairdressers	"	Smoking tobacco	New Zealand Insurance Co.	Unknown	"	"
Thursday, 2 April.	4:9 a.m.	None rec'd.	Belmore-street, Hurstville.	A. J. Jordan	Private dwelling.	Weatherboard, with iron roof	Unknown	Building and contents, Manchester Insurance Co., £300.	None	A cottage burned out and fallen down	Burned itself out.
"	8:39 p.m.	8:31 p.m.	45, Gerrard-street, Alexandria.	James Elliott	Carpenter	Weatherboard, with shingle roof.	Candle	None	Mercantile Mutual, £100.	A small fire in bedroom	Inmates, with buckets of water.
Sunday, 5 April.	12:25 a.m.	12:27 a.m.	7, Burnell-lane, City	W. Elliott	Private dwelling.	Brick, with iron roof.	Smoking tobacco	"	Unknown	"	"
"	1:35 a.m.	1:35 a.m.	*Quatre Bras, off Bourke Road, Alexandria.	H. Macnamara	Tannery	Brick and iron, with iron roof.	Unknown	Building and contents, Commercial Union Insurance Co., £6,000	"	A range of buildings nearly burned out	M.F.B., assisted by several Vol. Fire Cos., with one steam fire engine and one hydrant.
Monday, 6 April.	12:7 a.m.	12:12 a.m.	Hawarra-road, Marrickville.	Percy Puckerman	Private dwelling	Weatherboard, with iron roof.	Matches, rats at.	None	Unknown	Dining-room and store-room, with contents, severely damaged by fire.	M.F.B., with one hydrant.
Tuesday, 7 April.	1:10 p.m.	1:14 p.m.	Newcombe-street, Paddington	G. Ymbiner & Co.	Carriers	Wood, with iron roof.	Light thrown down.	"	"	A quantity of empty cases in shed, at rear of premises, damaged by fire.	Paddington V.F. Co., with one hydrant.
"	5:10 p.m.	5:15 p.m.	105, King-street, Newtown.	Mrs. A. Stewart	Dealer	Weatherboard, with iron roof.	Unknown	Manchester, £50.	"	Front shop and contents, also sitting-room and kitchen at rear of shop, with contents, burned out and roof fallen in.	M.F.B., with one hydrant.
"	"	"	117, King street	Unoccupied	"	"	"	None	"	Partition in front room on right of shop, also two rooms in rear, damaged by fire.	"
"	"	"	103, "	W. H. White	Furniture dealer	Stone, with iron roof.	"	"	"	Partition of kitchen in rear of shop damaged by fire, furniture in shop by removal.	"
Wednesday, 8 April.	8:15 p.m.	8:18 p.m.	"Queeny," West-street, North Sydney.	Thomas Sinclair	Builder	Weatherboard, with iron roof.	Light thrown down	"	None	Out-house at rear of premises severely damaged by fire	Neighbours and M.F.B., with buckets of water.
Thursday, 9 April.	5:0 a.m.	"	Bridge-street, Marrickville	Edward Gosnell	Private dwelling	Brick, with iron roof.	Gas bracket	"	Unknown	Back bedroom on ground floor and contents damaged by fire, smoke, and water.	Inmates and neighbours, with buckets of water.
Friday, 10 April.	1:0 a.m.	1:10 a.m.	Marsden-street, Parramatta.	Unoccupied	"	Weatherboard, and iron roof.	Unknown	"	Australian Mutual, £100.	Floor of dining-room and ceiling of front room on ground floor damaged by fire.	Parramatta Vol. Fire Co's Nos. 1 and 2, with one hydrant.
"	1:35 a.m.	1:40 a.m.	"Globe Hotel," King-street, City.	Elsa Plebix	Licensed victualler.	Brick, with iron roof.	Candle	"	Unknown	Small fire in bedroom	Inmates, with buckets of water.
"	9:30 p.m.	9:35 p.m.	Louisa Road, Balmain.	C. Richardson	Boat-shed	Wood, with iron roof.	"	Commercial Union, £40.	Commercial Union, £50.	A shed, with contents, burned out.	Balmain Vol. Fire Co., with one hydrant.

* Henry Williams, aged 31 years, burned to death. An inquest was held on the 6th and 7th inst., at which the following verdict was returned: "That the deceased met his death by burning, but there is no evidence to show the origin of the fire." Subsequent fires—6th June, 1896; 5th November, 1896. † Edward Gosnell, aged about 43 years; Annie Gosnell, wife, 43; Lillie, daughter, aged 11 years; George, son, aged 4 years; and Trimmer, son, aged 1 year and 7 months, were severely burned about face, hands, and body. They were attended to by Dr. Chenhall. George Gosnell died subsequently in Prince Alfred Hospital.

DETAILS of Fires which have occurred within the Metropolitan District—continued.

Date.	When discovered.	Time of call.	Locality.	Name of tenant.	How premises occupied.	Construction of premises.	Origin or supposed cause of fire.	Insurances.		Extent of damage, &c.	Extinguished by
								Contents.	Building.		
Saturday, 11 April.	12-15 p.m.	12-10 p.m.	318, George-street, City.	Freeman & Co.	Photographers	Brick, with slate roof.	Light thrown down.	Unknown	Unknown	Front room on third floor, with contents, slightly damaged by fire and water; ceiling under slightly damaged by water.	Employees, with buckets of water.
"	1-0 p.m.	1-8 p.m.	1, Carragher's Buildings, 144, Cumberland-st., City.	Patrick Murphy	Private dwelling.	Stone and brick, with shingle roof.	Foul chimney	None	"	A small portion of shingle roof damaged by fire	M.F.B., with buckets of water.
Sunday, 12 April.	12-30 a.m.	12-34 a.m.	Woolloomooloo, City.	Co-operative Coal Company.	Stables	Weatherboard, with iron roof.	Light thrown down.	"	None	One stall and end of stable damaged by fire	M.F.B., with Tozer pump.
"	2-15 a.m.	2-20 a.m.	Church-street, Parramatta.	*T. W. Pollock	Draper	Brick, with iron roof.	Unknown	London and Lancashire, £300.	Australian Mutual, £1,700.	Shop and contents, consisting of drapery, severely damaged by fire and water, and staircase to first floor burned, first floor and contents damaged by heat and water.	Parramatta Vol. Fire Co.s Nos. 1 and 2, with one hydrant.
Sunday, 12 April.	2-30 p.m.	2-45 p.m.	North Head, Sydney	The N.S.W. Government.	Quarantine Station.	Wood, with iron roof	Fire, careless use of.	None	None	Two out-houses burned out and fallen down, and several acres of scrub burned.	Employees, Manly V.F. Co., M.F.B., and citizens, with private hose and manual engine.
Saturday, 11 April	3-10 p.m.	-	827 to 831, George-street, City.	J. F. Ashwood	Grocer	Brick, with iron roof.	Candle	Imperial, £2,000	Unknown	Furniture in front bedroom, on 1st floor, slightly damaged by fire and water.	Inmates, with buckets of water.
Tuesday, 14 April.	10-20 a.m.	10-22 a.m.	69, Regent-street, City.	J. Taylor	Boarding house.	"	Spark from chimney.	None	"	Bed and bedding in front room, on ground floor, damaged by fire.	"
"	11-19 p.m.	11-21 p.m.	Spring-street, Strathfield.	Mrs. Tregear	Private dwelling	Weatherboard, with iron roof.	Light thrown down.	"	"	A small out-house at rear of premises burned out and fallen down.	Burwood V.F. Co., with one hydrant.
"	"	"	"	Mrs. Lennon	"	"	"	"	"	"	"
Wednesday, 15 April.	1-54 a.m.	1-58 a.m.	Sewer-road, Alexandria	Water and Sewerage Board.	Yard	"	Burning rubbish	"	None	A small portion of fencing damaged by fire	Alexandria V.F. Co., with one hydrant.
Thursday, 16 April.	3-27 p.m.	2-31 p.m.	Mount and Alfred streets, North Sydney.	"	Street	"	Explosion of gas	"	"	Gas main in street damaged by explosion	M.F.B., with sand and one hydrant.
Thursday, 16 April.	4-25 p.m.	4-30 p.m.	43, Grafton-street, Woolahra	Mrs. Hamer	Private dwelling.	Brick, with iron roof.	Incendiarism	London and Lancashire Insurance Co., £200.	United Insurance Co., £400.	A cottage of five rooms; a middle bedroom and contents damaged by fire, smoke, and water; back kitchen slightly damaged by fire, smoke, and water, two doors broken open.	Neighbours, with buckets of water.
"	4-55 p.m.	5-2 p.m.	112, Sussex-street	Hodge and Zlotkowski	Brassfounders	Brick, with shingle roof.	Spark from chimney.	None	Unknown	A small portion of shingle roof damaged by fire and cutting away.	Employees, with buckets of water.
"	11-12 p.m.	11-15 p.m.	671, George-street, Haymarket, City.	Fredrick Fontanella	Restaurant	Brick and slate roof.	Smoking tobacco.	"	"	A small fire in front of building	Inmates, with buckets of water.
Friday, 17 April.	11-8 p.m.	11-12 p.m.	37, Henderson-street, Alexandria.	Thomas Quinn	Private dwelling.	Brick, with iron roof.	Candle	"	"	Small fire on staircase.	"
Sunday, 19 April.	1-30 p.m.	1-34 p.m.	90, Gloucester-street, City	Henry Johnson	"	Brick, with shingle roof.	Spark from chimney.	Unknown	United Insurance Co., £150.	Shingle roof slightly damaged by fire and cutting away, ceiling under slightly damaged by water.	M.F.B., with hand-pump, and buckets of water.
Monday, 20 April.	2-20 p.m.	2-21 p.m.	Warren Road, Marrickville.	G. C. James	Shed	Weatherboard, iron roof.	Hot ashes	None	Unknown	A shed used as wash-house, with contents, burned out and fallen down.	M.F.B., with one hydrant.
"	"	"	Harnett Avenue, Marrickville.	Alexander Morgan	"	"	"	"	"	A small shed burned out and fallen down	"
Wednesday, 22 April.	5-40 p.m.	5-45 p.m.	"Marlaba," Roslyn-st., City.	Mrs. Scular	Private dwelling.	Brick and slate roof.	Gas bracket	Commercial Union, £250.	Unknown	Back bedroom on first floor, with contents, slightly damaged by fire and water.	Inmates, with buckets of water.
Thursday, 23 April.	6-40 p.m.	6-48 p.m.	Sydney Road, Manly	Michael Keleher	Produce merchant	Iron	Unknown	None	"	Bedroom in rear of premises, with contents, and a quantity of empty bags in shed adjoining, damaged by fire and water.	Manly Volunteer Fire Co., with two hydrants.
Friday, 24 April.	2 a.m.	2-9 a.m.	Botany-st., Waverley	William J. Allen	Private dwelling.	Weatherboard, with iron roof.	"	"	"	Fernery, side of coach-house, and buggy, at rear of premises, damaged by fire.	Inmates, with garden hose
Sunday, 26 April.	3-35 p.m.	3-55 p.m.	Excelsior-st., Concord	James Ryan	"	"	Light thrown down.	"	Mercantile Mutual, £200.	A weatherboard building of four rooms, with contents, together with two out-houses and contents, burned out and fallen down.	Burwood and Ashfield Vol. Fire Cos., assisted by M.F.B., with two hydrants.
"	3-35 p.m.	3-56 p.m.	"	Alfred Sutton	"	"	"	"	Mercantile Mutual, £150.	Side of building damaged by fire	"
"	5-40 p.m.	8-41 p.m.	96, Upper Fort-st., City	John Grant	"	"	Candle	"	Unknown	Bed, bedding, and a portion of furniture in back room, on ground floor, damaged by fire and water; ceiling of same slightly damaged by fire and water.	North Sydney Vol. Fire Co., assisted by M.F.B., with one hydrant.
Tuesday, 25 April.	6-45 p.m.	6-50 p.m.	Edward-st., Pyrmont	W. Piper	"	Brick, with iron roof.	"	"	None	Window curtain in back bedroom on first floor, damaged by fire.	Inmates, with buckets of water.
Wednesday, 27 April.	4-50 p.m.	4-50 p.m.	19, James-street, Leichhardt.	W. Johnston	Private dwelling.	Weatherboard, with iron roof.	Children playing with matches.	"	None	Bed and bedding in back room, on ground floor, damaged by fire and water.	Inmates, with buckets of water.
Thursday, 30 April.	2-45 a.m.	2-50 a.m.	454, Oxford-street, Paddington.	Joseph S. Ellis	Grocer	Brick, with iron roof.	Spark from fire-place.	"	Aust. Mutual, £750.	Shop and contents severely damaged by fire and water	Paddington Vol. Fire Co., assisted by other Vol. Co.s, and M.F.B., with two hydrants.

* An inquest was held on the 16th instant, of which an open verdict was returned.

† Previous fire, 2nd July, 1895.

‡ Two separate fires. An inquest was held on the 26th inst., when the jury returned the following verdict: "That the premises were wilfully set on fire by some person or persons unknown."

DETAILS of Fires which have occurred within the Metropolitan District—continued.

Date.	When discovered.	Time of call.	Locality.	Name of tenant.	How premises occupied.	Construction of premises.	Origin or supposed cause of fire.	Insurances.		Extent of damage, &c.	Extinguished by
								Contents.	Building.		
Thursday, 30 April.	2:45 a.m.	2:50 a.m.	456, Oxford-street, Paddington.	Mrs. Rathford	Milliner	Brick, with iron roof.	Spark from fire-place.	South British, £200.	Aust. Mutual, £750.	Shop and contents slightly damaged by fire and water	Paddington Vol. Fire Co., assisted by other Vol. Cos., and M.F.B., with two hydrants.
"	"	"	454, Oxford-street, Paddington.	David Davis	Pawnbroker	"	"	Aust. Mutual, £1,000.	"	Front window on ground floor broken by heat	
"	6:40 a.m.	6:46 a.m.	Botany Road, North Botany.	St. Bernard's	Convent	Weatherboard, with iron roof.	"	None	City Mutual £600.	A building of eleven rooms, with contents, burned out and partly fallen down; rest of building and contents damaged by fire, heat, smoke, and water.	North Botany Vol. Fire Co., with one hydrant, and M.F.B., with one steam fire engine.
"	4:32 p.m.	4:40 p.m.	Brown-street, Paddington.	M. Oliver	Private dwelling.	Brick, with slate roof.	Light thrown down	"	Unknown	A quantity of grass burned in yard at rear of premises	Inmates, with buckets of water.
Friday, 1 May.	11:0 a.m.	"	Portman-street, Waterloo.	J. G. Ryan	"	Brick, with iron roof.	"	"	None	A small portion of flooring damaged by fire in front room on ground floor.	"
"	6:30 p.m.	6:35 p.m.	Sewer Road, Alexandria	Water and Sewerage Board.	Yard	Wood	Burning rubbish.	"	"	A small portion of fencing burned	Alexandria Vol. Fire Co., with one hydrant
Sunday, 3 May.	1:53 a.m.	1:58 a.m.	Sydney Harbour, off Crafton Wharf.	Ship "Ross-shire," 1,500 tons reg. (Captain A. Baxter.)	In cargo	Iron	Smoking tobacco	Unknown	Unknown	A quantity of bags in 'tween decks, opposite main hatch, damaged by fire; cargo under damaged by water, and lining of ship by fire.	M.F.B., with one hydrant
"	1:0 a.m. (2nd)	11:22 a.m. (3rd)	The Harbour, Neutral Bay.	Ship "Eilen A. Read," 1,760 tons reg. (Captain R. C. Peary.)	"	Wood	Spontaneous ignition.	"	"	Ship, and cargo, consisting of coal, severely damaged by fire; upper deck damaged by fire and cutting away.	Crew, and crew of pilot-steamers, "Captain Cook," assisted by M.F.B., with steam fire-pumps of the "Captain Cook."
Monday, 4 May.	5:34 p.m.	3:7 p.m.	417 to 421, George-street	F. Lasseter & Co. (Walter Brown, manager.)	Hardware merchants.	Brick, with iron roof.	Gas-bracket	Several offices	"	A portion of stock in front window of shop slightly damaged by fire and water.	Employees, with private hose.
Tuesday, 5 May.	3:45 a.m.	4:4 a.m.	64, Darling-street East, Balmain.	*Pattinson Bros.	Bakers	Wood, with iron roof.	Unknown	None	None	A small stable, with contents, burned out and fallen down; two horses severely burned, and afterwards killed.	Balmain Vol. Fire Co., with one hydrant.
Monday, 11 May.	2:18 a.m.	2:22 a.m.	Bay-street, Rockdale	John Lowe	Refreshment-rooms.	Weatherboard, with iron roof.	"	Building and contents, Mercantile Mutual, £250.	"	A weatherboard building of six rooms, with contents, burned out and fallen down.	Rockdale Vol. Fire Co., assisted by M.F.B., with two hydrants.
Tuesday, 12 May.	10:15 p.m.	None rec'd.	24, Craigend-street, Darlinghurst.	Mary M'Key	Private dwelling.	Brick, with slate roof.	Gas bracket	Colonial Mutual, £600.	Unknown	Small fire in bedroom	Inmates, with buckets of water.
Wednesday, 13 May.	2:20 a.m.	2:37 a.m.	Castlereagh-street, City	"Australin Hotel," (Edwin Moore, Manager)	Licensed victualler.	"	Light thrown down.	In several offices.	"	A small pantry on third floor back, burned out; a small portion of landing severely damaged by fire; ceiling under damaged by water.	Employees, with private hose.
"	9:24 p.m.	9:25 p.m.	Tongood-street, Erskineville.	W. Greenell	Private dwelling.	Brick, with iron roof.	Candle	None	Commercial Union, £375.	Back bedroom on first floor, with contents, slightly damaged by fire and water	Inmates, with buckets of water.
Thursday, 14 May.	7:0 p.m.	7:10 p.m.	37, Junction-street, North Sydney.	William Howard	Undertaker	"	Defective flue	"	Unknown	A small portion of flooring in back kitchen damaged by fire and cutting away.	"
Friday, 15 May.	1:40 p.m.	1:45 p.m.	72, Walker-street, North Sydney.	Cook and Alexander	Stables	Wood, with iron roof.	Matches, children playing with.	"	"	A quantity of straw burned	"
Tuesday, 19 May.	1:5 a.m.	1:23 a.m.	132, Liverpool Road, Ashfield.	Frank Marth	Fruiterer	Weatherboard, with iron roof.	Fire, careless use of.	Imperial Insurance Co., £50.	"	A weatherboard building, consisting of shop and three rooms, burned out and partly fallen down.	Ashfield Vol. Fire Co., assisted by M.F.B. and Burwood V.F. Co., with two hydrants.
"	"	"	184, Liverpool Road, Ashfield.	Charles Luhr	Ice merchant	"	"	Mercantile Mutual, £245.	Commercial Union, £600.	Three back rooms with contents damaged by fire, heat, and smoke	"
"	"	"	130, Liverpool Road, Ashfield.	T. J. Hewett	Bootmaker	"	"	Australian Mutual, £50.	Unknown	Shop and contents burned out	"
"	"	"	125, Liverpool Road, Ashfield.	F. Llewellyn	Tailor	"	"	None	"	Shop and contents damaged by fire and water.	"
Friday, 22 May.	12:0 m't.	None rec'd.	Middle Head	George Bird	Private dwelling.	Weatherboard, with iron roof.	Spark from fire-place	"	None	Walls, lining-boards, and ceiling in back kitchen on ground floor damaged by fire and cutting away.	Medical Staff Corps, with buckets of water.
Saturday, 23 May.	3:5 p.m.	3:7 p.m.	157, Ocean-street, Woollahra.	P. Henry	Shed	Wood, with iron roof.	Fireworks	"	Mercantile Mutual, £230.	A shed at rear of premises slightly damaged by fire	Inmates, with buckets of water.
Sunday, 24 May.	12:30 a.m.	None rec'd.	Carrington Avenue, Hurstville.	Samuel Scott	Private dwelling.	Weatherboard, with iron roof.	Candle	Building and contents, United Insurance Co., £150.	Unknown	A weatherboard cottage of four rooms, with contents, burned out and fallen down.	"
"	7:0 a.m.	"	Arden-street, Coogee	*Basil Cooper	"	Wood, with iron roof.	"	None	Unknown	Bed and bedding in front room on ground floor damaged by fire.	"
"	10:35 a.m.	10:42 a.m.	193, Bourke-street, City	W. Tighe	"	Brick, with iron roof.	Fireworks	"	"	Room, with contents on first floor, slightly damaged by fire.	M.F.B., with buckets of water.
Tuesday, 29 May.	12:10 a.m.	12:20 a.m.	Moore-street, Drummoyne.	John Wilson	"	Weatherboard, with iron roof.	Spark from fire-place.	"	"	A small fire in kitchen at rear of premises	Drummoyne Vol. F. Co., with one hydrant.
Thursday, 28 May.	2:10 p.m.	2:12 p.m.	237, Codrington-street, Redfern.	B. Maloney	Yard	"	Boiling over of tar	"	"	A small quantity of tar destroyed by fire	Inmates, with sand.
Tuesday, 2 June.	2:50 p.m.	2:56 p.m.	406, Parramatta Road, Petersham.	Unoccupied		Brick, with slate roof.	Smoking tobacco	"	Commercial Union, £700.	A building of two floors; shop on ground floor burned out; three rooms over shop severely damaged by fire; roof partly burned off.	M.F.B., with one hydrant.

* Charles Pattinson, aged 19 years, severely burned about the face, arms, and neck. Taken to the Balmain Cottage Hospital for treatment.

† Isabella Nealds, aged 78 years, severely burnt about the body. Since dead.

DETAILS of Fires which have occurred within the Metropolitan District—continued.

Date.	When discovered.	Time of call.	Locality.	Name of tenant.	How premises occupied.	Construction of premises.	Origin or supposed cause of fire.	Insurances.		Extent of damage, &c.	Extinguished by
								Contents.	Building.		
Saturday, 6 June.	6-28 p.m.	6-30 p.m.	Quatre Bras Tannery, Alexandria.	*H. Macnamara	Tannery	Wood, with iron roof.	Light thrown down.	Unknown	Unknown	No. 3 sweat-house, with contents, slightly damaged by fire and water.	Employees, with buckets of water.
Thursday, 11 June.	2 30 a.m.	3-4 a.m.	Croydon Avenue, Enfield.	John H. Jackson	Provision dealer..	Weatherboard, with iron roof.	Rats at matches..	Imperial, £40..	Imperial, £300 ..	A building, consisting of shop, dwelling, coach-house, and stable, with contents, burned out and partly fallen down.	Ashfield Vol. F. Co., and M.F.B., with one hydrant.
Sunday, 14 June.	4-52 a.m.	4-57 a.m.	63, Union-street, Pymont.	Wm. Coskerie	Lodger	Brick, with iron roof.	Unknown	Imperial, £800 ..	Commercial Union, £650 (two buildings).	Back rooms on ground and first floors, used as store rooms, together with stairs, burned out; rest of first and second floors, used as a dwelling, severely damaged by fire and water; contents of front shop damaged by water and front doors broken open.	M.F.B. with two hydrants.
"	"	"	65, Union-street, Pymont.	Unoccupied	Shop	Weatherboard, with iron roof.	"	None	"	Shop on ground floor and three rooms on first floor damaged by fire and water.	"
"	7-40 p.m.	7-45 p.m.	98, Albion street, City..	R. J. Coombes	Grocer	Brick, and iron roof.	Light thrown down.	Australian Mut., £150.	Unknown	A box containing rubbish damaged by fire in front shop ..	Inmates and neighbours, with buckets of water.
Monday, 15 June.	1-17 p.m.	1-17 p.m.	8, Selwyn-street, Moore Park, City.	Herbert A. Rice	Private dwelling..	Brick, and slate roof.	Children playing with matches.	None	"	Front bedroom on first floor and contents slightly damaged by fire and water.	"
Wednesday, 17 June.	5-53 a.m.	5-53 a.m.	226, Clarence-st., City	Edwards & Co.	Tea merchants ..	Brick, and iron roof.	Unknown	New Zealand, £1,500	On the block—L. L. & Globe, £2,060; N. Zee- land, £2,060; United, £2,060; North'n, £2,060; Victoria, £2,060; —£10,300.	A building of five floors, about 25 ft. x 85 ft., with contents, burned out and roof off.	M.F.B., with six steam fire- engines, water tower, and two hydrants, assisted by theseveral Vol. Fire Co.'s.
"	"	"	228, " ..	"	"	"	"	"	"	"	"
"	"	"	230, " ..	Unoccupied Warehouse.	"	"	"	"	"	A building of five floors; top floor damaged by fire, floors under damaged by water.	"
Saturday, 20 June.	8-20 p.m.	8-24 p.m.	168, Palmer-street, City	George Crewar	Private dwelling..	Brick, and slate roof.	Candle	None	Com. Union, £300	Front bedroom on first floor, with contents, slightly damaged by fire and water.	M.F.B. and Police, with buckets of water
Sunday, 21 June.	8-45 p.m.	8-52 p.m.	31, Cavendish-street, Newtown.	W. P. Murphy	"	"	Kerosene lamp, explosion of.	Manchester, £250	Commercial Union, £800.	A dwelling of two floors; rooms on ground floor, with contents, severely damaged by fire and water; rooms over damaged by heat and smoke.	M.F.B., with one hydrant.
Monday, 22 June.	2-29 a.m.	2-30 a.m.	Miller and Ridge Streets, North Sydney.	Mary Ann Sinclair ..	Fruiterer	Brick, and iron roof.	Light thrown down.	Queensland Mutual, £100.	Unknown	Shop and contents slightly damaged by fire and water	"
Tuesday, 23 June.	None rec'd.	None rec'd.	67, Morehead-street, Waterloo.	Mrs. J. Stock	Private dwelling..	"	Candle	Commercial Union, £100.	Commercial Union, £200.	Bed and bedding in front room on first floor slightly damaged by fire.	Inmates and police, with buckets of water
Thursday, 25 June.	12-35 p.m.	12-37 p.m.	259, William Henry Lane, off Crown-st., Ultimo.	Albert Wright	"	"	Foul chimney ..	None	United, £1,200 (on seven houses).	A small portion of roof damaged by fire and cutting away; chimney cracked by heat	M.F.B., with hand-pump and buckets of water.
Friday, 26 June.	3-40 a.m.	None rec'd.	Ramsgate Road, Rock- dale.	Unoccupied	"	Weatherboard, and iron roof.	Unknown	"	United, £100	A weatherboard cottage of two rooms burned out and fallen down.	Burned itself out.
Saturday, 27 June.	0-7 p.m.	0-9 p.m.	Grafton Wharf, Sussex- street, City.	Grafton Wharf Co. ...	Wharf office	Weatherboard..	"	Unknown	Unknown	Writing-desk in office slightly damaged by fire.	Watchman, with buckets of water.
Tuesday, 30 June.	7-50 p.m.	7-55 p.m.	Darlinghurst Road and Oxford-street, City.	New South Wales Gov- ernment.	Court-house	Wood	Light thrown down.	None	None	Meter-box and meter damaged by fire in yard at rear of Court-house.	Paddington Brewery Vol. F. Co. and M.F.B., with one hydrant.
Wednesday, 1 July.	3-50 p.m.	4-0 p.m.	Merrylands	†John Fry	Cement works ..	Wood, brick, and iron roof	Unknown	"	"	A wood and iron building, about 50 x 60 feet, with contents, burned out; and a brick building, about 30 x 60 feet, with contents, partly burned out.	Granville and Parramatta Nos. 1 and 2 Vol. Cos., with hydrant and manual engine.
Saturday, 4 July.	9-0 a.m.	None rec'd	438, George-street, City	G. B. Suffren	Jeweller	Brick, and iron roof.	Light thrown down.	"	Unknown	A small portion of flooring damaged by fire in workshop on first floor.	Inmates, with buckets of water.
Monday, 6 July.	9-30 a.m.	9-32 a.m.	50, Campbell-st., Bal- main.	T. H. Brown	Private dwelling..	Weatherboard, over shingle roof.	Spark from chim- ney.	"	"	Attic used as a lumber room, with contents, burned out and roof fallen in, three rooms under, with contents, severely damaged by fire and water.	Balmain Vol. Co., with one hydrant, assisted by M.F.B.
"	"	"	43, Campbell-street ...	Barbara Simpson	"	"	"	"	"	Attic used as a bedroom, and two rooms under, severely damaged by fire and water.	"
"	"	"	52, Campbell-street ...	Isabel Murray	"	"	"	"	"	Gable end of building damaged by fire; furniture damaged by removal.	"
"	10-22 p.m.	10-25 p.m.	Wynyard-lane, rear of 331, George-st., City.	Jessen & Co.	Sign writers	Stone, and slate roof.	Unknown	N. Zealand, £640.	Royal, £2,000	Room on second floor used as a furniture store, with con- tents, severely damaged by fire and water, and part of roof off	M.F.B., with one hydrant.
Tuesday, 7 July.	11-54 a.m.	11-58 a.m.	"Strand," Darling-st., Balmain.	Whitehead & Co.	French polishers..	Yard	Tar boiling over..	None	Unknown	Contents slightly damaged by fire and water	"
Wednesday, 8 July.	1-0 a.m.	1-7 a.m.	339, Parramatta-road, Leichhardt.	Scott & Co.	Drapers	"	"	"	"	A small quantity of tar destroyed in yard at rear of premises.	Inmates. "
"	"	"	"	W. G. French	Boot factory	Brick, and iron roof.	Unknown	National of N.Z., £1,000.	Alliance, £1,200.	Front workshop on ground floor, with contents, burned out; back rooms severely damaged by fire, heat, and water; basement and contents, consisting of machinery, leather, &c., severely damaged by fire and water; rooms on first floor, with contents, used as a dwelling, damaged by heat and smoke.	M.F.B., with one hydrant, assisted by Vol. F. Co.

* Previous fire, 6th April, 1896. † Outside M.F.B. area.

DETAILS of Fires which have occurred within the Metropolitan District—*continued.*

Date.	When discovered	Time of call.	Locality.	Name of tenant	How premises occupied.	Construction of premises.	Origin or supposed cause of fire.	Insurances.		Extent of damage, &c	Extinguished by
								Contents.	Building.		
Wednesday, 8 July.	1 0 a.m.	1 7 a.m.	387, Parramatta-road, Leichhardt.	W. G. French	Boot factory	Brick, and iron roof.	Unknown	National or N.Z. £1,000.	Alliance, £1,200	Rooms on first floor, used as a workshop, with contents, severely damaged by fire and water; rooms over, used as a dwelling, damaged by heat and smoke.	M.F.B., with one hydrant, assisted by Vol. Fire Cos.
Thursday, 9 July.	5 40 a.m.	5 45 a.m.	Tinton Estate, Carlingford.	Unoccupied	Private dwelling.	Brick, and shingle roof.	"	None	National of N.Z., £2,000.	Main building of five rooms, and adjoining building of eight rooms, with contents, consisting of caretaker's furniture, burned out.	Balmain and Parramatta Nos. 1 and 2 Vol. Fire Cos., with manual engine. M.F.B.
Friday, 10 July.	2 23 a.m.	2 30 a.m.	4, Co-operation Buildings, Sussex-st., City.	Crocker, Barrett, & Co.	Produce merchants.	Brick, and slate roof.	Rats at matches.	"	None	A small quantity of produce burned on ground floor of store.	"
Saturday, 11 July.	"	3 6 a.m.	Bay-street, Croydon	J. F. Carson	Private dwelling.	Weatherboard.	Unknown	"	Unknown	Windmill, about 30 ft. x 15 ft., with three rooms under, used as lumber room, awlry, and fernery, burned out and fallen down.	Ashfield Vol. Fire Co., with one hydrant.
Sunday, 12 July.	2 45 p.m.	2 50 p.m.	53, George-street West, City.	Unoccupied	Shop and dwelling	Brick, and iron roof.	Light thrown down.	"	"	A quantity of rubbish burned in basement, and front window of shop slightly damaged by fire.	M.F.B., with buckets of water.
Monday, 13 July.	10 23 p.m.	10 25 p.m.	160, Point Piper Road, Paddington.	J. Bradley	Bootmaker	Brick, and slate roof.	Candle	"	None	A small quantity of wearing apparel damaged by fire in middle room on ground floor.	Inmates.
Saturday, 18 July.	12 0 a.m.	12 17 p.m.	30, Broadway, Globe	W. J. Sands	Grocer	Brick, and iron roof.	Defective fire-grate.	Commercial Union, £300.	Unknown	A small portion of flooring damaged by fire in shop on ground floor.	Inmates, with buckets of water.
"	12 17 p.m.	12 16 p.m.	23, York-street, City	S. Bradley	Manufacturers' agent.	"	Light thrown down.	Unknown	"	A small quantity of paper burned and a portion of flooring damaged by fire in office on first floor.	M.F.B., with buckets of water.
Sunday, 19 July.	12 0 a.m.	12 9 a.m.	378, Oxford-street, Paddington.	James Cook	Baker	Brick, wood and iron roof.	Unknown	South British, £200.	Mercantile Mutual	A shed building at rear of premises, used as an office, burned out, and back room of main building, with contents, severely damaged by fire and water; side of bakery damaged by fire; front door broken open.	Paddington and Woollahra Vol. Fire Cos., with two hydrants, assisted by other Vol. Fire Cos and M.F.B.
"	"	"	376, Oxford-street, Paddington.	John Moss	Tobacconist	Weatherboard, and iron roof.	"	National of N.Z., £	"	Side and roof of shed building at rear of premises damaged by fire.	"
Monday, 20 July.	2 19 a.m.	2 55 a.m.	Hercules-street, Ashfield	Mrs. E. M. Carne	General store	"	Candle	Royal, £150	Unknown	Shop, together with two rooms and kitchen, with contents, burned out and fallen down.	Ashfield Vol. Fire Co., with three hydrants, assisted by the M.F.B.
"	"	"	24, Hercules-street	Henry Hart	Undertaker	Brick, and iron roof.	"	Unknown	"	Plate-glass window broken and window frame scorched.	"
"	"	"	20, "	Unoccupied	Private dwelling.	"	"	None	"	Side of building damaged by heat	"
Tuesday, 21 July.	9 0 p.m.	None rec'd.	322, King-st., Newtown	H. Lockman & Co.	Boot shop	"	Light thrown down.	Victoria, £300	"	Some waste paper burned, woodwork slightly damaged by fire, and contents by smoke, in back shop, on ground floor.	Inmates, with buckets of water.
Friday, 24 July.	11 42 a.m.	11 48 a.m.	George-street West, City	Sydney Cyclorama Co. (Manager, David Murray, Secretary, G. S. Buzzacott)	"	Brick, wood, with iron and glass roof.	Chemicals, explosion of.	Sun, £750	Several offices, £3,500.	Storeroom and contents under front staircase of corridor, severely damaged by explosion.	Employees.
Sunday, 26 July.	10 7 p.m.	10 10 p.m.	16, Jane-street, Balmain	Mrs. C. Fitzsimons	Private dwelling	Stone, and slate roof.	Heating of the hearthstone.	Anstl. Alliance, £340.	City Mutual, £1,000	A small portion of flooring damaged by fire in kitchen	Inmates, with buckets of water.
Tuesday, 28 July.	10 58 p.m.	10 39 p.m.	Regent-street, Redfern	Hudson Bros.	Timber merchant	Paddock	Vagrants smoking	Unknown	Unknown	A small portion of timber logs in paddock adjoining premises damaged by fire.	M.F.B., with buckets of water.
Thursday, 30 July.	8 10 p.m.	8 16 p.m.	Middle-street, Randwick.	Unoccupied	Private dwelling	Weatherboard, with iron over shingle roof.	Unknown	"	Commercial Union, £250.	A cottage of three rooms, together with outhouse, burned and fallen down.	Waverley and Woollahra Vol. F. Co., with one hydrant.
Friday, 31 July.	2 30 a.m.	None rec'd.	37, Bullanaming-street, Redfern.	William Ongley	"	Brick, and slate roof.	Candle	None	Unknown	Bed, bedding, and wearing apparel, in front room on ground floor, damaged by fire.	Inmates and neighbours, with buckets of water.
Friday, 31 July.	1 36 p.m.	1 38 p.m.	Blue street, North Sydney.	E. J. Rodson	School	"	Defective fire place.	"	"	Fire place in front room and a small portion of front verandah damaged by fire and cutting away.	M.F.B., with buckets of water.
Saturday, 1 August.	6 0 p.m.	6 0 p.m.	Holden-street, Ashfield.	John Harper	Private dwelling.	Weatherboard, and iron roof.	Unknown	Unknown	"	A shed, 10 ft. by 14 ft., containing a number of empty cases, damaged by fire.	Inmates, with buckets of water.
Sunday, 2 August.	10 0 p.m.	10 40 p.m.	Thompson-street, Drummoyle.	E. W. Gillies	"	Brick, and iron roof.	Candle	None	Australian Mutual, £300.	Dining-room at rear of cottage and contents damaged by fire and water.	"
Tuesday, 4 August.	12 15 a.m.	12 50 a.m.	Montgomery street, Kogarah.	Unoccupied	"	Weatherboard, and iron roof.	Unknown	Cornwall, £80	Unknown	A cottage of 4 rooms burned out and fallen down	Kogarah and Rockdale Vol. F. Co., with two hydrants.
"	"	"	"	John Condon	"	"	"	Manchester, £200	"	Back portion of dwelling, and roof of same, severely damaged by fire.	"
"	"	"	"	Ernest McNaughton	Blacksmith	"	"	London and Lancashire, £75.	"	Side and roof of shop damaged by fire	"
"	1 56 a.m.	1 58 a.m.	2 Dean's-place, City	£Fuertl and Nall	Warehouse	Brick, and iron roof.	Spontaneous ignition.	Several offices	"	A number of bales of paper damaged by fire and water in yard.	M.F.B., with one hydrant.
"	7 45 a.m.	None rec'd.	Burwood Road, Burwood.	Richard Rowo	Private dwelling.	"	Candle	N.Z., £200	Mercantile Mutual, £2,000 on the block.	Back bedroom on first floor and contents damaged by fire and water.	Inmates, with buckets of water.

* Previous fire, 15th August, 1892.

† Charles Fahey, aged 28 years, and Alfred Maitland, aged 34 years, severely injured by the explosion. Both men were taken to the Sydney Hospital, where Fahey died at 2 15 p.m.

‡ Elizabeth, wife of William Ongley, burned about the body, admitted for treatment to the Prince Alfred Hospital.

§ Previous fire, 12th February, 1894.

DETAILS of Fires which have occurred within the Metropolitan District—continued.

Date.	When discovered.	Time of call.	Locality.	Name of tenant.	How premises occupied.	Construction of premises.	Origin or supposed cause of fire.	Insurances.		Extent of damage, &c.	Extinguished by
								Contents.	Building.		
Tuesday, 4 April.	5-52 p.m.	5-55 p.m.	250 and 251, King-street, Newtown.	Sweet Brothers	Drapers	Brick, and iron roof.	Gas bracket	New Zealand, £1,200; Norwich Union, £1,000; National, £1,000; Colonial Mutual, £1,000; Cornwall, £1,000; London & Lancashire, £1,000—£5,200.	Australian Mutual, £500.	Shop window burned out and contents of front portion of shop damaged by smoke, fire, and water.	M.F.B., with one hydrant.
Thursday, 6 August.	7-45 p.m.	3-19 p.m.	Shea's Creek Bridge, North Botany.	Joseph Chapelton	Steam tug proprietor.	Wood	Boiler, overheating of.	None	None	Decking and a portion of coal bunker damaged by fire	Employees, with buckets of water.
"	4-45 a.m.	7-45 p.m.	Edward-street, North Sydney.	William White	Private dwelling.	Weatherboard, and iron roof.	Candle	"	Unknown	Front bedroom on first floor and contents slightly damaged by fire and water.	M.F.B., with buckets of water.
Saturday, 15 August.	4-45 a.m.	4-49 a.m.	Corner of George and Markets Streets, City.	Hon. G. J. Roberts, C.M.G.	Licensed victualler, "Roberts Hotel."	Brick, and slate roof.	Unknown	Australian Mutual, £8,500.	Victoria, £20,000.	Dining-room lift, from 2nd to 4th floor, burned out; greater portion of roof very severely damaged by fire; two rooms and contents on 4th floor burned out, and remaining rooms on same floor very severely damaged by fire and water; contents of rooms on four floors under very severely damaged by fire.	M.F.B., with two steam fire engines and two hydrants.
Tuesday, 18 August.	7-43 p.m.	7-47 p.m.	66 King-street, City	Harrington & Co.	Photographic material importers.	Brick, and iron roof.	Wax boiling over	Scottish Union, £4,000.	Unknown	A quantity of straw burned in basement	Employees and M.F.B., with buckets of water.
Wednesday, 19 August.	12-18 a.m.	12-30 a.m.	68, Pitt-street, Redfern	E. J. Booth	Baker	"	Defective oven	None	"	A portion of rafters over oven, and contents of bakchouse, slightly damaged by fire and water.	M.F.B., with buckets of water.
"	1 a.m.	1-30 a.m.	Queen-street, Burwood	Joseph Que	Private dwelling.	Weatherboard, and iron roof.	Hot ashes	"	Australian Mutual, £125.	A cottage of five rooms, with contents, burned out and fallen down.	Burwood and Ashfield Vol. F. Cos., assisted by M.F.B., with two hydrants.
"	"	"	"	Mrs. Annie Beveridge	General store	"	"	Mercantile Mutual, £200.	Unknown	Gable end of dwelling damaged by fire, and a portion of stock and furniture damaged by water and removal.	"
"	7-30 a.m.	7-51 a.m.	Channel-street, Petersham	G. Stokes	Grocer	Brick, and iron roof.	Children, with matches	None	"	Back bedroom on first floor, and contents, damaged by fire and water.	Inmates, with buckets of water.
Thursday, 20 August.	10 p.m.	10-3 p.m.	64, Darling-street, Balmain	Patterson Bros.	Bakers	Stone, and iron roof.	Candle	"	None	Front bedroom on second floor, with contents, damaged by fire and water.	"
Friday, 21 August.	8-45 p.m.	8-49 p.m.	100, Alfred-street, North Sydney	Frederick Stack	Workshop	Weatherboard, and iron roof.	Unknown	"	"	A shed, about 40 ft. x 60 ft., used as a workshop, and containing a quantity of furniture, severely damaged by fire and water.	M.F.B., with one hydrant.
"	"	None rec'd.	Rich-street, Hurstville	P. T. Groove	Private dwelling	"	Defective flue	"	Mercantile Mutual, £80.	Weatherboard cottage of three rooms and kitchen, with contents, burned out and fallen down.	Rockdale Vol. F. Co., with one hydrant.
Saturday, 22 August.	7-25 p.m.	7-29 p.m.	32, William-street, Paddington	Mrs. J. Keane	"	Brick, and iron roof.	Candle	"	Unknown	Back bedroom on first floor and contents slightly damaged by fire and water.	Paddington Vol. F. Co., with buckets of water.
Sunday, 23 August.	6-36 a.m.	6-40 a.m.	27, Eskine-street, City	C. W. Foley & Co.	Grocers	"	Unknown	Scottish Union, £2,000.	"	Front shop and contents severely damaged by fire, heat, and smoke; contents of dwelling of two floors over severely damaged by smoke.	M.F.B., with one hydrant.
"	9-25 a.m.	9-30 a.m.	College and Cameron Streets, Balmain	Charles A. Howard	Licensed Victualler, "Dry Dock Hotel."	Brick, and slate roof.	Gas explosion	None	"	Front room of College street and contents very severely damaged by explosion; hall adjoining and contents also severely damaged.	Inmates and police.
Monday, 24 August.	3-45 p.m.	None rec'd.	Prince-street, Mosman	David Cleland	Private dwelling	Weatherboard, and iron roof.	Light thrown down	Commercial Union, £100.	"	A cottage of two rooms, bedroom and contents, severely damaged by fire and water.	Inmates and police, with buckets of water.
Friday, 28 August.	7-40 a.m.	7-47 a.m.	126, and 125, Queen-st., Woollahra	W. F. Latimer	Draper	Wood, and iron roof.	Burning rubbish	New Zealand, £1,600; Royal, £2,000—£3,600.	United, £3,000	A shed used as a store at rear of premises, with contents, severely damaged by fire and water; two rooms over, used as bedrooms, with contents, slightly damaged by fire, smoke, and water.	Woollahra Vol. F. Co., assisted by several other Vol. F. Cos and M.F.B., with two hydrants.
Saturday, 29 August.	1-50 p.m.	1-54 p.m.	3, Dean's Terrace, Kent-street, City	Mrs. Stewart	Private dwelling	Brick, and shingle roof.	Spark from chimney	None	Unknown	A portion of shingle roof damaged by fire and cutting away.	M.F.B., with hand-pump.
"	5-12 p.m.	8-16 p.m.	Palmer-street, Balmain	James Easton	"	Brick, and iron roof.	Candle	"	"	Contents of bedroom on ground floor damaged by fire and water.	Balmain Vol. F. Co., with buckets of water.
Monday, 31 Aug.	6-15 p.m.	6-21 p.m.	124, Simmonds-street, Newtown	Mary Morgan	"	Brick, and slate roof.	"	"	"	Front bedroom on ground floor, with contents, slightly damaged by fire and water.	Inmates, with buckets of water.
Wednesday, 2 September.	7-20 a.m.	7-23 a.m.	86, Quay-street, City	Patrick Lonaghan	Harness maker	Brick, and shingle roof.	Light thrown down	"	"	A quantity of straw and cocoanut fibre, in gateway in front of premises, damaged by fire.	"
"	11-18 p.m.	11-19 p.m.	Off Belmore-road, City	N.S.W. Police	Police Depot, fodder store.	Brick, with iron over slung roof.	Unknown	"	None	A building of one floor, about 24 ft. x 60 ft., containing a large quantity of fodder, burned out, and greater part of roof off.	M.F.B., with two steam fire engines, assisted by Stan. Bry. and Padd. Bry. Vol. F. Cos.
Thursday, 3 September.	11-30 a.m.	None rec'd.	Tenterden-road, Botany	William Dodd	Private dwelling	Weatherboard, and iron roof.	Sparks from another fire	"	City Mutual, £150	A portion of flooring of verandah and lining boards, damaged by fire.	Neighbours, with buckets of water.
Friday, 4 September.	9-31 a.m.	9-33 a.m.	645, George-street, Hay-market, City	Mrs. Cullen	Restaurant	Brick, with iron over shingle roof.	Foul chimney	"	Unknown	A small portion of shingle roof damaged by fire.	M.F.B., with hand-pump.

* Previous fire, 332, Kent-street, City, 16th February, 1894. † Previous fire Tuesday, 5th May, 1890, same premises. ‡ Mrs. Keane (widow) slightly burned about the face; attended to by a doctor at her home. § John S. Howard, aged 25 years, severely burned about the face, arms, and body; treated by Dr. Bott.

DETAILS of Fires which have occurred within the Metropolitan District—continued.

Date.	When discovered.	Time of call.	Locality.	Name of tenant.	How premises occupied.	Construction of premises.	Origin or supposed cause of fire.	Insurances.		Extent of damage, &c.	Extinguished by
								Contents.	Building.		
Saturday, 6 September	8.33 p.m.	8.36 p.m.	195, Victoria-street, Darlinghurst.	Mrs. Gara	Private dwelling.	Brick, and iron roof.	Candle	None	Unknown	Back room on ground floor, and contents, slightly damaged by fire and water.	Inmates, with buckets of water.
Sunday, 6 September	7.20 p.m.	7.30 p.m.	154, Underwood-street, Paddington.	Mrs. Reimer	"	Brick, and slate roof.	Curtain, in contact with fire.	"	"	A small quantity of bedding in front room on first floor damaged by fire and water.	Paddington V.F. Co., with buckets of water.
"	9.8 p.m.	None rec'd.	11 and 13, York-street, City.	Edward Milverton, "Langham Hotel."	Licensed victualer.	Brick, with slate and iron roof.	Gas explosion	National of N.Z., £200.	"	Bar fittings and contents on ground floor damaged by fire and explosion.	Inmates, with buckets of water.
Tuesday, 8 September	9.6 p.m.	9.7 p.m.	Wycombe Road, Neutral Bay, North Sydney.	Dr. W. J. Shirrow	Private dwelling	Brick, and tile roof.	"	New Zealand, £300.	"	Front room and contents on ground floor damaged by fire and water.	"
"	10.27 p.m.	10.30 p.m.	Arden street, Coogee.	Mrs. J. Nicholson	"	Weatherboard, and slate roof.	Candle	Mercantile Mutual, £850	"	Back bedroom on ground floor, and contents, damaged by fire and water.	Waverley and Woollahra V.F. Cos., with 1 hydrant.
Wednesday, 9 September	6.40 p.m.	None rec'd.	454, Cleveland-street, City.	Unoccupied	Shop and dwelling.	Brick, and iron roof.	Unknown	None	Unknown	A quantity of rubbish burned in passage at rear of shop	Police and neighbours, with buckets of water.
Thursday, 10 Sept.	7.40 p.m.	"	416, Bourke-street, Surry Hills.	Mrs. Emma Martin, "Great Western Hotel."	Licensed victualer.	Brick, and slate roof.	"	Royal Exchange, £150.	"	Contents of front room on first floor slightly damaged by fire and water.	Inmates, with buckets of water.
Friday, 11 Sept.	7.15 p.m.	7.25 p.m.	Ever-street, Strathfield	*James Bagnell	Private dwelling.	Brick, weather-board, and iron roof	Kerosene lamp, explosion of.	Mercantile Mutual, £40.	"	A cottage of four rooms, with contents, burned out and fallen down.	Burwood and Ashfield V.F. Cos., assisted by M.F.B., with two hydrants.
"	"	"	"	James Ramsay	Butcher	"	"	None	"	Gable end and roof of cottage severely damaged by fire.	"
Saturday, 12 Sept.	2.25 p.m.	2.30 p.m.	Glen-street, Marrickville	George F. Stewart	Private dwelling.	Weatherboard, and iron roof.	Unknown	Mercantile Mutual, £75.	Mercantile Mutual, £100.	Weatherboard cottage of four rooms and kitchen, with contents, burned out and partly fallen down.	M.F.B., with one hydrant.
"	7.23 p.m.	7.25 p.m.	327, Sussex-street, City.	Albert Hill	"	Brick, and iron roof.	Candle	None	Unknown	Front room, and contents, slightly damaged by fire and water.	Inmates, with buckets of water.
"	10.20 p.m.	10.25 p.m.	432, Victoria-street, Darlinghurst.	Charles Bawn	"	Brick, and slate roof.	"	"	"	Contents of front bedroom on ground floor slightly damaged by fire.	"
Sunday, 13 Sept.	12.40 a.m.	12.46 a.m.	56, John-street, Waterloo	Miss Young	"	Brick, and iron roof.	Defective flue	"	"	Staircase to first floor, and a small quantity of furniture, damaged by fire.	"
"	10.24 a.m.	10.26 a.m.	Corner of Little Essex and Cumberland Streets, City.	Michael Moran	Butcher	Weatherboard, and iron roof	Light thrown down.	"	"	A small portion of fence damaged by fire, in back yard	North City Vol. F. Co., with buckets of water
"	6.39 p.m.	None rec'd.	1, Anderson Road, Alexandria.	H. J. Hanneyfield	Baker	Brick, and iron roof.	"	Commercial Union, £375	"	Front shop slightly damaged by fire and water.	Inmates, with buckets of water.
Wednesday, 16 Sept.	4.14 a.m.	4.18 a.m.	101 and 103, Hay-street, City.	E. Horton & Co.	Seed merchants.	"	Unknown	Royal Exchange, £2,000.	Australian Mutual, £1,000.	First floor and contents slightly damaged by fire, smoke, and water; contents of ground floor damaged by water.	M.F.B., with one hydrant.
"	7.25 a.m.	7.28 a.m.	42 and 44, Harris-street, Pyrmont.	Charles Butterworth, "Pyrmont Hotel."	Licensed victualer.	"	Matches, children playing with.	United, £75	Unknown	Back bedroom on first floor, and contents, slightly damaged by fire.	Inmates, with buckets of water.
Thursday, 17 Sept.	5.0 p.m.	5.5 p.m.	Emu-street, Leichhardt.	Fredk. Walker	Private dwelling.	Weatherboard, and iron roof.	Spark from fireplace.	None	None	A cottage of three rooms, with contents, burned out and fallen down.	M.F.B., with one hydrant, assisted by Leichhardt Vol. F. Co.
"	"	"	"	Wm. Kreiger	"	"	"	"	"	Gable end of dwelling damaged by fire; furniture damaged by removal.	"
Friday, 18 Sept.	1.45 a.m.	1.46 a.m.	79, George-street, City.	A. E. Roberts	Grocer	Brick and iron roof.	Light thrown down.	Unknown	Unknown	A quantity of rubbish in yard at rear of premises damaged by fire	M.F.B., with buckets of water.
"	6.52 p.m.	6.55 p.m.	Rear of 56, Margaret-street, City.	"The Minerva Manufacturing Company."	Warehouse	"	Spontaneous ignition.	"	"	Box containing rubbish burned on fourth floor	"
"	7.60 p.m.	7.69 p.m.	71, Engine-street, Redfern.	Arthur Chrome	Confectioner	Brick, and shingle roof.	Lamp, upsetting of	None	"	Partition in shop slightly damaged by fire	Inmates, with buckets of water.
Saturday, 19 Sept.	"	4.0 p.m.	453, King-street, Newtown.	Unoccupied	Private dwelling.	Brick, and iron roof.	Gas explosion	"	London and Lancashire, £300.	A portion of ceiling in front room, and in hall, fallen down.	Workmen.
"	8.0 p.m.	None rec'd.	196, Stanmore Road, Petersham.	Fred. R. Hawke	"	"	Candle	"	Unknown	Contents of front bedroom, on first floor, slightly damaged by fire and water.	Inmates and neighbours, with buckets of water.
Sunday, 20 Sept.	11.44 a.m.	11.49 a.m.	15, Upton-street, City.	E. Daniels	Private dwelling.	Brick, and shingle roof.	Spark from chimney.	None	Mercantile Mutual, £200.	A small portion of shingle roof damaged by fire and cutting away.	M.F.B., with buckets of water.
Wednesday, 23 Sept.	4.40 p.m.	4.45 p.m.	Russell's Wharf, off Barker-street, City	Alderman J. Taylor	Wharf	Wood, brick, and iron roof	Rats, with matches.	New Zealand, £2,500.	Several offices, £10,000.	Several tons of chaff, bran, and wheat damaged by fire and water.	M.F.B., with one hydrant.
Saturday, 26 Sept.	2.15 a.m.	2.20 a.m.	21, Darling-street, Glebe	Peter McInerney	Private dwelling.	Brick, and shingle roof.	Spark from chimney.	Aust. Mutual, £150.	Aust. Mutual, £200.	A cottage of three rooms, roof nearly burned off; rooms under, with contents, severely damaged by water; furniture damaged by removal.	Glebe Vol. Fire Co., assisted by M.F.B., with one hydrant.
Sunday, 27 Sept.	1.45 p.m.	1.49 p.m.	Clergy Daughters School, Albion-street, Waverley.	Miss C. E. Fox (Principal)	School	Wood, and shingle roof.	Over-heating of stove.	Unknown	Liverpool, London, and Globe, £1,700.	A building of three rooms, about 30 ft. x 30 ft., used as a hospital; roof burned off, and ceiling under severely damaged by fire.	Waverley and Woollahra Vol. Fire Cos., assisted by other Vol. Fire Cos., and M.F.B., with one hydrant.
Monday, 28 Sept	1.40 a.m.	1.42 a.m.	37, Botany-st., Waterloo	D. Barker	Fruiterer	Weatherboard, and iron roof.	Unknown	"	Unknown	A stable, about 14 ft. x 14 ft., with contents burned out and fallen down; one horse burned to death.	M.F.B., with one hydrant.

* Mrs. Bagnell, aged 88 years, slightly burned about the hands.

DETAILS of Fires which have occurred within the Metropolitan District—continued.

Date.	When discovered.	Time of call.	Locality.	Name of tenant.	How premises occupied.	Construction of premises.	Origin or supposed cause of fire.	Insurances.		Extent of damage, &c.	Extinguished by
								Contents.	Building.		
Monday, 28 Sept.	2 0 a.m.	2 5 a.m.	Alma-street, Paddington.	Unoccupied	Private dwelling.	Brick, and shingle roof.	Light thrown down.	None	Australian Mutual, £350.	Stairs to first floor totally destroyed by fire; middle room on ground floor, and front room on first floor, severely damaged by fire and water; rest of building slightly damaged by fire, heat, and smoke.	M.F.B., with one hydrant.
"	2 20 p.m.	2 25 p.m.	140, Glenmore Road, Paddington.	John Pericles, M.D.	"	Brick, and slate roof.	Matches, careless use of.	"	Liverpool, Lond., and Globe, £300.	A small quantity of clothing damaged by fire in front room on ground floor.	Inmates, with buckets of water.
"	11 0 p.m.	11 7 p.m.	Union-lane, off Kent-street, City.	E. Lucas	Furniture store.	Brick, and shingle roof.	Unknown	"	Unknown	A small quantity of kapoek damaged by fire in room on first floor.	Employees, with buckets of water.
Tuesday, 29 Sept.	3 52 a.m.	3 55 a.m.	180, Elizabeth-street, City.	Sargeant and King	Printer's workshop.	"	"	Queensland Mutual, £175.	"	Back room, on first floor, used as a printer's workshop, and contents severely damaged by fire and heat.	M.F.B., with one hydrant.
Wednesday, 30 Sept.	8 25 a.m.	8 30 a.m.	129, Parramatta Road, Ashfield.	P. H. Pope	Private dwelling.	Weatherboard, and iron roof.	"	None	Australian Mutual.	A shed, about 8 ft. x 10 ft., at rear of premises, with contents, severely damaged by fire.	Inmates and neighbours, with buckets of water.
"	"	"	181, Parramatta Road, Ashfield.	W. Jacob	Baker	"	"	"	"	Side of stable slightly damaged by fire.	"
"	9 35 p.m.	9 33 p.m.	Angel Place, off Pitt-street, City.	"	"	Street	"	"	"	A box of rubbish in front of premises burned.	M.F.B., with buckets of water.
Thursday, 1 October.	3 18 p.m.	3 20 p.m.	9, Oxford-street, City	Mark Foy	Draper	Brick, and slate roof.	Matches, rats at	In several offices	"	A small portion of flooring and joisting boards in back room on third floor damaged by fire and cutting away.	Inmates, with buckets of water.
Friday, 2 October.	7 25 p.m.	7 30 p.m.	23, Short street, Balmain	John Ferguson	Private dwelling.	Weatherboard, and shingle roof.	Candle	None	Palatine	Back bedroom on ground floor, and contents, slightly damaged by fire and water.	Balmain Vol. F. Co., with buckets of water.
"	7 40 p.m.	7 49 p.m.	Blue's Point Road, North Sydney.	James Ryan	"	"	"	"	Alliance, £50	A weatherboard cottage of four rooms, with contents, nearly burned out, and roof partly off.	M.F.B., with one hydrant.
Saturday, 3 October.	2 20 a.m.	2 30 a.m.	9, Erskineville Road, Newtown.	Warwick Wilce	Cordial manufacturer.	Wood, and iron roof.	Hot ashes	South British, £700.	"	A portion of flooring damaged by fire and cutting away in rear portion of premises.	M.F.B., with hand-pump.
Friday, 9 October.	11 5 p.m.	11 10 p.m.	3, Macquarie Place, City.	E. L. Barker & Co.	Offices	Stone, and slate roof.	Unknown	None	None	Offices on first floor very severely damaged by fire and water.	M.F.B., with one hydrant.
"	"	"	"	Chard & Co.	"	"	"	Lion, £100	"	Rear offices on first floor and contents damaged by heat, smoke, and water.	"
"	"	"	"	Cowlishaw Bros.	"	"	"	United, £2,000.	"	Offices and contents on ground floor damaged by water; front door broken open.	"
"	"	"	"	The Pacific Insurance Company.	"	"	"	Queensland, £100	"	Contents of rear offices on ground floor damaged by water.	"
"	"	"	"	Holdsworth, Macpherson, & Co.	"	"	"	Guardian, £700	"	Contents of basement slightly damaged by water.	"
Saturday, 10 October.	2 53 p.m.	2 55 p.m.	25, Greck-street, Glebe.	William Glendennon	Shed	Wood, and iron roof.	Light thrown down	None	Australian Mutual, £500.	A shed, about 35 ft. x 10 ft., containing a quantity of fodder, harness, &c., severely damaged by fire and water.	"
"	10 10 p.m.	10 20 p.m.	King-street, North Botany.	William Garland	Private dwelling.	Weatherboard, and iron roof.	Spark from fire-place.	Mercantile Mutual, £200.	"	Back kitchen and contents on ground floor damaged by fire and water.	Inmates, with buckets of water.
Monday, 12 October.	11 21 p.m.	11 23 p.m.	Victoria-street, Darlinghurst.	Charles Cammoro, "Austral Club Hotel"	Licensed victualler.	Brick, and iron roof.	Candle	Unknown	Unknown	Small portion of furniture damaged by fire in back bedroom on second floor.	Inmates, with buckets of water.
Tuesday, 13 October.	6 40 a.m.	6 48 a.m.	91, Liverpool-street, City.	C. H. Perry	Restaurant	Brick, and slate roof.	Fat boiling over	Mercantile Mutual, £95	"	Ventilator over stove destroyed, and contents of kitchen slightly damaged by fire.	M.F.B. and inmates, with buckets of water.
Thursday, 15 October.	10 20 p.m.	10 25 p.m.	402, Bourke street, Surry Hills.	Vivian Johnston	Private dwelling	"	Matches, careless use of.	None	"	Contents of back bedroom on first floor damaged by fire and water.	Padd. Bry., Vol. F. Co., assisted by M.F.B., with hand-pump.
Sunday, 18 October.	8 39 p.m.	8 40 p.m.	97, Mitchell-street, Glebe	Sarah Whiteall	"	Brick, and iron roof.	Candle	"	"	Contents of front room on first floor slightly damaged by fire and water.	Inmates, with buckets of water.
Tuesday, 20 October.	8 2 p.m.	8 4 p.m.	Town Hall, Darling-street, Balmain.	Balmain Council	Yard	Yard	Burning rubbish	"	None	A portion of fencing and quantity of timber, logs, &c., severely damaged by fire in back yard of premises.	Balmain Vol. F. Co., assisted by M.F.B., with one hydrant.
Wednesday, 21 October.	6 5 p.m.	6 10 p.m.	77, Queens-street, Woolahra.	Ernest Hoskings	Private dwelling	Brick, and iron roof.	Light thrown down	"	Unknown	A quantity of straw and rubbish burned in front room on ground floor.	Woolahra Vol. F. Co., with buckets of water.
"	9 45 p.m.	9 51 p.m.	6, Little Rile-street, off Campbell-street, Surry Hills.	John Dickie	"	Weatherboard, and shingle roof.	Unknown	"	"	A cottage of two rooms and kitchen, with contents, very severely damaged by fire and water.	M.F.B., with two hydrants, assisted by Vol. Fire Co. s.
Thursday, 22 October.	3 30 p.m.	3 33 p.m.	78, George-street West, City.	Frank Hoskings	Furniture dealer	Brick, and iron roof.	Tar boiling over	Alliance, £500	Imperial, £750	Kitchen on ground floor and contents slightly damaged by fire, and mantel damaged by breakage.	M.F.B., with one hydrant.
Friday, 23 October.	2 0 a.m.	None rec'd.	Wooli Creek, Arncliffe.	M'Lean and Nelson	Wool sheds	Wood, and iron roof.	Overheating of drying-room.	United, £500	United, £770	Three sheds (30 x 40 ft., 30 x 20 ft., 30 x 18 ft.), used as wool sheds and pressing rooms, and containing a quantity of wool and machinery, burned out and fallen down.	Burned itself out.
Monday, 26 October.	1 50 a.m.	1 54 a.m.	49, George-street, Camperdown	J. L. Mooney	Produce store	Brick, and iron roof.	Overheating of hay.	Imperial, £200	Australian Mutual, £200	About 1 ton of chaff and a small quantity of lucerne damaged by fire and water; building slightly damaged by fire.	M.F.B., with one hydrant.
"	11 45 a.m.	11 53 a.m.	Beach-street, Woolahra	M. T. Banks	Boat-shed	Wood, and iron roof.	Lime, slaking of	Liverpool, London,	and Globe, £500	Room on first floor used as store and contents slightly damaged by fire.	Inmates and neighbours, with buckets of water.

* James Ryan, aged 5 years, slightly burned about the arms and feet, and taken to the North Sydney Hospital for treatment.

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DETAILS of Fires which have occurred within the Metropolitan District.—*continued.*

Date.	When discovered.	Time of a.m.	Locality.	Name of tenant.	How premises occupied.	Construction of premises.	Origin or supposed cause of fire.	Insurances.		Extent of damage, &c.	Extinguished by
								Contents.	Building.		
Monday, 26 October.	8:58 p.m.	8:50 p.m.	40, George street West, City.	Walter Lawrence	Shop and dwelling	Brick, and iron roof.	Lamp, upsetting of.	None	Unknown	Back room on first floor used as a workshop, with contents, slightly damaged by fire and heat.	M.F.B., with buckets of water.
Friday, 30 October.	7:0 p.m.	None rec'd.	50, Pyrmont-street, Pyrmont.	Hyburn M'Kenzie	Saw-mill	Weatherboard, and iron roof.	Overheating of boiler	Unknown	"	Partition of wood over boiler slightly damaged by fire	Police and neighbours, with buckets of water.
Saturday, 31 October.	1:55 a.m.	2:0 a.m.	Rowley-st., Alexandria.	*Annie Storey	Private dwelling	Weatherboard, and iron roof	Unknown	None	None	A weatherboard shed, about 10 ft x 10 ft., used as a wash-house, together with contents, severely damaged by fire	Inmates and neighbours, with buckets of water.
Thursday, 5 November.	12:30 a.m.	12:40 a.m.	Quatre Bras Tannery, Alexandria.	†H. Macnamara	Woolscourer and feltmonger.	Brick, and iron roof.	"	Imperial, £7000	"	Two buildings about 70 x 30 ft. each, containing a large quantity of wool, skins, &c., burned out and fallen down; other buildings adjoining, with contents, damaged by heat and water.	M.F.B., with one steam fire engine.
"	8:52 p.m.	8:50 p.m.	Gordon-st. and Abattor Road, Balmain	Federal Timber Co. (Manager, John Dunmug)	Timber merchants.	Timber Yard, Sawmill, and iron roof.	"	None	None	A quantity of timber, covering an area of 350 ft. x 150 ft., together with sawmill and machinery, destroyed by fire	M.F.B., with two steam fire engines, assisted by several Vol. F. Cos.
"	"	"	"	Federal Glass Co.	Glassworks	Wood, and iron.	"	"	"	Sides of building damaged by fire and heat	"
Monday, 9 November.	11 a.m.	None rec'd.	Off Fuller's Road, Wiloughby.	Mow Long & Co	Private dwelling	Weatherboard, and iron roof	Spark from fire-place.	"	"	A weatherboard cottage of four rooms, with contents, burned and fallen down.	Burned itself out.
Friday, 18 November.	2:44 p.m.	2:44 p.m.	Off New South Head Road, Woollahra.	F. Bennett	"	Brick, and iron roof.	Bush fire	"	"	A portion of fence burned adjoining building	M.F.B., with buckets of water.
Saturday, 14 Nov.	1:55 p.m.	1:58 p.m.	New South Head Road, Woollahra.	P. Bowles and Son ..	Grocer	"	Lightning	Victoria, £2,000.	"	Flag pole on roof of house and about 6 feet of parapet destroyed by lightning.	Inmates.
Monday, 16 Nov.	6:11 p.m.	6:15 p.m.	234, Clarence st., City	Levy Bros.	Waterproof clothing manufacturers.	"	Smoking tobacco	N. Queensland, £325; Queensland & Ind. £24; S. N. £325; New Zealand, £325—£1,100.	United, £2,240; Liverpool, £2,240; Netherlands, India, £1,240; National of N. Z., £2,240; Victoria, £2,240—£11,200	Fittings and contents of work-room on first floor very severely damaged by fire and water; upper floors damaged by heat and smoke, and windows damaged by breakage.	M.F.B., with one hydrant.
"	"	"	"	P. Henry	Agent	"	"	"	"	Contents of front room on first floor, consisting of briar pipes, damaged by heat and smoke.	"
"	"	"	"	Lamson Stove Service Co. (Manager, A. E. Rand)	General importers	"	"	Palatine, £1,500 ..	"	Contents of ground and basement floors damaged by water	"
Wednesday, 18 Nov.	12:50 a.m.	12:54 a.m.	Wattle-street, City	G. and C. Hoskins ..	Foundry	"	Upsetting of kerosene lamp.	Unknown	Unknown	A small quantity of paint and oil destroyed in store on ground floor.	Employees, with ashes.
Friday, 20 Nov.	12:0 a.m.	12:3 p.m.	Abattoir Road, Balmain	Union Box Co (W. Guthrie, manager)	Factory	"	Overheating of furnace.	Several offices, £2,000.	"	A quantity of shavings burned in furnace-room	Employees, with buckets of water.
Saturday, 21 Nov.	7:52 a.m.	7:56 a.m.	52, Macquarie-st South, City.	Mrs. Butler	Private dwelling..	"	Children playing with matches.	None	None	Contents of back bed room on first floor slightly damaged by fire and water.	Neighbours, with buckets of water.
"	11:35 p.m.	11:40 p.m.	179, Victoria-street, Darlinghurst.	Mrs. D. Dyson	"	Weatherboard, and iron roof.	Careless use of matches.	"	"	Contents of front room in cottage slightly damaged by fire	M.F.B., with hand-pump.
Tuesday, 24 Nov.	10:50 p.m.	10:50 p.m.	130, King-street, New Town	Mrs. Emily Cole	Draper	Brick, and iron roof.	Unknown	Col. Mutual, £150	Unknown	Shop and contents severely damaged by fire and water	M.F.B., with one hydrant.
Wednesday, 25 Nov.	6:10 a.m.	6:18 a.m.	Bourke and Filary Streets, Surry Hills.	Building in course of erection. W. Bothe contractor, 70, Bourke-street, Redfern.	"	Wood, and iron roof.	Line slaked by rain.	"	Aust. Mutual, £2,000.	A shed at rear of premises containing a quantity of builders' material burned and fallen down.	Paddington Brewery V.F. Co., assisted by M.F.B. with one hydrant.
Friday, 27 Nov.	11:16 p.m.	11:20 p.m.	48, Raglan-streets, Darlington.	A. Kaminsky	Furniture manufacturer	"	Unknown	United, £200	Unknown	Workshop on first floor, with contents consisting of drilling machine and a small quantity of bamboo furniture slightly damaged by fire and water.	M.F.B., with one hydrant.
Saturday, 28 Nov.	10:0 p.m.	10:1 p.m.	Cook's River Road, St. Peters.	Charles Cook	Produce merchant	Brick, weatherboard, and iron roof	Spontaneous ignition.	Victoria, £200 ..	Victoria, £40	A quantity of fodder damaged by fire and water, and lining boards damaged by fire.	"
"	10:15 p.m.	10:25 p.m.	52 Malcolm street, Erskine-ille.	Robert Bennett	Private dwelling..	Brick, and slate roof.	Unknown	None	City Mutual, £250	Back kitchens on ground floor damaged by fire and water	Neighbours, with buckets of water
Sunday, 29 Nov.	3:30 a.m.	4:1 a.m.	Arden and Greville Sts., Randwick.	Unoccupied	"	Weatherboard, and iron roof	"	"	United, £200	A cottage of six rooms burned and fallen down	Waverley V.F. Co., with one hydrant, assisted by several V.F. Companies
Tuesday, 1 Dec.	1:55 p.m.	1:59 p.m.	Rear of 95, Sussex-st., City.	Dannister, Morris, & Co	Produce merchants	Brick, and iron roof	"	Col. Mutual, £200	Commercial Union, £3,000	Side of cottage adjoining slightly damaged by fire	M.F.B., with buckets of water
Thursday, 3 Dec.	11:53 a.m.	11:53 a.m.	249, Victoria-street, Darlinghurst	William Furness	Ironmonger	"	Vapour of spirit in contact with flame.	Sun	Unknown	Spirit lamp and methylated spirits destroyed by explosion.	Employees.
Friday, 4 Dec.	12:42 p.m.	12:46 p.m.	63, King-street, City	§Harrington & Co.	Photographic material importers.	"	Overheating of gas burner.	Scottish Union, £4,000.	Commercial Union, £2,333 Gs. 8d.	A quantity of photographic mounts on hard floor damaged by fire and water.	M.F.B. and employees, with buckets of water.

* Annie Storey (widow), aged 40 years, burned about the face, head, and hands; attended to at her home. † Previous fires, 5th April, 1898; 6th June, 1896. ‡ Previous fire, 6th March, 1895.
§ Previous fires—16th February, 1894, Kent-street; 18th August, 1896, King-street

DETAILS of Fires which have occurred within the Metropolitan District.—continued.

Date.	When discovered.	Time of call.	Locality	Name of tenant.	How premises occupied.	Construction of premises.	Origin or supposed cause of fire.	Insurances.		Extent of damage, &c.	Extinguished by
								Contents.	Building.		
Sunday, 6 Dec.	2-0 a.m.	2-20 a.m.	President Avenue, Rockdale.	Jas. McKenzie	Private dwelling	Weatherboard, and iron roof.	Unknown	Manchester, £75	None	A cottage of three rooms burned and fallen down, also a quantity of fencing damaged by fire.	Rockdale and Kogarah V.F.O., with one hydrant, assisted by M.F.B.
Wednesday, 9 Dec.	11-20 p.m.	11-27 p.m.	Cario-street, North Sydney.	Michael Miles	"	"	"	"	London and Lancashire, £50	A cottage of three rooms and contents burned and fallen down, also 20 yards of fencing damaged by fire.	"
Thursday, 10 Dec.	7-41 p.m.	7-44 p.m.	602, George-street, City	Mrs. N. A. Ward	Milliner	Brick and iron roof.	Lighting gas	Standard of New Zealand, £300.	Standard of New Zealand, £1,750	Shed in front shop and shop fittings severely damaged by fire and water.	"
"	"	"	"	C. Lemaire	Photographer	"	"	Standard of New Zealand, £300.	"	Contents of studio and dwelling damaged by smoke	"
"	11-15 p.m.	11-22 p.m.	118, Albion street, North Annandale.	John Newland	Private dwelling.	Weatherboard, and iron roof	Fat boiling over	Unknown	Unknown	A quantity of fat destroyed in washhouse at rear of dwelling.	Inmates.
Saturday, 12 Dec.	10-0 p.m.	None rec'd.	36, George-street, Redfern.	James Moss	Confectioner	Brick, and iron roof.	Explosion of kerosene lamp.	None	"	A small quantity of confectionery in shop window damaged by fire and water.	Neighbours, with buckets of water.
Sunday, 13 Dec.	2-0 a.m.	2-3 a.m.	442, George-street, City	Miss E. Hardy	Restaurant	"	Unknown	Colonial Mutual £350.	London and Lancashire, £1,000	Front room and contents on first floor severely damaged by fire and water; contents of shop under, consisting of confectionery, &c., damaged by water; second floor and contents damaged by smoke.	M.F.B., with one hydrant.
Friday, 18 Dec.	10-5 p.m.	10-11 p.m.	38, Chisholm-street, City	John M'Innes	Private dwelling.	"	Candle	None	Unknown	Contents of front bedroom on first floor slightly damaged by fire and water.	Inmates and Paddington Brewery V.F. Co., with buckets of water.
Saturday, 19 Dec.	2-0 p.m.	2-15 p.m.	Cheltenham-road, Burwood.	Frederick Broughton	"	Weatherboard, and iron roof.	Unknown	Mercantile Mutual, £250	"	A shed, about 12 ft x 12 ft, at rear of dwelling, with contents, burned out and fallen down; a portion of fencing damaged by fire.	Burwood and Ashfield Vol. F. Cos., assisted by M.F.B., with one hydrant.
Monday, 21 Dec.	1-0 p.m.	1-2 p.m.	162, Pitt-street, City	Australian Edison Electric Company. (Manager, W. J. N. Oldershaw).	"	Brick, and iron roof.	Light thrown down.	None	Commercial Union.	A shed at rear of premises, and contents, severely damaged by fire.	M.F.B., with one hydrant.
Tuesday, 22 Dec.	8-48 p.m.	8-51 p.m.	303, Darling-street, Balmain.	J. P. Williams	Milliners	"	Kerosene lamp, upsetting of.	Commercial Union, £265.	Australian Mutual, £1,500	Contents of shop window damaged by fire and water	Occupants, with buckets of water.
Wednesday, 23 Dec.	5-50 a.m.	5-53 a.m.	58, Margaret-street, City.	Jas. Moir & Co.	MERCHANTS	"	Unknown	South British, £150	Liverpool, London, and Globe, £1,600.	Cupboard and contents, consisting of boots, samples, &c., and partition on ground floor, severely damaged by fire. Staircase damaged by heat	M.F.B., with one hydrant.
"	11-50 a.m.	11-54 a.m.	35, Harrington-street, City.	Mrs. J. O'Connell	Grocer	"	"	Commercial Union, £190.	Unknown	Back bedroom on first floor, and contents, damaged by fire and water.	"
Thursday, 24 Dec.	7-35 p.m.	7-55 p.m.	315, Oxford street, Paddington.	Mrs. Anne Gee	Confectioner	Brick, and slate roof.	Matches, careless use of.	Mercantile Mutual, £230.	None	Front window, and contents, slightly damaged by fire and water.	Inmates, assisted by Paddington Vol Fire Co., with buckets of water.
Friday, 25 Dec.	12-10 a.m.	12-13 a.m.	11, Argyle-street, City	George Thomas	News agent	Brick, and iron roof	Candle	None	Unknown	A small quantity of bedding in yard at rear of premises damaged by fire and water.	Inmates, assisted by M.F.B., with buckets of water.
"	8-3 p.m.	8-5 p.m.	Park-street, Rookwood	John Robertson	Private dwelling	Weatherboard, and iron roof	Kerosene lamp, upsetting of.	"	None	A small portion of furniture in back kitchen damaged by fire.	Inmates, with buckets of water.
"	10-20 p.m.	10-49 p.m.	Water Falls Estate, North Sydney.	Ah Tong	Garden	"	Incendiarism	"	"	A quantity of pea sticks burned in garden, and a portion of fencing damaged by fire.	M.F.B., with buckets of water
Monday, 28 Dec.	8-50 p.m.	8-59 p.m.	Hunter's Hill	O. Ludowici	Tannery	Paddeck	Bush fire	"	"	Bush fire	Drummoyne Vol. Fire Co., with one hydrant.
Tuesday, 29 Dec.	3-0 a.m.	None rec'd.	High-street, Penrith	Mrs. W. Brewer	Confectioner	Brick, wood and iron roof.	Unknown	Phoenix, £100	Commercial Union, £400.	Shop and dwelling, consisting of 3 rooms, lathen, and outhouses, with contents, burned out and partly fallen down.	Police and neighbours, with hose reel and buckets of water.
"	"	"	"	Noble & Co	Milliners	"	"	Phoenix, £350	"	Shop and room at rear, with contents, consisting of millinery, &c., burned out and partly fallen down.	"
"	"	"	"	D. Austen	Bootmaker	"	"	None	"	Shop and room at rear, with contents, consisting of boots, &c., burned and fallen down.	"
"	"	"	"	*Mrs. M. A. Spence	Newsagent	"	"	Phoenix, £150	"	Window-blinds damaged by heat, windows broken, and contents slightly damaged by water.	"
"	9-10 p.m.	9-15 p.m.	Church-st., Parramatta.	Mrs. Gallagher	Draper	Brick, and iron roof.	Burning rubbish	Imperial, £1,200. United Australian, £1,600. New Zealand, £1,200; North British, £500. Commercial Union, £500. £5,000.	Unknown	Shed at rear of premises, and contents, damaged by fire and water.	Parramatta Vol. Fire Cos., with one hydrant.
Wednesday, 30 Dec.	3-0 a.m.	3-12 a.m.	827 to 831, George-st., City.	J. T. Ashwood	Grocer	Brick, with iron over shingle roof.	Unknown	Imperial, £1,000.	"	Second floor left, with contents, consisting of a large quantity of grocery, &c., nearly burned out; contents of first, ground, and basement floors severely damaged by water. Decorations in shop window damaged by fire.	M.F.B., with one hydrant.
"	7-37 p.m.	7-42 p.m.	80, Market-street, City.	Leonard Giraud	Confectioner	Brick, and iron roof.	Lighting gas	None	"	"	Inmates, with buckets of water.
Thursday, 31 Dec.	11-20 p.m.	None rec'd.	Mary-street, Waterloo	Unoccupied	Private dwelling.	Weatherboard, and iron roof.	Matches, children playing with.	"	City Mutual	Door of back room of cottage slightly damaged by fire	Neighbours, with buckets of water.

* An inquest was held on the 10th January, 1897, at which an open verdict was returned.

APPENDIX X.
SUMMARY of Localities for 1896.

City and Suburbs.	Class of Fire.									Total No. of fires.	False alarms.	Chimney fires.		Grand total.
	Slight.			Serious.			Total destruction.					Attended with engine, and reported as house fires.	Attended with hand-pump only.	
	In-sured.	Not in-sured.	Insur-ance un-known.	In-sured.	Not in-sured.	Insur-ance un-known.	In-sured.	Not in-sured.	Insur-ance un-known.					
CITY—														
Bourke Ward	6	1	...	1	...	...	...	...	...	8	4	...	...	12
Brisbane "	9	5	2	3	...	...	...	...	...	19	11	2	8	39
Cook "	8	7	...	...	1	...	2	...	...	18	3	3	4	28
Denison "	6	7	2	2	...	...	1	...	...	18	7	...	1	26
Fitzroy "	7	10	1	...	...	...	...	...	...	18	5	1	7	33
Gipps "	4	3	1	...	...	...	...	...	...	8	6	1	9	24
Macquarie "	7	2	1	1	...	...	...	...	...	11	3	...	3	17
Phillip "	4	3	2	...	1	...	...	...	...	10	2	...	3	15
Total	51	38	9	7	2	...	3	...	...	110	41	7	35	193
SUBURBS—														
Alexandria	4	4	...	2	...	...	...	...	...	10	1	...	1	12
Annandale .....	...	2	...	...	...	...	...	...	...	2	...	...	...	2
Ashfield	1	2	1	...	...	...	2	1	...	7	1	...	...	8
Auburn	1	1	...	...	...	...	...	...	...	2	...	...	...	2
Balmain	5	7	1	...	1	...	...	2	...	16	2	...	1	19
Botany	1	...	...	...	...	...	...	...	...	1	...	...	...	1
Burwood	3	...	...	...	...	...	1	...	...	4	1	...	...	5
Camperdown	1	...	...	...	...	...	...	...	...	1	2	...	...	3
*Carlingford .....	...	...	...	...	...	...	1	...	...	1	...	...	...	1
Concord	1	...	...	...	...	...	1	...	...	2	...	...	...	2
Darlington	1	...	...	...	...	...	...	...	...	1	...	...	...	1
Drummoyne	1	1	...	...	...	...	...	...	...	2	1	...	...	3
Enfield .....	...	...	...	1	...	...	...	...	...	1	1	...	...	2
Erskineville	2	...	...	...	...	...	...	...	...	2	2	...	...	4
Five Dock .....	...	...	...	...	...	...	...	...	...	...	1	...	...	1
Glebe	2	1	...	1	...	...	...	...	...	4	1	...	3	8
Hurstville	1	...	...	...	...	...	4	...	...	5	...	...	...	5
Kogarah	2	...	...	1	...	...	...	...	...	3	...	...	1	4
Leichhardt .....	...	2	...	1	...	...	...	1	...	4	1	...	...	5
Manly .....	...	2	...	...	...	...	1	...	...	3	...	...	...	3
Marrickville	1	3	...	1	...	...	...	1	...	6	2	...	...	8
*Merrylands .....	...	...	...	...	...	...	...	1	...	1	...	...	...	1
Mosman	1	...	...	...	...	...	...	...	...	1	...	...	...	1
Newtown	7	4	...	2	...	...	1	...	...	14	8	...	3	25
North Botany	1	1	...	1	...	...	1	...	...	4	...	...	1	5
North Sydney	2	10	1	1	...	...	1	...	...	15	9	3	6	33
Paddington	3	5	...	2	...	...	...	...	...	10	6	2	...	18
Parramatta	3	...	...	1	...	...	...	...	...	4	1	...	1	6
Penrith .....	...	...	...	...	...	...	1	...	...	1	...	...	...	1
Petersham	1	1	1	1	...	...	...	...	...	4	1	...	2	7
Randwick	1	2	...	...	...	...	2	...	...	5	3	...	...	8
Redfern .....	...	7	...	...	...	...	1	...	...	8	...	1	2	12
Rockdale	1	...	...	...	...	...	4	...	...	5	...	...	...	5
Rookwood .....	...	1	...	...	...	...	1	...	...	2	...	...	...	2
*Sherwood	1	...	...	...	...	...	...	...	...	1	...	...	...	1
Strathfield .....	...	1	...	...	...	...	1	...	...	2	...	...	...	2
St. Peters	2	...	...	...	...	...	...	...	...	2	1	...	...	3
Waterloo	2	2	...	...	...	...	...	1	...	5	1	...	...	6
Waverley	3	2	...	...	...	...	...	...	...	5	1	...	...	6
Willoughby .....	...	...	...	...	...	...	...	1	...	1	...	...	...	1
Woollahra	5	3	...	...	...	...	...	...	...	8	2	...	...	10
*The Harbour	3	...	...	2	...	...	...	...	...	5	1	...	...	6
*Hunter s Hill .....	...	1	...	...	...	...	...	...	...	1	...	...	...	1
Totals	114	103	13	24	3	...	26	8	...	291	91	13	56	451

* Outside Metropolitan Fire Brigade area.

APPENDIX XI.

SUMMARY of Trades for 1896.

Trades.	Class of Fire.									Totals.
	Slight.			Serious.			Total Destruction.			
	Insured.	Not Insured.	Insurance unknown.	Insured.	Not insured.	Insurance unknown.	Insured.	Not insured.	Insurance unknown.	
Bakers	2	2	.....	.....	.....	.....	.....	1	.....	5
Banks	1	.....	.....	.....	.....	.....	.....	.....	.....	1
Blacksmiths .....	.....	1	.....	.....	.....	.....	.....	.....	.....	1
Bootmakers and Factories.....	4	2	.....	1	.....	.....	.....	.....	.....	7
Builders and Contractors	2	2	.....	.....	.....	.....	1	.....	.....	5
Butchers	2	1	.....	.....	.....	.....	1	.....	.....	4
Boarding-houses	2	1	.....	.....	.....	.....	.....	.....	.....	3
Boiling-down Works .....	.....	.....	.....	.....	.....	.....	1	.....	.....	1
Buildings in course of erection	1	.....	.....	.....	.....	.....	1	.....	.....	2
Cement Works .....	.....	.....	.....	.....	.....	.....	.....	1	.....	1
Cordial Manufacturers	1	.....	.....	.....	.....	.....	.....	.....	.....	1
Confectioners	2	4	.....	.....	.....	.....	2	.....	.....	8
Carriers.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1
Churches and Convents .....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Coach and Carriage Builders...	1	.....	.....	.....	.....	.....	.....	.....	.....	1
Drapers	6	.....	1	1	.....	.....	.....	.....	.....	8
Fruiterers and Greengrocers ...	1	.....	.....	.....	.....	.....	1	1	.....	3
Furniture Dealers	2	2	.....	1	.....	.....	1	.....	.....	6
Foundries .....	.....	1	.....	.....	.....	.....	.....	.....	.....	1
Grocers	11	3	2	3	.....	.....	.....	.....	.....	19
Government Buildings .....	.....	4	.....	.....	1	.....	.....	.....	.....	5
General Merchants	3	1	.....	.....	.....	.....	2	.....	.....	6
Halls.....	2	.....	.....	.....	.....	.....	.....	.....	.....	2
Ironmongers	3	1	.....	.....	.....	.....	.....	.....	.....	4
Jewellers	1	.....	1	.....	.....	.....	.....	.....	.....	2
Licensed Victuallors	4	3	1	1	.....	.....	.....	.....	.....	9
Machinery Importers and Manufacturers.	1	.....	1	.....	.....	.....	.....	.....	.....	2
Milliners	2	.....	.....	.....	.....	.....	.....	.....	.....	2
Paddocks and Parks .....	.....	5	.....	.....	.....	.....	.....	.....	.....	5
Paper Factories	1	.....	.....	.....	.....	.....	.....	.....	.....	1
Painters and Decorators .....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Photographers	2	.....	.....	.....	.....	.....	.....	.....	.....	2
Private Dwellings	33	45	2	6	2	.....	12	3	.....	103
Produce Merchants	3	1	.....	.....	.....	.....	.....	.....	.....	4
Provision Merchants .....	.....	.....	.....	1	.....	.....	.....	.....	.....	1
Restaurants and Refreshment Rooms.	2	1	1	.....	.....	.....	1	.....	.....	5
Schools	1	.....	1	.....	.....	.....	.....	.....	.....	2
Ships	3	1	.....	2	.....	.....	.....	.....	.....	6
Stables .....	.....	3	.....	.....	.....	.....	.....	.....	.....	3
Stationers and Booksellers	1	1	.....	.....	.....	.....	.....	.....	.....	2
Sheds.....	4	1	.....	.....	.....	.....	.....	1	.....	6
Saddle and Harness Makers ...	1	1	.....	.....	.....	.....	.....	.....	.....	2
Streets and Yards .....	.....	7	.....	.....	.....	.....	.....	.....	.....	7
Soap Works.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1
Timber Merchants .....	.....	1	1	.....	.....	.....	.....	1	.....	3
Tobacconists.....	2	.....	.....	.....	.....	.....	.....	.....	.....	2
Tanneries	1	1	.....	2	.....	.....	.....	.....	.....	4
Undertakers .....	.....	1	.....	.....	.....	.....	.....	.....	.....	1
Unoccupied premises	3	2	.....	1	.....	.....	2	.....	.....	8
Wool Stores .....	.....	.....	.....	.....	.....	.....	1	.....	.....	1
Workshops	1	2	.....	.....	.....	.....	.....	.....	.....	3
Waterproof Clothing Manufac- turer.	.....	.....	.....	2	.....	.....	.....	.....	.....	2
Wharfs.....	1	.....	1	.....	.....	.....	.....	.....	.....	2
Warehouses	1	.....	1	1	.....	.....	.....	.....	.....	3
Totals.....	114	103	13	24	3	.....	26	8	.....	291

APPENDIX XII.

HOURLY and Daily Summary of Calls for 1896.

Hour.	Sunday.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.	Totals.
A.M., 1	7	1	6	5	4	2	...	25
" 2	5	2	6	3	...	4	...	20
" 3	3	4	1	2	3	5	3	21
" 4	1	...	2	3	2	...	1	9
" 5	4	...	2	1	2	1	2	12
" 6	...	...	...	2	2	1	1	6
" 7	3	...	2	1	1	1	...	8
" 8	...	...	1	3	...	1	1	6
" 9	...	1	1	1	...	3	1	7
" 10	2	1	...	1	...	2	2	8
" 11	2	2	1	1	1	4	1	12
" 12	3	...	2	5	2	2	1	15
P.M., 1	1	...	2	1	2	2	3	11
" 2	2	3	3	1	3	1	5	18
" 3	2	4	1	...	1	3	5	16
" 4	3	3	4	1	3	1	3	18
" 5	4	1	1	3	3	...	2	14
" 6	2	4	4	3	4	...	3	20
" 7	4	5	2	3	6	5	10	35
" 8	8	2	5	2	11	8	6	42
" 9	5	8	3	5	6	7	8	42
" 10	3	4	7	6	...	3	7	30
" 11	3	2	10	2	3	5	3	28
" 12	1	4	4	2	7	8	2	28
Totals	68	51	70	57	66	69	70	451

APPENDIX XIII.

WEEKLY Summary of Calls for 1896.

Week.	False Alarms	Chimney Alarms.	Fires.	Chimney with Engine	Totals.	Week.	False Alarms	Chimney Alarms	Fires.	Chimney with Engine.	Totals.
1st ending Jan. 4	6	...	5	...	11	29th ending July 18	1	...	4	1	6
2nd " " 11	5	...	8	...	13	30th " " 25	1	2	4	1	8
3rd " " 18	2	1	8	...	11	31st " Aug. 1	2	3	6	1	12
4th " " 25	1	...	3	...	4	32nd " " 8	...	1	7	...	8
5th " Feb. 1	4	...	10	...	14	33rd " " 15	1	1	1	1	4
6th " " 8	...	...	5	...	5	34th " " 22	...	1	8	...	9
7th " " 15	2	...	4	...	6	35th " " 29	2	2	6	1	11
8th " " 22	1	...	7	...	8	36th " Sept. 5	2	1	6	...	9
9th " " 29	1	...	5	...	6	37th " " 12	...	2	10	...	12
10th " March 7	...	...	5	1	6	38th " " 19	2	1	12	2	17
11th " " 14	4	...	4	...	8	39th " " 26	1	...	2	1	4
12th " " 21	3	...	3	...	6	40th " Oct. 3	1	1	12	...	14
13th " " 28	2	...	3	...	5	41st " " 10	1	2	3	...	6
14th " April 4	3	2	4	...	9	42nd " " 17	1	5	3	...	9
15th " " 11	3	1	13	...	17	43rd " " 24	4	...	6	...	10
16th " " 18	4	3	11	...	18	44th " " 31	1	1	5	...	7
17th " " 25	2	2	5	...	7	45th " Nov. 7	2	1	2	...	5
18th " May 2	2	1	9	...	12	46th " " 14	2	...	3	...	5
19th " " 9	4	1	4	1	10	47th " " 21	4	...	5	...	9
20th " " 16	2	2	6	...	10	48th " " 28	4	1	5	...	10
21st " " 23	1	1	3	...	5	49th " Dec. 5	...	2	4	...	6
22nd " " 30	4	1	5	...	10	50th " " 12	...	...	5	...	5
23rd " June 6	...	1	2	...	3	51st " " 19	...	...	3	...	3
24th " " 13	...	3	1	1	5	52nd " " 26	...	...	8	...	8
25th " " 20	...	1	5	1	7	from 26 to 31	3	...	7	...	10
26th " " 27	...	4	6	...	10						
27th " July 4	1	2	3	1	7						
28th " " 11	1	3	7	...	11						
							91	56	291	18	451

APPENDIX XIV.

MONTHLY Summary of Calls for 1896.

Months.	False Alarms.	Chimney Fires.		Class of Fire.									Grand Totals.
		Attended with engines, and reported to be house fires.	Attended with hand-pump only	Slight.			Serious.			Total destruction.			
				Insured.	Not insured.	Insurance unknown.	Insured.	Not insured.	Insurance unknown.	Insured.	Not insured.	Insurance unknown.	
January	18	.....	1	16	13	1	1	.....	.....	4	.....	.....	54
February.....	4	.....	.....	13	5	.....	1	.....	.....	2	.....	.....	25
March.....	10	1	.....	8	8	.....	.....	.....	.....	1	.....	.....	28
April.....	11	.....	8	9	20	.....	4	1	.....	3	1	.....	57
May.....	11	1	5	6	9	.....	1	.....	.....	3	1	.....	37
June.....	.....	2	8	6	2	1	5	.....	.....	1	.....	.....	25
July.....	3	4	9	5	5	4	2	1	.....	3	2	.....	38
August.....	6	3	7	8	9	3	2	.....	.....	2	.....	.....	40
September.....	5	2	6	15	13	2	3	.....	.....	1	2	.....	49
October.....	7	.....	7	9	7	1	2	1	.....	1	.....	.....	35
November.....	12	.....	2	6	3	1	2	.....	.....	2	2	.....	30
December.....	4	.....	3	13	9	.....	1	.....	.....	3	.....	.....	33
Totals { 1896	91	13	56	114	103	13	24	3	.....	26	8	.....	451
{ 1895.....	82	18	64	114	159	26	18	1	1	27	19	2	533

APPENDIX XV.

COMPARISON of Calls for the period 1885 to 1896.

	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	Totals.
Casualties .....	.....	.....	.....	.....	.....	2	1	1	.....	.....	2	.....	6
False alarms	42	32	14	35	33	44	52	47	68	49	82	91	589
Chimney alarms.....	64	40	60	61	45	52	33	75	75	90	82	69	746
Fires, slight	160	150	174	222	179	205	216	270	210	206	299	230	2,521
„ serious.....	13	21	18	19	17	12	27	21	23	23	20	27	241
„ total destruction	23	34	15	25	29	18	19	23	25	41	48	34	334
Totals	302	277	281	362	303	333	348	437	401	409	533	451	4,437

APPENDIX XVI.

SUMMARY of Causes of Fires for 1896.

Boiling over of fat, tar, &c.	11	Incendiarism	4
Burning rubbish.....	10	Lamp, kerosene, explosion of	4
Boiler, overheating of	2	„ „ upsetting of	6
Candle.....	47	Lightning	1
Chemicals, explosion of	1	Light thrown down	36
Doubtful or Unknown	66	Lime slaked by rain	3
Furnace, overheating of.....	4	Matches, careless use of.....	8
Fire, careless use of	2	„ children playing with	9
Fireworks	2	„ rats at	6
Flue, defect in	3	Smoking tobacco.....	11
Foul chimney	69	Spark from another fire.....	1
Gas bracket or burner	14	„ chimney	20
„ explosion of.....	6	Spontaneous ignition	5
„ pipe, defect in	1	Vapour of spirit coming in contact with flame	2
Hot ashes	3		
Hearth, defect in	3	Total	*360

* This includes 69 chimney fires.

APPENDIX XVI.

SUMMARY of how Fires were reported to the Brigade for 1896.

Calls given by.	Fires.	False Alarms.	Chimney Alarms.		Totals.
			Reported as House Fires.	Attended with hand-pump.	
Alexandria Volunteer Fire Company	8	.....	.....	.....	8
Ashfield Volunteer Fire Company	7	3	.....	.....	10
Balmain Volunteer Fire Company	4	.....	.....	.....	4
Burwood Volunteer Fire Company	5	1	.....	.....	6
Citizens	47	6	2	20	75
Drummoyne Volunteer Fire Company	3	1	.....	.....	4
Fire Alarm Telephones	86	56	6	15	163
G.P.O., per telephone	52	13	2	5	72
Glebe Volunteer Fire Company	1	1	.....	2	4
Granville Volunteer Fire Company	1	.....	.....	.....	1
Kogarah Volunteer Fire Company	2	.....	.....	.....	2
Leichhardt Volunteer Fire Company	3	.....	.....	.....	3
Meat-preserving Company Volunteer Fire Company	3	.....	.....	.....	3
Manly Volunteer Fire Company	2	.....	.....	.....	2
Night Watchmen.....	2	.....	.....	.....	2
North Botany Volunteer Fire Company	2	.....	.....	.....	2
North City Volunteer Fire Company	2	.....	.....	3	5
Newspaper reports	1	.....	.....	.....	1
Paddington Volunteer Fire Company	6	2	1	.....	9
Paddington Brewery Volunteer Fire Company	5	1	.....	.....	6
Parramatta No. 1 Volunteer Fire Company.....	2	.....	.....	.....	2
Parramatta No. 2 Volunteer Fire Company.....	1	1	.....	.....	2
Police Stations, per telephone	30	2	1	5	38
Railway Department	3	.....	.....	1	4
Rockdale Volunteer Fire Company	1	.....	.....	.....	1
Seen from Station .....	.....	2	1	4	7
Standard Brewery Volunteer Fire Company	5	.....	.....	1	6
Tower, Headquarters Station	2	1	.....	.....	3
Waterloo Volunteer Fire Company	1	.....	.....	.....	1
Waverley Volunteer Fire Company	1	1	.....	.....	2
Woollahra Volunteer Fire Company.....	3	.....	.....	.....	3
Totals.....	291	91	13	56	451

1897.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

MR. W. L. VERNON, F.R.I.B.A., GOVERNMENT
ARCHITECT.

(REPORT SUBMITTED BY, IN CONNECTION WITH HIS RECENT VISIT TO THE UNITED KINGDOM
AND CONTINENT OF EUROPE.)

Printed under No. 22 Report from Printing Committee, 18 November, 1897.

The Government Architect to The Under Secretary for Public Works.

Department of Public Works, Government Architect's Branch,
Sydney, 12 November, 1897.

MINUTE PAPER.

I HAVE the honor to report that during my recent visit to Europe, and owing to the consideration of the Minister, I was able to devote the months of July and August to inspecting various buildings both in England and on the Continent, and generally to make myself acquainted with the progress in architecture during the last ten years, particularly with reference to technical details and improved methods of building.

Having this object in view, I visited a large number of Gaols, Police Buildings, Hospitals, Asylums for the Insane, Post Offices, Parliament Houses, Exhibition buildings, also the Royal Mint, Law Courts, Electric light Plants, and numerous factories and works in connection with the production of Sanitary appliances.

I have to gratefully acknowledge the cordial assistance rendered me by the Agent-General and his Secretary (Mr. Yardley) in obtaining the best facilities for visiting all these buildings, and, so far as the Continent was concerned, in obtaining the necessary letters of introduction from Lord Salisbury to the several Ambassadors and Ministers.

As regards the Government buildings visited, the general impressions I have gained are that in asylum and post-office work quite the most modern improvements and systems have been adopted, and in that relating to prisons and police stations the work is of a more stereotyped character; but while there are many items of interest in the latter, I am of the opinion that the Government buildings of this Colony do not suffer by comparison.

It is in works of private enterprise that one sees the immense progress in all matters relating to the building art, and in all classes of buildings it is everywhere apparent that in sanitary matters and fittings the arrangements are hardly possible of improvement; while the use of English fittings and appliances appears to be universally adopted on the Continent, both in hotels, steam-boats, railways, and public buildings. Hitherto the best of these fittings have not been used, except to a limited extent, in Australia, possibly owing to their cost, but doubtless suitable opportunities for so doing will arise.

I also visited several of the most important factories for sanitary ware, and Messrs. Bradford's laundry works, and Messrs. Chubbs' safe-works.

One of the most marked improvements in London and the large provincial towns consists in the construction of public underground lavatories, fitted up by the best makers in a most complete manner, and producing in many instances, I understand, a handsome return upon their cost.

On visiting the Royal Mint, I made a close inspection of the whole of the extensive premises. The coinage of silver, just then in full operation, was produced from the same plant as that used for the gold coinage, and I was somewhat surprised to find that in so large an establishment no separate plant exists, while I was informed that nearly the whole of the gold coinage of the British Empire is now produced by the Australian mints. The buildings are old, and consequently not well arranged. Extensive rebuilding of some portions is now proceeding, and the engineer-in-charge informed me that (upon precisely similar grounds as those existing in Sydney) the works were being carried out on the day-work basis as distinct from contract, and by men specially engaged.

As regards theatres and public places of amusement, the regulations laid down for fire-proof construction, and sufficiency of exits, &c., are most rigidly enforced, and in cases of recent buildings of this class, sites bounded by at least two streets, and sometimes three, are invariably secured to the great diminution of danger by fire to adjoining properties. This is in marked contrast to the conditions of the sites of some of the theatres recently erected in Sydney.

I made particular inquiries as to the policy of the Works Committee of the London County Council with reference to open competition amongst contractors, to the introduction of day-work, and to the use of the minimum-wage clause. I could, however, gain very little reliable information upon these points, as they are all passing through an experimental and critical stage, and are the subject of great controversy, due probably to the action of the responsible officers of the Works Committee in so dealing with day-work building accounts, as that factitious total costs have been arrived at, possibly in order to obtain results in accordance with the principles (for or against day-work) in vogue with the majority of the Committee for the time being. The administration was so much under a cloud, and party feeling was so high, that, as before stated, nothing of any value could be obtained.

As regards open competition for contract works, from what I heard, a system of selection has grown up. I have further on reported in connection with Metropolitan police stations, that about thirty contractors are on an approved list, and are invited to tender for works to be put out. In post offices an unrecorded selection at the discretion of the Architect's Branch has become adopted, while in the asylums, which are erected by private architects in private practice under direct commission, those architects take care that none but tried contractors, mostly personally known to themselves, have an opportunity of tendering.

I found in the specifications also no hesitation in mentioning makers' names of special fittings required, to the great advantage of the buildings. This is the universal practice of the profession in England, and has encouraged certain manufacturers to produce special articles of the highest excellence, and of the latest invention, the large amount of business that comes to them through this channel producing the capital necessary for these very extensive undertakings. The absence of this custom in the work here has in some instances placed the Department at a disadvantage, and it has been found impossible to refuse to accept articles and fittings up to a certain standard submitted by the contractors and of unknown make, while those of a special maker would have been preferable.

With regard to the carrying on of works on a day-work basis, my observation went to show that there is a tendency both in London and in the Municipalities to adopt the system in such cases where works are of a highly technical character, and where perfection of execution is of more importance than either time or money. I did not find any decided movement towards the minimum-wage rate, excepting, as I before mentioned, in connection with the London County Council.

Generally speaking, the rule in building matters is to determine by public competition, and in the higher class of work to restrict tendering to approved contractors.

I feel that the advantage of having seen so much modern work will prove to be of great assistance to me in the duties of my office, and I trust of equal value to the Government. I have been able to compare both our classes of buildings and the mode of construction with those adopted in England and on the Continent, and the result has convinced me, after an absence of ten years (that being the period that has elapsed since my last opportunity of seeing modern work), of the great value of a revisit, from a professional point of view.

I was everywhere struck with the importance given to the sites for public buildings. London was, up till recently, an example of the neglect of this important feature, most of the public buildings and the sites being anything but roomy and dignified; of late years, however, the authorities have fully awakened to the importance of this, and enormous sums of money have been spent in redeeming the mistakes of the past—wide, well-formed streets have been cut through the denser portions of the city—the surroundings of public buildings have been enlarged by demolition and otherwise—and the now completed series of public and palatial private buildings overlooking the Thames Embankment present an appearance, owing to the beauty and openness of the sites, unequalled in the world.

In the Continental cities I visited the importance of open sites has always been held in view, the consequence being that, with hardly an exception, the notable buildings are well placed. Unfortunately, this cannot be said of Sydney, except in a few instances; and in the event of the erection of new Parliament Houses and Law Courts, I would urge that the greatest possible attention be given to, and the broadest views taken of this important matter.

The following special reports upon the classes of buildings are necessarily very much condensed, and contain but few details, but it may be understood that a great deal has been impressed upon my mind which it is not possible to state fully. I also have the advantage of having obtained plans and sketches, and promises of more should they be at any time required:—

Prisons.

The prison I particularly wished to see, and about which the Comptroller-General of Prisons had specially desired me to make inquiries, is that recently established for female prisoners exclusively, at Aylesbury. I accordingly made the necessary arrangements, and paid this institution a visit.

Prisoners under sentences of nine months and upwards are drafted here from all parts of the country, although, at the same time, those on shorter sentences, I understand, under certain circumstances, are also confined. On my visit the total number of inmates was about 230.

The prison is under the charge of a governor, who is also medical superintendent—an arrangement which, I believe, is working well. He has the necessary warders and male attendants for heavy and guard duties, and a matron and female warders for dealing directly with the prisoners.

Having heard a great deal as to this modern institution, I anticipated finding a model structure, embracing all the latest improvements applicable to prison construction and administration; but I regret I was doomed to disappointment. The buildings are really an old county gaol, converted and added to for the purpose of its present use, while the additions have been made in the most economical way possible. The governor, I understand, is much hampered in consequence of the defective planning, and finds it difficult to carry out his duties efficiently.

After a very close investigation, and obtaining all the information that I possibly could upon the special subject of exclusive female prisons, and having the first experiment of Aylesbury fully in view, I formed the opinion that should such an institution be contemplated in this Colony, it would tend more to economy and efficiency to erect a building specially for the purpose, rather than convert existing premises, even if the first cost appeared smaller.

The original wings at Aylesbury are occupied by the prisoners in separate cells, and as these are not of modern construction, they call for no special comment.

The kitchen, bathrooms, storerooms, and offices generally are very inferior, and the cooking is done with a plant that in this Colony would be unhesitatingly condemned.

All prisoners, being lodged in separate cells and confined there, except when in the exercise grounds or in the associated workrooms, have no communication with each other, and they are practically treated on what is known as the "solitary system," the conversation when associated at work, I understand, being extremely limited.

The laundry is used only for the washing in connection with the inmates themselves, and consists of a central room containing a small plant, and that of a simple description, and a series of compartments ranging round the room, about thirty in number, as illustrated in the accompanying sketch. These compartments are entered from the central room and lighted from the outside wall, and are fitted internally with

with the necessary washing-troughs, batten dressers, and water supply. The object of this arrangement is for one prisoner to be located in each compartment, with a fixed amount of work given her when she is locked-in in solitary confinement during the hours of labour. The Governor, however, informed me that this mode of treatment is considered too severe, and his practice was to use the system in special cases only, and generally have all the laundry work done in association.

The endeavour to make this prison an industrial institution may, I understand, be considered as successful. Every able-bodied prisoner is at work. Some are engaged in making and repairing under-clothing for the inmates of prisons generally; others again are engaged in making up the lighter class of mail-bags for the postal authorities, while others are employed in making twine, also for post office use. This latter occupation is done in a long shed in which a rope-walk has been set up, and here the inmates prepare the material, make the twine, and with the aid of simple machinery, wind it into balls of given length, and finally form it into packages. I understand that the demand is so constant that full occupation is found for a considerable number of women in this industry. It is well adapted for female labour, being of a light and healthy character, and its adoption is well worthy of the consideration of the prison authorities of this Colony.

All the prison cleaning, except of the heaviest character, and all the cooking, is done by prison labour.

The open areas within the prison walls lack the careful and, to an extent, attractive garden appearances of some of the best prisons in this Colony, but the ablest-bodied of the inmates are engaged in the cultivation of vegetables for prison use, and I was shown a vegetable garden patch the whole length of one side of the prison premises, about 100 yards by a width of about 20 yards, which was cultivated, and was then bearing heavy good-looking crops, chiefly potatoes, cabbage, onions, carrots, &c.

There is a commodious chapel attached to the prison. Like all English prisons where the prisoners are lodged in their cells, except when specially employed, there is no attempt at relieving the gloomy appearance of the yards generally by cultivating shrubs, flowers, and grass.

Owing to these buildings having been erected at various periods, it was not possible to obtain any idea of the cost, and I could well see that had that information been procurable it would have been of no practical use.

Aylesbury is a country town, situated about 35 miles from London, and the prison is about 1 mile distant from the town boundary.

No provisions are made for executions in this prison.

With regard to prison industries, the only actual and thoroughly industrial prison in England is that at Wakefield, in Yorkshire, and prisoners only are here confined who are able-bodied and are conversant with some operative trade. It is the centre of the commercial dealing with prison products, and every opportunity is taken to produce articles which can be done with a minimum plant, and, at the same time, without injury to outside trades, and that are likely to produce some financial result.

As circumstances so vary in this Colony with those governing the Home prisons, I do not suppose it is possible to institute a similar prison; indeed, the present system seems more preferable, namely, that in which the inmates in every first-class prison in the Colony, so far as is possible, are given occupation.

The two large convict establishments in which hard out-door labour is carried on are those of Dartmoor and Portland, the systems of which are somewhat similar to those at Trial Bay.

With a view of inspecting the miscellaneous industries carried on in a partial manner at other well-known prisons, I visited those at Wormwood Scrubs and Wandsworth.

The former was erected recently, partly to take the place of the old penitentiary at Millbank, which has now been demolished, while the latter was erected to provide for the increase of prisoners, consequent on the increase of the population of London generally.

The general appearance of these prisons during the day-time differs considerably from that of the first-class prisons of this Colony, inasmuch as with the exception of the prisoners visible in the workshops and on the exercise rings none are either seen or heard, although it may be that the accommodation of the prison is fully taxed. The prisoners are lodged in separate cells, and there they remain day and night, except for the purpose of exercise, and in some cases occupation. There is a large number of prisoners, however, whose occupation is carried on in their respective cells in a manner similar to that adopted at Berrima. Amongst other occupations progressing in the cells, I noticed that of weaving a very creditable class of Axminster rug on simple looms fitted into spare cells, in which prisoners do not sleep; also the preparing for and making of every description of fibre mats, and the coarser and heavier work in connection with postal mail-bags, this latter being carried on in a very systematic and regular manner, the demand of the Postal Department being very constant and considerable.

The special labour workshops in both these prisons are constructed in some cases with a view to the isolation of the individual, and in others to the isolation and grouping of trades—the whole being under the direct oversight of the warders. In one case, namely, that of the shoemakers and tailors' shops, each prisoner is confined in a compartment (*see* plan attached), with side partitions shutting off communication from those adjoining, open in the front towards the raised warders' platform, and also opened to a gangway in the rear, backed on to the outside walls, against which stands a range of benches and tool-racks for the larger class of work, and each compartment is furnished with a suitable bench and stool.

This arrangement for separating prisoners, however, I was given to understand, is somewhat objectionable, as the warder, in his frequent beat up and down the whole length of the platform, becomes obscured by the partitions from all but those prisoners immediately to his right and left, and the supervision, therefore, is not perfect. To obviate this, other workshops have been planned, notably those for carpenters, smiths, fitters, painters, &c., with compartments formed by dwarf walls about 4 ft. 6 in. high (*see* also accompanying plan), down the centre of which, also, is constructed the warders' platform. The supervision here is uninterrupted, and in all cases very favourably commented upon by the officials with whom I came in contact.

In no case did I find that the warders' gangway was closed in by wire-netting as a protection against attack, while, on the contrary, the flights of steps leading to the gangways opened into some of the compartments. This latter arrangement appears objectionable, and in the accompanying sketch I have shown them as outside the building, so that no facility should be given to a prisoner to mount the gangway.

For hard-labour and punishment drill, there is a building at Wandsworth (*see* accompanying plan) containing twelve separated cells, six on either side of the usual raised platform, but opened to the platform, and approached from the rear. Through each set of six cells is fitted a crank shaft for pumping purposes, and

and so regulated as to require the united efforts of all six or twelve prisoners, as the case may be, to work the gear. This appliance takes the place of the older treadmill, and I am rather of the opinion will, before long, also follow it into the past.

In neither of these prisons did I see any other than the ordinary industries carried on, excepting those for the post-office authorities beforementioned; and, as is the case in this Colony, the same difficulty presents itself in finding occupation.

I inspected the punishment cells generally, and found that, intentionally, they are not so severe as those in this Colony; in no case, I was informed, throughout the whole country was there such a thing as a "dark cell" in use; and, while the punishment cells were as much as possible isolated, and in some cases, in a separate basement, the punishment consisted more in the severe regimen and incarceration, than in the physical and mental pain of absolute darkness.

Wandsworth Prison contains a very useful set of cells for the first accommodation of incoming prisoners previous to their classification, and also for the final dealing with time-expired prisoners. In large prisons of this character, containing upwards of 1,500 to 2,000 inmates, such arrangements are extremely useful and necessary.

These prisons have special buildings erected as bathrooms, that in Wormwood Scrubs containing fifty-four baths, each in its own partial enclosure, and partly open to the broad gangway patrolled by the warders. This arrangement I consider superior to the arrangements for bathing in the prisons of this Colony, and the plan has been noted for future use.

The kitchen and offices, though on a larger scale than those here, are in no way better fitted up—cooking by steam, as also in this Colony, has been found the best and generally adopted.

Special cell fittings and conveniences, such as doors, locks, provision for inspection, cell windows, &c., are not, as I also noticed to be the case in police buildings in London, nearly so perfect as in this Colony; apparently older types have in a conservative spirit been still adhered to.

There is no electric light in any prison in England, and I understand that the authorities do not expect its introduction. The lighting is chiefly by gas, each cell being lighted, but in many cases, I found, in a manner that we here consider as very undesirable.

Every cell, also, has its bell communication, and many have wood floors and ceilings, with the corresponding difficulty of keeping clear of vermin. They are, however, warmed by hot water in the winter, and appear to be well ventilated.

Each prisoner is provided with a wooden-plank bed and limited bedding, and a small table and stool, besides one or two shelves in which to keep his regulation articles and books, no doubt the long incarceration making it absolutely necessary that some such personal comforts should be allowed.

On inquiry I ascertained that in no cases are night-tubs used in the cells, but the prisons are provided with water-closets and lavatories, a suite of such being generally placed on either side of the wings about half-way in the length of cells, and, of course, on each floor. The closets are fitted with half-doors, and the lavatories are quite open, so that supervision is always possible.

Owing to the cell treatment of prisoners, and to the fact that they are never allowed in the yards excepting when exercising in the rings, which latter are of greater length and more extent than those in vogue in this Colony; there is no need, therefore, for watch-tower and platform provision, and consequently these adjuncts are not to be found. For the same reason, I presume, the yards present a most gloomy and heavy appearance. No trees or shrubs have been planted, and no flowers cultivated, and the whole has a most depressing effect. I am certainly of opinion that the practice in this Colony of employing prisoners on flower and vegetable cultivation is the better of the two.

I was not able to obtain any definite information with regard to penitentiaries for short-sentence prisoners, vagrants, and petty offenders; indeed, the matter is still under consideration, and no establishments have as yet been erected for this object.

The same also applies to establishments for inebriates, and, so far as I could form an opinion, I should say that the authorities in this Colony are quite as well able to initiate this system successfully as those at Home.

I should have liked to have paid a visit to the Broadmoor Criminal Lunatic Establishment, although I was quite certain, from all the information I obtained, that so far as the arrangements of the buildings were concerned, they were not of the latest description, and there would not, consequently, be much fresh light to be gained. I was disappointed, however, by finding that it was neither under the control of the Lunacy Commissioners nor under that of the Comptroller of Prisons, but directly under the Home Office. This being the case, I further found difficulties in the way of obtaining an *entree*, which time alone could have got over, and this I could not afford.

The large class prisons contain a few observation cells for suspected lunatics, but the provision of padded cells is very rare.

Police Buildings.

For years the construction of metropolitan and country districts police buildings has had the closest attention of the Inspector-General of Police of this Colony and of this branch of the Public Works Department, resulting in the impression that this class of building here, is at least equal in most respects to that erected under the London County Council.

In order to be able to be in a position to form an exact opinion on this point, and also to obtain all information possible, I put myself in communication with the police authorities, and, as a result, had all the information I required placed at my disposal.

I closely examined the whole of the plans of such metropolitan and suburban police stations as had undergone alterations or had been erected during the last few years, or are now being erected. Many of the older buildings, although much improved, are out of date; others have undergone a modern rearrangement and enlargement; while others again have been altogether erected on the most modern of plans, though, in some cases, on very confined sites.

I was informed that should I at any time desire tracings of any of these plans or particulars, and information was so sent through the Agent-General, no difficulty would be placed in the way of their being forwarded to Sydney.

In connection with the erection of new buildings, the designs disclosed the general tendency to give the exterior of the buildings a less forbidding look and cold classical appearance than formerly, and in the case of several of the suburban ones, they presented very similar appearances to many of the more recent ones erected in the country districts of this Colony.

It is gratifying to be able to report that, as a whole, the New South Wales modern police buildings compare most favourably with those in England, and, in some respects, I am of the opinion, are superior.

For the sake of comparison, and for general information, I was advised to inspect buildings of three distinct types, namely, the rearranged existing central police station at Chelsea, a new metropolitan station at King's Cross, and a small suburban one at Willesden.

I found the arrangements of the metropolitan stations, so far as the police themselves are concerned, who do all their parading and mustering on the premises, perhaps more complete and comfortable than those adopted here. Besides containing comfortable messroom and kitchen, each constable has a portion of the general dormitory partitioned off into a cubicle for his own separate use, and this, while containing a sufficiency of cubic air-space, is also fitted up with little conveniences and specially-designed, self-contained furniture. The accommodation for washing is by one general lavatory per floor, with bathrooms, &c., attached. A specially-constructed room for drying both police and prisoners' clothing is provided, generally in the basement, and this convenience is found to be of considerable use.

The quarters also contain well-equipped billiard, reading, and smoking rooms, and a special effort appears to be made to complete these as comfortably and as attractively as possible. The inspectors informed me that it is found a great convenience to attract and retain the single constables within the building when not on duty.

The furniture for these rooms, I understand, is all found by the department, the men having their library and newspaper funds amongst themselves.

Of course, such accommodation as the foregoing is necessarily applicable only to large centres, and it is well worthy of consideration whether as opportunity occurs such provision could not be made in the establishments at the Central Police Station and Belmore Barracks, Sydney, and possibly at Newcastle and Broken Hill.

Making all due allowance for the differences of administration between that of the metropolitan area and of this Colony, the arrangement here for the retention of prisoners compares more than favourably with that in the metropolitan district. I found white glazed lining bricks, from economic motives, too sparingly used, consequently the walls in many cases looked very grimy and lacked a sense of cleanliness inseparable from white glazed bricks. The lighting of the cells in many cases was indifferent, and sufficient care had not been exercised to isolate it from the adjoining properties. The admirable provision in the Sydney lock-ups for the continuous observation of drunken and sick prisoners by means of large grilled openings does not exist, while the distinctiveness of arrangement as between male and female prisoners does not appear to have been considered. I noticed cases in which female prisoners would be confined in cells immediately adjoining those in which male prisoners were confined, and although detention is of a much shorter period than with us, it appeared to me to be objectionable.

Some of the women's cells were lined with a new material called "Opalesque," which answers apparently the same purpose as glazed bricks; but as it is only placed on the walls in very thin layers, and that, I understand, only experimentally at present, I am quite prepared to find that in course of time it will be much damaged and rendered useless.

The lavatory and washing accommodation generally is provided for with better fittings and in a more complete manner than in Sydney; and until a complete system of sewerage is available for all police stations in the metropolitan area it will not be possible to come quite up to the standard of the London ones.

Padded cells are the exception, and very rarely fitted up or required; the only one I saw was inferior in material and construction, for instead of being spring-fitted and faced with hides, it was coarsely stuffed and faced with painted canvas.

The heating of cells had received much attention, as also the ventilation, and, while the former is not required in Sydney, the latter offers several points for careful consideration.

The artificial lighting is, of course, by gas, and in no instance did I find that the electric light had been introduced. The gas fittings in all cases were within the cells.

I generally noticed that the cell-doors, locks, hinges, flaps, &c., are constructed of composite material, wood, and iron, and of a type, I am of the opinion, less efficient and suitable, and not so modern as those adopted in New South Wales.

The inspectors' offices, charge-room, &c., are very similar to those in use here, special provision, of course, being made to meet any special circumstances.

The small suburban station at Willesden, already referred to, contains very moderate quarters for a sergeant, with a couple of cells about which there is nothing specially to remark.

I took advantage of an opportunity also of inspecting a commodious new station just approaching completion under the city police, in a street near the Tower Bridge. It was apparent that a large sum of money had been expended upon this building, which externally presented considerable architectural effect, and internally was designed and fitted in a somewhat elaborate and complete manner; I noticed in the planning and conveniences very much the same characteristics as those under the London County Council, and already referred to. In this case an unlimited and very proper use of glazed white bricks had been adopted.

I also inspected more or less modern country and municipal lockups in Bucks, Monmouthshire, and Sussex. In some of these the type was quite obsolete, and in others no general and strikingly suitable plan seems to have been adopted, owing, no doubt, to the varied authorities under which they have been erected.

An opportunity was also given me of looking over the new and extensive range of buildings erected for metropolitan police purposes, on the Embankment at Whitehall, and called "New Scotland Yard," taking the place of the "Old Scotland Yard," about to be demolished as unsuited for modern purposes, and as necessitated by the recent improvements to the neighbourhood. The new building is a striking one, standing on its own land, with roads and outlooks on all four sides, and very convenient access both to Parliament-street on the one side and the Thames Embankment on the other. It is erected in stone, with striking circular turrets on the four corners, and internally it has an open court-yard. As a result the building is of very simple planning, and every room is well lighted, while access is rendered easy by the various lifts and staircases.

The building contains accommodation for the Chief Commissioners of Police, the Board of Administrative Officers, the Surveyor (Mr. Butler), who attends to all buildings and building properties in connection with the police district, and paymaster's branch. It also contains ample accommodation for the detective branch, with its strong rooms and museum, and is, I am informed, a thoroughly useful building and a success.

It was here that I inspected the large number of plans, and received the assurance as to the intention of giving any further information, already referred to, and received from Mr. Butler and his officers every assistance.

On making inquiries of Mr. Butler as to the practice adopted with regard to tendering for police buildings, he informed me that he was not required to run the risk inseparable from public tendering, but had been able to compile a list of about thirty respectable and experienced contractors, and these only received invitations to tender. His arrangements for clerks of works' supervision is similar to that in this branch, namely, all works of £2,000 and upwards have a clerk of works, if possible, separately appointed for them, whilst smaller undertakings are grouped and inspected from time to time.

Post Offices.

Owing to the courtesy of the Postmaster-General, I had a good opportunity of viewing the large buildings at St. Martin le Grand associated with the general postal business of the country.

The original building, which stands four-square, and covers a large area, now accommodates only the postal and parcels postal branches, the telegraph business, and the telephone exchange. I understand the constant increase in these, the most important branches, has gradually pushed out the Ministerial and administrative and the financial (including Savings Bank) branches into other quarters.

The Ministerial and Administrative branches are now located in their newly-erected large building adjoining, while some years since, and prior to my last visit to London (ten years ago), the Savings Bank and Postal Order business had also been accommodated in a new building, and connected with the parent one by means of a subway.

A great feature of the building, devoted to postal, telegraph, and telephone business, appears to be the large, uninterrupted, open rooms in which the services were being performed. The postal business has been so often described that it is not necessary for me in this case to enter into technicalities, excepting to say that as little partition work as possible seems to have been adopted, and one subdivision of the service adjoins another without any structural hindrance.

In the telegraph department, particularly in the operators' floors, the whole of the four long wings are altogether open, making a continuous circuit round the central court-yard. On this floor are accommodated many hundreds of telegraph operators, their instruments and fittings being arranged in the most perfect precision. This is one of the sights of London, and the beholder is struck with the sense of order and ease of supervision which this arrangement provides.

The telephone work is not of so extensive a character as I anticipated. It was explained to me that this building contains (and that in a transitional state only) an exchange of exchanges, and not one general exchange for London, the business being still to some extent in the hands of private companies.

It may be thought idle to compare the arrangements for the huge departmental business of London with the more moderate business of Sydney; but on inspecting these premises, my previous convictions that all additions or alterations to the latter buildings should have in view the removal of the financial and Administrative branches, was much strengthened; so much so, that in dealing practically with the question I propose making my recommendations quite in that direction.

I believe, from the experience gained by the London authorities, the truest economy is to face the inevitable increase of postal and all other business in good time, so that all expenditure may be in a right direction and with the least dislocation of the work of the Department.

I made inquiries as to the general policy of the Government with regard to suburban and local post offices in provincial towns. For many years the policy of the British authorities has been to subsidise, as much as possible, tradespeople in small country places having suitable premises and suitable trades to undertake postal business at a comparatively small annual remuneration. This is, to a large extent, still in vogue, and has no doubt saved the Government from a large capital expenditure, but I find that specially-designed post offices are now being erected in greater numbers than formerly in such districts and towns where increase of business warrants this step. As an instance of the large expenditure, I may state that at the present moment the post office in Liverpool is being enlarged at a cost of upwards of £100,000, and a new post office is being erected in the Bloomsbury district of London at a cost of £33,000.

Mr. Tanner, the architect to the Postal authorities, informs me that his present yearly expenditure in the erection and improvement of buildings is about £300,000.

I took advantage of Mr. Tanner's kindness, and examined, at his offices in Whitehall, a large number of plans for suburban and country town post offices, some already erected and others in course of erection, and I obtained from him a number of departmental drawings of the most recent details in fittings for offices, which I have placed in the departmental library.

I also inspected the large building in Bloomsbury before referred to, and I found that the authorities were modernising their post office arrangements, particularly with reference to the open counter accommodation for the public, on precisely similar lines to those which I have recommended and adopted during the last few years in this Colony, both to the advantage of the Department itself and the convenience of the public.

With regard to telephone arrangements in the public streets, I was very much struck with the system adopted in Stockholm, of conveying the innumerable wires to central skeleton tower erections in the immediate neighbourhood of the exchanges. Without going very fully into the principles of the system, it seemed to me that there is a good deal to commend it, as the unsightliness of a great number of wires carried in all directions and at all angles is almost entirely avoided.

Hospitals for the Insane.

In order to compare the system adopted in the erection of these institutions in New South Wales with the best types in England, I made special and interesting visits to such as I was advised should be seen.

My first visit was to that at Morningside, Edinburgh. This institution, situated a few miles out of Edinburgh, consists of two groups of buildings. One, the earlier and most extensive, is used for pauper inmates of that part of Scotland, and although a fairly modern structure, presents no very special features for observation, except as a means of comparison with those here.

The second portion, called the "New West Branch," on the contrary, consists of a group of buildings recently erected on the grounds of an old mansion, "Craig-house" (much like that at Callan Park), the latter having been made an integral portion of the whole. The buildings have been erected for the accommodation of paying patients, and I was there informed that payments are made in accordance with the accommodation given, at rates varying from £100 to £500 per annum. It is built to accommodate 200 patients, and has cost, without the purchase of the estate, upwards of £170,000, or at the rate of £850 per bed.

Ascertaining these particulars, I was somewhat prepared for the extreme elaboration of the design, both as regards its architectural appearance externally and its arrangement and decoration internally. In every direction expense has been lavishly incurred, the fittings being of the very best class obtainable, and the furnishings on a scale equal to many high-class hotels. I could see at once that nothing of the kind is likely to be required in New South Wales, unless, perhaps, on a most limited scale, at some future day; but this establishment contained many points which were of great interest.

Owing to the nature of the site, and the adoption of the separate pavilion system, the institution has the appearance of an assemblage of fine houses scattered through well-timbered grounds. I found the whole were connected by an extensive series of underground corridors, well lighted and warmed, which also serve as special ways for all pipes, leads, and wires. This system I also found adopted elsewhere where it was necessary, owing to climatic and other reasons, to have such means of communication.

The sanitary arrangements are very complete and elaborate, and include generally the best class of fittings, excepting in the matter of baths, which are inferior to those used in this Colony. I did not find in this or any other institution I visited the adoption of the Gegenstrom, as at Kenmore, although I found that sanitary ware and fittings manufacturers were alive to its advantages.

I was given to understand that no institution in the world approaches the "New West Branch" in completeness, down to the very smallest details, and although the cost appears enormous by comparison with that of some of the large hospitals in London, it is not excessive.

The cost of the new hospital at Kenmore, it is estimated, will not exceed from £150 to £200 per bed.

As the most modern and best of the metropolitan asylums, and more closely in comparison with those of this Colony, I was advised to visit Claybury (Dr. R. Jones, medical superintendent). This collection of buildings stands upon a fine elevated site near Woodford, in Essex, and is one of the five large asylums used for the metropolitan area. To give an idea of its extent I may state the medical superintendent informed me a perambulation of the whole of the buildings and connecting corridors involved a walk of about 10½ miles.

As the building has been recently erected the most careful consideration has been given to the details, and I was glad to make an exhaustive inspection of such parts as could be of interest and value, and, as in all other instances, every facility was given me for so doing. The pavilion system chiefly is adopted, but not being in echelon, as at Kenmore, and the several blocks being connected by intermediate buildings, there appears to me to be a sacrifice of the sunshine in some of the enclosures and court-yards, as well as a want of direct lighting to some of the rooms and wards.

The classification of patients is pretty much the same as that adopted by Dr. Manning in this Colony, though the wards are larger than Dr. Manning considers desirable.

The enclosed exercise yards, for the more refractory patients and those requiring closer supervision, are not so distinctive a feature at Claybury as here, and one misses the highly-cultivated gardening and shrubbing we are accustomed to. The "Ha Ha" fences to these enclosures, so universal and satisfactory in New South Wales, are very little used in English asylums, and at Claybury only a light iron fence, about 4 feet 6 inches high, is erected, and which appeared to me to be both insecure and dangerous to the patients. Several medical officers expressed to me the wish that "Ha Ha's" were more generally adopted.

I noted that all the sanitary arrangements were good, while the lavatories and bathrooms, although in separate cubicles, were grouped into one central set for males and females respectively, instead of being distributed amongst the wards, as in our institutions.

Ample accommodation is given to the public to visit their patient friends, as also the general administrative and executive officers; and the kitchen is probably the most complete ever fitted up, the cooking being done by steam, fire, and gas, on the same principles generally as in vogue in this Colony, with more elaboration of plant, but not necessarily with more efficiency.

The padded cells are lined with vulcanite rubber facings to the cushions, in preference to hides, and I was given to understand that they are more cleanly and equally as indestructable as leather.

The proportion of single rooms to day-rooms and dormitories, regarded in the classification of patients, has apparently been followed very closely on the lines adopted by Dr. Manning.

The chapel is a most beautiful and dignified building of pure ecclesiastical design, and is capable of seating a congregation of about 1,500. A recreation hall is also part of the establishment, with similar accommodation.

The extensive network of corridors, touching almost all portions of the institution, is lighted, warmed, and paved, and apparently of endless lengths, the long winter conditions of England no doubt rendering such adjuncts very necessary.

Included in the institution is a complete building for pathological research, and it contains mortuary, refrigerating chamber, dissecting rooms, laboratories, museum, &c.; the intention being at some future day to enlarge upon the work of investigation now performed there upon the dead from the institution, and to form a school for the study of diseases of the brain. The accommodation and plant provided in the refrigerating room is, I understand, in daily use, every corpse as it is removed from the institution being at once refrigerated before *post-mortem* takes place.

At Claybury, as also at Morningside, and every other institution of modern construction, electric lighting plants of a most extensive character are in use, and the machinery and the necessary buildings have

have been erected on a scale far in advance of anything contemplated or attempted in the Colonies. The guiding principles appear to be ample power, the best of machinery, plenty of space, light, and ventilation. It is needless to say that under such conditions the electricians have brought the lighting, and in some cases the motive power, supplied to these institutions to a state of great efficiency.

In speaking of electric lighting plant generally, I might here remark that wherever I have seen its installation, both in England and on the Continent, I have been struck with the great prominence and importance given to it, and found it contrasts only too favourably with the somewhat makeshift and experimental way in which, perhaps, we have been accustomed to treat it in New South Wales.

Altogether, Claybury impressed me as an excellent model in many respects for future guidance.

I also visited asylums of not so recent a date, including Hanwell and one county asylum, and although recent additions and improvements have been made to these somewhat obsolete buildings, they offered no field for notification that will be of much service.

The Lunacy Commissioners control a very large number of asylums, there being no less than fifty-five in the counties, and fifteen in the boroughs of England and Wales, exclusive of Scotland, while the lunatic hospitals under their control number fourteen; the idiot asylums, five; Naval and Military hospitals, two; and to a limited extent the one criminal lunatic asylum at Broadmoor.

In erecting new buildings spread over so large and densely populated a country, it has been found to be convenient for the several county councils and boroughs to commission architects of repute to erect these buildings, the plans having been first submitted to, and approved of, by the Commissioners. In no case could I find that public competition had of recent times been instituted, no doubt experience of former times having been sufficient in that direction.

During last year the Commissioners examined and approved of the erection of the following new asylums, some of which have already been commenced, namely:—

	Patients.		Acreage.
	Male.	Female.	
Bexley Heath	600	1,100	139
Winwick, Lancashire	1,000	1,000	206
Cheddleton, Staffordshire.....	400	400	175
West Sussex	300	300	246
Borough of Middlesborough	125	125	98½

The officials in London have supplied me with lithographic plans of the above-mentioned asylums, and making allowances for the difference in climatic circumstances, a comparison with the institutions of New South Wales is not at all unfavourable to the latter.

Consumptive Hospitals.

The only consumptive hospital within easy distance of London is at Brompton, and, although there are others scattered along the south coast of England in sheltered situations, these are all of a smaller character, and not so well and favourably known as the former.

I made it my business to obtain *entree* into the consumptive hospital at Brompton, particularly into that of the newer portion, a distinct range of buildings on the opposite side of the Brompton-road, but connected by subway. My inspection was a complete one. The hospital embraces an extensive range of buildings erected some years since, and the second range, already referred to, erected within the last two or three years, in which latter, improvements, gained by experience in the administration of the former, have been adopted.

The newer building at the time of my visit was temporarily vacated for the purpose of painting and cleansing.

I found the wards to be of all sizes, up to and not exceeding accommodation for eight patients. The air-space per bed was large, and great attention was paid to the lighting, warmth, and ventilation.

The corridors adjoining the wards are in each case of ample dimensions, with large deeply-recessed bays, and the whole is comfortably furnished, warmed, and lighted, so that patients can have both exercise in the corridors and the comfort of sitting-rooms in the recesses.

The building is of three floors in height, so far as the patients are concerned, and the wards are classified as much as possible, being based to a great extent upon the several stages of the disease.

Large lifts, constructed to carry couches and bath-chairs, and easy staircases give access to the upper floors.

The difficulty of obtaining anything like a pure atmosphere at Brompton, a circumstance not likely to occur in this country, is met as well as possible by the provision of a large shaft raised above the highest portion of the building, down which the upper stratum of air is drawn into the basement, and then distributed.

This hospital contains, I believe, the only example of an air-chamber specially constructed for treating patients with compressed air. It is circular in form, constructed of iron, with air-tight door and valves, and is capable of seating half a dozen patients. These patients, I understand, use it for from half an hour to two hours per diem, under air at various pressures, and being artificially lighted and warmed, it is made into a comfortable lounge. What the result upon the patients is I am not in a position to say.

After a careful examination of both buildings in every portion, I was forcibly struck with the more advantageous conditions under which a hospital of this character could be conducted in New South Wales than in the murky and surcharged atmosphere of Brompton, although the results that I ascertained on my visit showed me how even under these unfavourable conditions much good can be accomplished.

No very special features are required for hospitals for patients of this character; light, air, and warmth in the corridors and day-rooms, the minimising of numbers in the wards, and well arranged protection for outside exercise, together with good administration, appear to be the main points to be considered.

Infectious

Infectious and Cancer Hospitals.

Wishing to see the latest type of this class of building, I was recommended to visit that recently erected at Newport, in Monmouthshire, and now in working order. I found it to be built on the isolated pavilion principle, with accommodation for about eighty patients, and extensive and complete administrative buildings. The buildings contain points of interest, which I have carefully noted, but about which it is perhaps hardly necessary to enter into the details of in this report.

Parliament Houses.

I took the opportunity of visiting the building at Westminster, although I was previously fairly well acquainted with it, in addition to which the office possesses plans of its several floors.

One of the points upon which I was recently examined before the Public Works Committee in reference to the proposed new Parliamentary buildings dealt with the question of the distribution of the *Hansard* and public Press representatives in the two Chambers, and I therefore made particular inquiries as to what the arrangements were. I found that in the Commons neither the *Hansard* nor public Press are accommodated on the floor of the House, but in their own special galleries behind the Speaker's Chair. As regards the Lords, I found that although the same general arrangement exists as in the Commons, yet upon occasions the *Hansard* staff has been accommodated on the floor of the House, owing to the inaudibility of several of the Peers, but I could not ascertain that any of the Press had been granted the same privilege, all my information pointing to the contrary.

The lighting of the Lords is entirely through traceried and stained-glass horizontal windows on either side, and the artificial lighting is by means of pendants, &c. The Commons is lighted in the daytime by similar windows, and at night-time by artificial light behind a glazed ceiling. In all cases the lights are filled with stained glass of rich hues, depicting historical subjects. In neither House is ventilation in any shape or form introduced through the windows; but is all controlled by the plant erected in the clock tower and the connecting shafting. In summer cool and cleansed air is introduced in the basement chambers through coarse canvas soaked with iced water, the effect being to extract the dust and dirt inseparable from London atmosphere, and to reduce it some degrees in temperature. It has, however, been found that the air so dealt with is too highly charged with moisture. In the winter the air is passed through similar screens, only dry, and then warmed before being passed into the Chamber.

At Copenhagen I was disappointed to find that the Legislative Chambers, which formed part of the Royal Palace, had been destroyed by fire, and accommodation of a temporary character was being used, pending dealing with a scheme for the erection of new buildings. In these buildings provision will have to be made for sixty-six Members of the Upper House and 114 of the Lower House.

Again, at Stockholm the two Chambers meet in their old and featureless Government buildings, from which I could gain no suggestions. The Diet consists of two Chambers, the Upper one numbering 150 Members and the Lower one 230.

The Swedish and Norwegian Government, however, has commenced the erection of new Parliamentary buildings in conjunction with the Royal Bank of Sweden, the site being the whole extent of an island lying midway between the Old and the New City, and connected with each by a continuous bridge over one of the numerous waterways of Stockholm. The plans of this building, as about to be erected, have already been placed before the Public Works Committee for their information.

The site is a magnificent one, although it is too curtailed to carry anything more than the present scheme of building, the rapid tide of the river washing the foot of the retaining-walls on all sides. A curious sentimental controversy has arisen between the two Parliamentary parties with regard to this site; one ("Right") objecting to the effect the new pile will have in somewhat obscuring the view of the Royal Palace on the adjoining shore from the main portion of the city, as emblematic of overshadowing Royalty; and the other party ("Left") approving of the site for precisely the same reasons.

At Brussels, the Chambers, which are also founded on a similar plan to those of the Deputies ("Corps Legislatif") in Paris, may be considered as in many respects agreeing in principle with the design for Sydney. Both the Upper and Lower Chambers are similar in all particulars, excepting that the Upper (Senate) provides for sixty-nine Senators and the Lower (Chamber of Representatives) for 138.

The accompanying sketch shows the general disposition in each case. The Chambers are semi-circular in plan, the main walls being carried up solid behind the President and colonnaded round the Members' portion, supporting a frieze, cornice, and ceiling with top lighting. Behind the columns is carried the gallery, the whole circuit of the circular wall, to accommodate the public, one extreme end to the right of the President being partitioned off for Ambassadors and distinguished visitors, and the corresponding one on the left for the Press. These three portions of the gallery all have their separate exits distinct from the precincts of the House proper.

The President is placed on a raised dais similar to the Speaker; the House officials are ranged immediately below him, and in the lowest portion of the floor of the House the official stenographers (*Hansard*) have their accommodation. The Members are provided for on an ascending floor with circular-planned separate tables and benches for each Member; the doors of entrance and exit being on the right and left of the President.

The Chambers are entirely lighted from the top, and the ventilation is conducted towards the same direction. The walls, where not broken by features, are panelled and hung with valuable historic paintings, representing scenes in the Parliamentary history of the country.

I understand that the acoustic principles of the rooms are good, and the Members here speak from their own seats, and not from the "tribune," as in Paris.

I may say here that in all the Continental Chambers of which I have cognisance, the stenographers (*Hansard*) are accommodated on the floor of the House, but not the public Press.

The Chambers in Brussels have the appearance of great dignity, with their quiet architectural treatment. The accommodation for Members is provided to the right and left of the Chambers in a series of well-furnished and commodious salons. I endeavoured to obtain a photograph of the interior of these Chambers, but I regret to say without success.

The site of the buildings faces one of the principal avenues in the park, being *vis-a-vis* with the Royal Palace, while it is recessed in front in a very similar manner as that recommended for Sydney, but on a more dignified scale. The flanks are continuous, Government offices occupying the street on either side. Access is also obtained to the rear of the building, and, in fact, there are two distinct fronts.

In all the Parliamentary buildings that I have visited, both on this occasion as well as previously, I observed the greatest possible stress has been laid upon the necessity of giving large open spaces around the same, and in the majority of cases with great success.

Picture Galleries.

I lost no opportunity of critically inspecting as many of these as time would permit, and amongst others I visited the Melbourne Gallery, National Gallery, New Portrait Gallery, Tait's Gallery, The New Gallery, Galleries at Earl's Court Exhibition, South Kensington, and also several private ones in London. I visited, as well, the National Gallery in Edinburgh, the newly-elected one at Antwerp, the Exhibition Galleries at Brussels and Stockholm, and also the permanent National Gallery at the latter city.

I took rough sketches of the lighting of those most to be remarked, as well as notes regarding other features.

In respect of planning, I found a great deal worth noting in connection with the New Gallery in Regent-street, London, particularly with reference to the entrance and central courts, they presenting a somewhat new departure, being treated with more architectural detail than usually. The central court contains a handsome fountain, admirably-placed statuary, and narrow galleries for the display of water-colours and miniatures, together with access to the refreshment-room, cloak-rooms, &c.

I was gratified to find that, generally, the sectional dimensions of the new gallery in Sydney were in accordance with the best examples at home; about the details of which I had opportunities of discussion with some of the leading authorities. In no one place was it possible, owing to climatic difference, to compare the system of lighting closely with that adopted in Sydney. In some of the galleries the lighting was by ordinary single skylights, both horizontal and sloping, with all the attendant difficulties of adjustment of light by a system of blinds. In others more elaborate construction was adopted, including the use of horizontal lantern lights, with more or less success; and in only two cases that of the Sydney principle of vertical inner light and horizontal outer lights combined, adopted, although with considerable difference of design and detail.

Though the New Gallery before referred to contains many good features, the lighting I consider not very successful, and here as in many others of the buildings, heavy intersecting ceiling beams prevented the equalisation of light on the exhibited pictures.

As regards the floors of galleries, polished wood, generally in parquet patterns, appears to be universal. It is true I came across exceptions, as in the case of the mosaic floors at South Kensington, and some temporary cemented floors in the Exhibition Galleries of Brussels and Stockholm. The reflection and glow obtained from polished floors as a subsidiary assistance to the lighting up of pictures is considered so valuable as to warrant its adoption.

I noticed all the galleries were furnished with comfortable lounges, an acknowledgment of the fatiguing nature of picture-seeing; and it is well worth the consideration of the Trustees in Sydney the placing of comfortable upholstered lounges or settees, in preference to incurring expense in less comfortable furniture.

Most of the galleries have protecting handrails round the circuit of the courts, generally fixed to standards.

The permanent galleries in Antwerp and Stockholm, in each case in combination with the National Museums, are both buildings of extremely handsome and complete a character, and have been erected evidently at very considerable cost. The lower floors are used as museums, and generally the first floor, with horizontal lights, for prints and etchings, and the noble suites of rooms on the top floor, with ceiling lights, for pictures, in which both buildings, particularly that in Antwerp, are exceedingly rich. The stair-cases have been made notable features, decorated with statues and pictures, and a great display of marble.

The Tait Gallery, just recently erected on the site of the old Millbank Penitentiary in Westminster, and presented by Mr. Tait to the nation, is one of the most modern type in Europe, the architectural detail being very prominent.

The National Gallery in Edinburgh is in some respects the prototype of the design for the completed scheme for Sydney. It stands in an admirable position, overlooking the Princess-street Gardens, having four exposed façades, and is designed in symmetrical proportion in pure classic style, and being entirely lit from the top, there is no fenestration visible.

The National Portrait Gallery, in the rear of the National Gallery in Trafalgar Square, is a very notable building, both on account of the extremely handsome architectural detail, notwithstanding its irregular planning, and of the wealth of its contents, the portraits there hung giving a very vivid and interesting picture of English history. As only the upper floor can necessarily be lighted with a top light, the lower ones have to be content with horizontal ones, and consequently the lighting of these latter is not in all cases good.

Exhibition Buildings.

During the latter end of 1896 I was instructed by the Minister to submit a scheme for the consideration of the Honorable the Premier for the erection of a series of buildings to be devoted to the use of an Exhibition projected for 1899. I therefore prepared and submitted one applicable to the Outer Domain as a site, and embracing the present Art Gallery, on the extreme east, and the shell of the proposed Parliamentary buildings on the west. Owing, I understand, to representations from Paris, that an Exhibition held in Sydney in 1899 might clash with the great Exhibition to be held in Paris in 1900, the matter was subsequently left in abeyance.

Having thus far been engaged in the initiation of such an undertaking, I took the opportunity of seeing all the Exhibitions within a reasonable distance that I found to be open during July and August, 1897. I therefore visited the following:—

- Victorian Era Exhibition, Earl's Court, London.
- Horticultural and Floricultural Exhibition, Hamburg.
- Great Art and Industrial Exhibition, Stockholm.
- International Exhibitions at Brussels and Tervueren.

The features of these Exhibitions may be classed as follows:—

- 1st. The commercial object, including display of machinery and productions, the result of the industry of the people, and of the natural resources of the countries interested.
- 2nd. Official display in all the branches of the Government.
- 3rd. The exhibition of objects in the Arts and Sciences for the instruction of the people.
- 4th. The amusement and refreshment of the people.

Two of these Exhibitions, namely, Stockholm and Brussels, being under Government control, fully exemplify these objects, while the Exhibition at Hamburg is confined to fewer objects, and is, I understand, under municipal control. The Earl's Court Exhibition to all intents is a private speculation, although managed by a very representative committee, and is confined to an exhibition of objects, both of manufacture and art, showing the general advance during the sixty years' reign of the Queen, with a very large proportionate amount of accommodation for amusement and refreshment.

The Earl's Court Exhibition covers an irregular site in the west end of London, upon which has been held Exhibitions of various characters yearly for some considerable period, and is as much a rendezvous for the people of London for evening entertainments as perhaps for exhibition purposes. Although it has been erected by private enterprise, it has received this particular year a certain amount of official recognition, and is managed by an Honorary Committee of Advice, embracing amongst its members the leaders in all branches of arts and sciences. With the objects as before stated, it may be understood that the Exhibition is a purely British one. The exhibition halls proper are ranged round two very extensive and beautiful courts—one embracing an ornamental sheet of water in the centre, with bridges, fountains, promenades, deep verandahs, and the whole designed in Indian architecture, and brilliantly illuminated at night with many thousands of electric and gas lights, while a band-stand has been erected upon the small island in the centre of the sheet of water. The buildings immediately adjoining this court and overlooking its prospects are devoted to refreshment.

The other court is oval in shape, the centre laid out with rich-coloured flower-beds and gardening, and is skirted all round by attractive stalls.

Between these courts branch off in all directions annexes containing machinery, manufactures, amusements, picture-galleries, and all the exhibits connected with such objects.

The amusement portion of the Exhibition takes up the remaining area of the site, and includes, besides numerous refreshment places surrounded with ornamental gardens, numberless side shows of all sorts, and a huge wheel, 300 feet high, which in its revolutions takes car-loads of passengers to the top-most height. Military band concerts and other entertainments that suggest themselves for amusing the public take place here daily. The Exhibition also includes a very fine reproduction of a small town of the last century, entitled "Picturesque England," and comprises a large number of shops, public buildings, and private houses, all faithfully reproduced in canvas, plaster, and decorations.

The Exhibition generally is notable for the advance made upon those of twenty years ago, and showed most clearly that in Exhibitions of the character not only legitimate Exhibitions, but public amusement must be catered for in every way to make them continually attractive and remunerative.

The Floricultural Exhibition in Hamburg occupies the whole extent of the ornamental gardens of the city, which had been laid out on the banks of a disused canal. The grounds are very extensive and beautiful, being planted out with the utmost taste, and the foliage is such as could not be expected in the uncertain climate of Sydney.

For exhibition purposes a gigantic floral hall has been constructed, probably 1,000 feet by 500 feet, oval in shape, and sunk in the centre, the whole designed with paterres and terraces filled with the choicest flowers and shrubs. A large number of other buildings of every description were also erected in the grounds, both for exhibition and refreshment purposes, the whole being brilliantly illuminated, and made bright and attractive by the presence of five or six military bands.

I understand that from 35,000 to 40,000 people visit the Exhibition nightly.

I was given to understand, also, that so far as matters can be disassociated in Germany from Imperial control, this Exhibition is under the auspices of the Municipality.

In Stockholm the Exhibition is of an unique character, and is generally confined to the products of the three Scandinavian nations—Norway-Sweden, Denmark, and Finland (Russia). No other countries have been allowed to exhibit, the only exception being with regard to a small number of paintings in the art section, to illustrate the progress of this art generally.

The city of Stockholm reminds one very much of Sydney. The physical features are not dissimilar. Each city is intersected by numerous broad and deep waterways, while the houses and shipping cluster in all directions and at unexpected points. The dissimilarity consists mostly in the broad comprehensive style in which the city and its quays have been laid out, and in the palatial buildings erected, facing large open sites, the opposite being the case in Sydney. Stockholm has rather more than half the population of Sydney, but the city gives the impression of being a much larger one.

The site determined upon for the Scandinavian Exhibition is a portion of an island laid out in its entirety as a public park, with one end lying so near one of the principal quays as to be approached therefrom by a bridge. The island being 2 miles in length, is also approached by ferry boats in all directions, reminding one very much of those in Sydney Harbour. The portion of the garden enclosed for exhibition purposes contains about 40 acres, is irregular in contour, and sparsely covered with trees, both these features having been made the most of. The site is also cut into two irregular portions by a public road from the quay before mentioned, so that additional access is gained to the Exhibition by the admirable system of horse-tramways. The Exhibition was first projected in 1894, and since that time the three partners to the enterprise have devoted much energy and attention to produce the present successful results. I ascertained that the mode adopted for erecting the necessary buildings was to employ well-known and private architects of the three nationalities, commissioning them each to erect certain buildings, while the whole was under the control of the Chief Architect residing in Stockholm. As a result, Sweden commissioned eight architects, Norway one, Denmark one, while some of the Finnish buildings were put up by Russian architects. In no cases were competitions held.

The cost of the Exhibition was 4,275,000 kroners, equal to about £213,000 English money.

In conversation with the British Minister of Legation in Stockholm, I ascertained that owing to good management and the popularity of the scheme, the whole of this expense had already been met by the takings (about the middle of August last). Mr. Pakenham told me that at one time, soon after opening,

opening, it was feared there might be a deficit. Thereupon the Government determined to open a "Tombola," or public lottery, but the results on other and more legitimate enterprises have been so assuring that the "Tombola" has fallen almost into disuse, and it is not looked upon as necessary.

It would take too long to describe minutely in this report the general arrangements of this wonderful Exhibition, and it may be sufficient, perhaps, to say that it consists of one large central industrial building devoted to the suitable exhibits of the three nations. It is built as the main architectural effort and the leading feature of the whole Exhibition, being surmounted with a lofty dome and four engaged minarets; it dominates the city, and emphasises the important scheme. Other national buildings, also for the joint exhibits, comprise a large machinery hall, consisting of a wide nave and two aisles, constructed of timber and glass, the main ribs of the roof being carried down to the floor, and supporting in an ingenious manner a series of galleries framed into the spreading timber-work of the principals.

The National Museum contained exhibits of domestic handiwork, a special characteristic of Scandinavian nations, and the results of the education in the sciences and other schools. There are separate buildings also for technical industries, the fishery halls, army and navy exhibits, horticultural exhibits, and a pavilion erected by the city of Stockholm, displaying every variety of sanitary and municipal objects, one annexe containing the entire section of a public street, in which the spectators can see in actual size the arrangements for subways, pipes, drainage, &c.

The official portion of the Exhibition also includes extensive administration buildings, royal pavilion, post, telegraph, and telephone station, press pavilion, and others erected by various small provinces.

The special exhibits include a pavilion of tourists and sportsmen's exhibits, another theatrical and musical exhibits, a further for mining, another for forestry, and also another for the application of electricity.

Throughout the grounds are scattered a large number of strikingly-designed pavilions of all dimensions erected by manufacturing firms for the display of their own production.

Amusement and refreshments are extremely well looked after, and in all directions can be found refreshment pavilions with tariffs of every grade, the whole being very well conducted.

One very striking spectacle is the reproduction of the old town of Stockholm (in a similar way as at Earl's Court); encampments of Laplanders and Finns, who give national entertainments; also zoological exhibits, and a large number of amusements of every description, and facilities for the sale of small articles.

The gardens have been laid out with great taste, and must evidently have been allowed at least two or three years to attain their present maturity.

Altogether the Exhibition is one that offers a most suitable example for guidance should another be undertaken in New South Wales.

I noticed that the authorities advertised the Exhibition in particularly well-executed posters spread over a wide area, and developed a system of private advertising without detriment to the general appearance of the Exhibition that must have added very materially to the returns.

The International Exhibition at Brussels, with its auxiliary at Tervueren, is of a somewhat different description to that at Stockholm, inasmuch as it is open to the exhibits of all nations, and is principally confined under one roof.

The building is of very large dimensions, being in reality an enlargement of the Palais du Cinquante-enaire, and contains courts devoted to Belgium, France, United States, Germany, Italy, Switzerland, Great Britain, Spain, the Ottoman Empire, China, Japan, Russia, Austria, and Hungary. These several nations have classified their exhibits, and in some cases the result is almost complete exhibitions in themselves.

The art section has been very specially provided for in a gallery of large dimensions, containing a number of courts. In these are assembled a collection of pictures of the world, and this alone is a source of very great attraction to the public.

The gardens in front of the building contain a large number of buildings, some of an official character, others of a private, while the restaurants and cafes are so numerous as to form themselves into long streets.

As in Stockholm and London, there is a reproduction on this occasion of old Brussels, providing a large number of amusements, as well as a curious representation of an old town of the middle ages.

The auxiliary Exhibition at Tervueren, a public park about 8 miles distant, and which, I am of the opinion, suffers as an auxiliary in consequence of its isolation, contains a very fine and complete exhibition of the products, manufactures, and inhabitants of the Congo States of West Africa; and this being the only colony possessed by Belgium, the very utmost has been made of it. I did not see much advantage in connecting the Tervueren Exhibition with the International Exhibition in Brussels, as the former appears to be devoted, with the exception of the Colonial Exhibition, to the pleasure of the people of Brussels.

I am not in a position to speak with any degree of authority as to the cost of the Exhibition or of the returns, but I am of opinion that the outlay has been in excess of that of Stockholm, and, to my mind, the result is not so good. The latter contains so much that is fresh, picturesque, and attractive, while that at Brussels is carried on on the more stereotyped lines of exhibitions with which the public have to some extent been surfeited.

The access to the Exhibition at Brussels is easy and convenient; it is on the outskirts of the town, and approached from the principal centres by horse and electric trams, some of the latter having the motive power in accumulators carried in the cars, and others from overhead wires, and third, from underground wires, while I noticed in places that all three travel upon the same metals.

Summing up the impressions I gained from the inspection of these undertakings, I am of opinion that, so far as a Colonial Exhibition in New South Wales is concerned alone, there is a great deal that is suggestive at Earl's Court Exhibition in London, while for an Intercolonial Exhibition, I consider Stockholm the prototype, and in both cases much can be learned from the Horticultural Exhibition at Hamburg

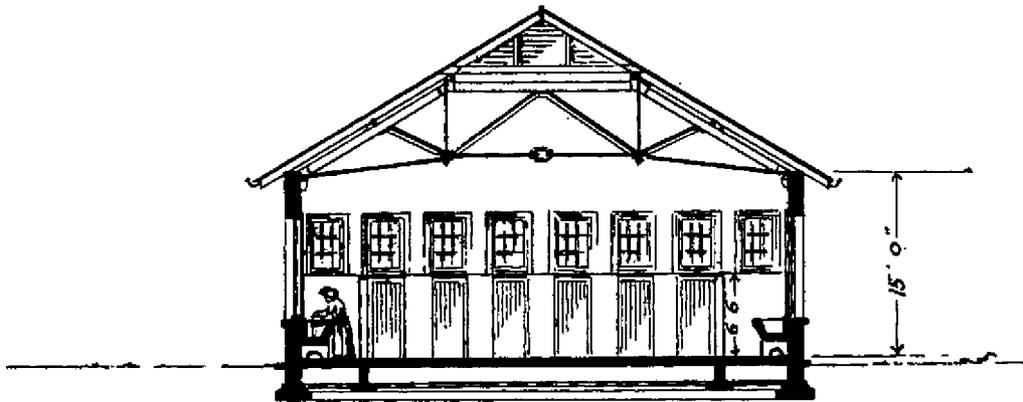
W. L. VERNON.

[Six Diagrams.]

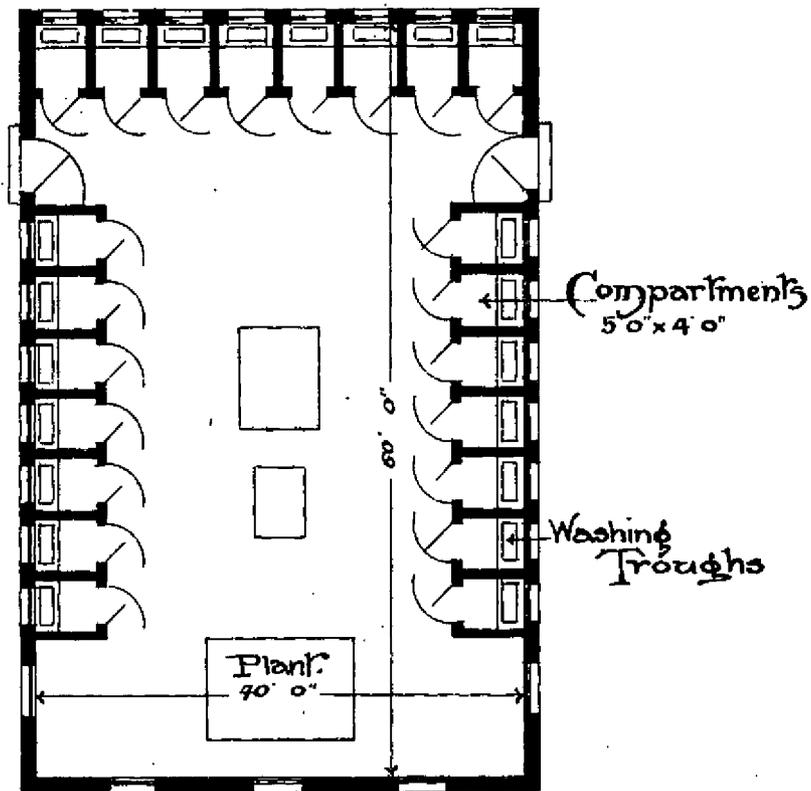
LAUNDRY

With Separate Washing Compartments

$\frac{1}{16}$ " Scale Sketch.



Section.



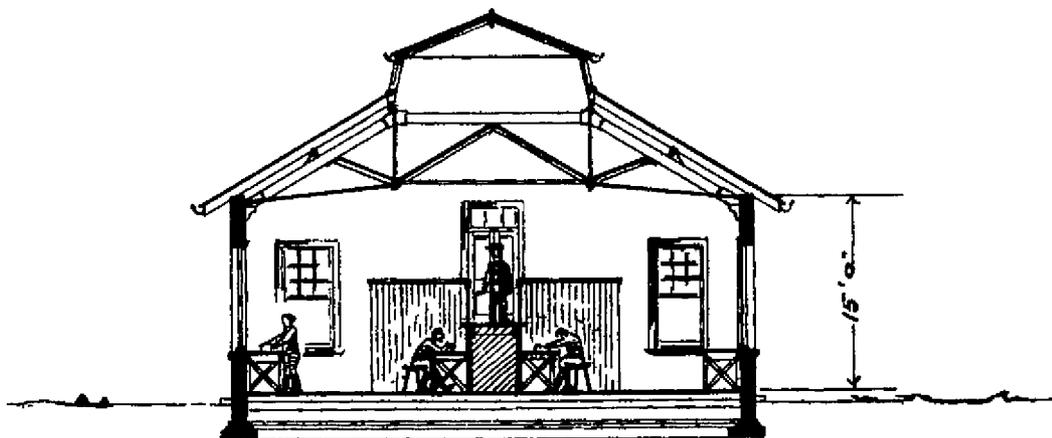
Plan.

SCHEME BASED ON LAUNDRY
ARRANGEMENTS AT
FEMALE PRISON • AYLESBURY
• BUCKS •

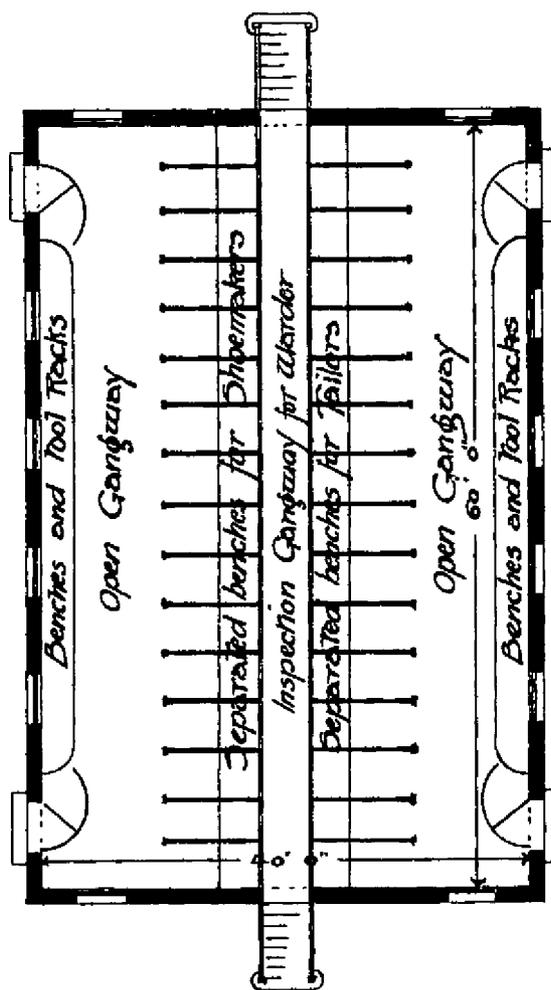
PRISON WORKSHOPS

With Open Compartments for Separate Trades
and Inspection Gangway • $\frac{1}{16}$ " Scale.

Sketch.



Section

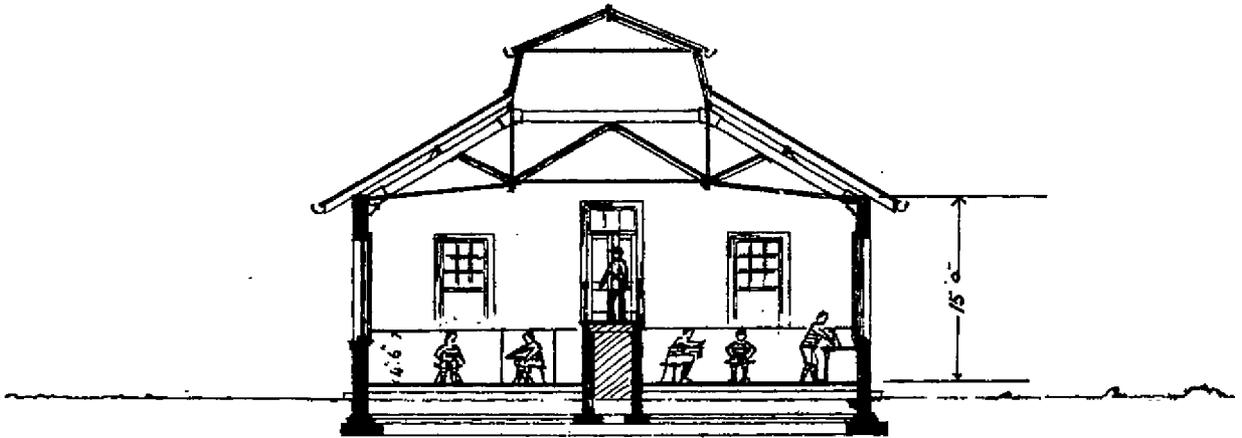


Plan

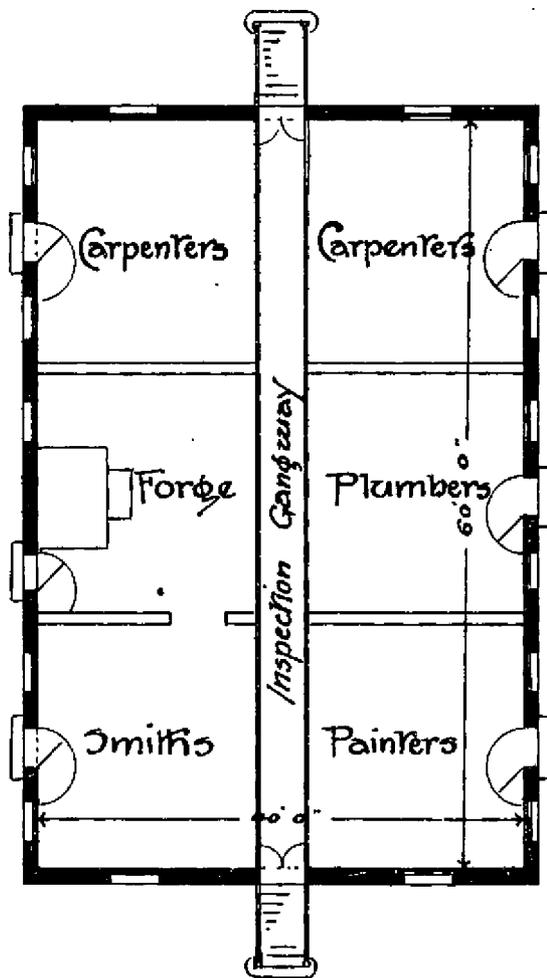
SCHEME BASED ON OPEN
COMPARTMENT ARRANGEMENT AT
• WANDSWORTH AND WORMWOOD
SCRUBS PRISONS •

PRISON WORKSHOPS

With Open Compartments for Separate Trades
and Inspection Gangway. $\frac{1}{16}^{\text{th}}$ " Scale
Sketch.



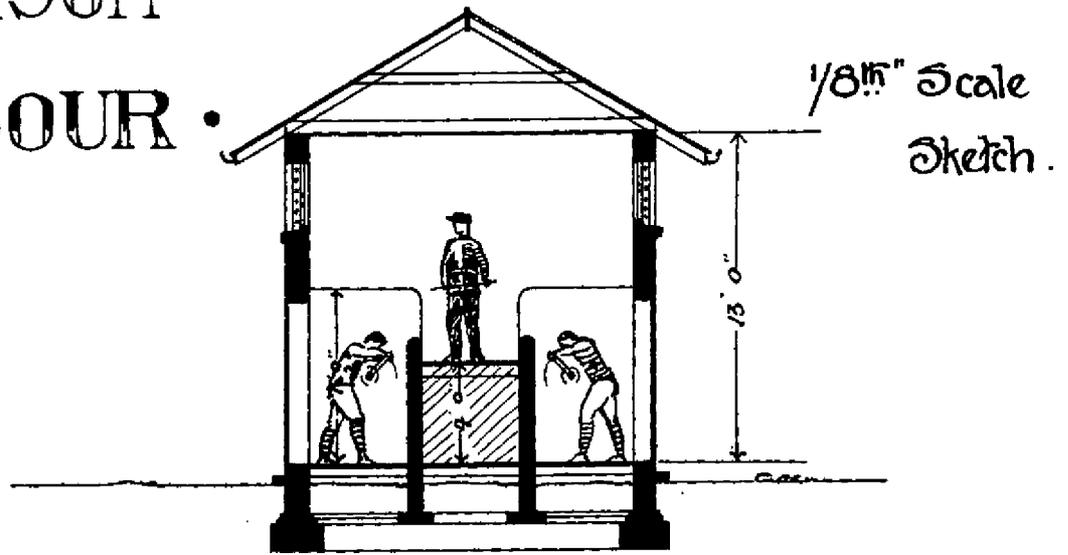
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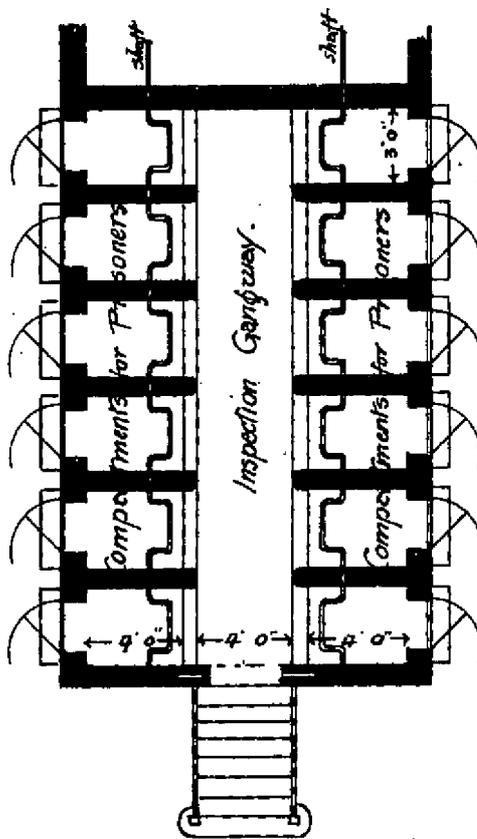
Plan.

**SCHEME BASED ON OPEN
COMPARTMENT ARRANGEMENT AT
• WANDSWORTH AND WORMWOOD
SCRUBS PRISONS •**

PRISON LABOUR.



Section

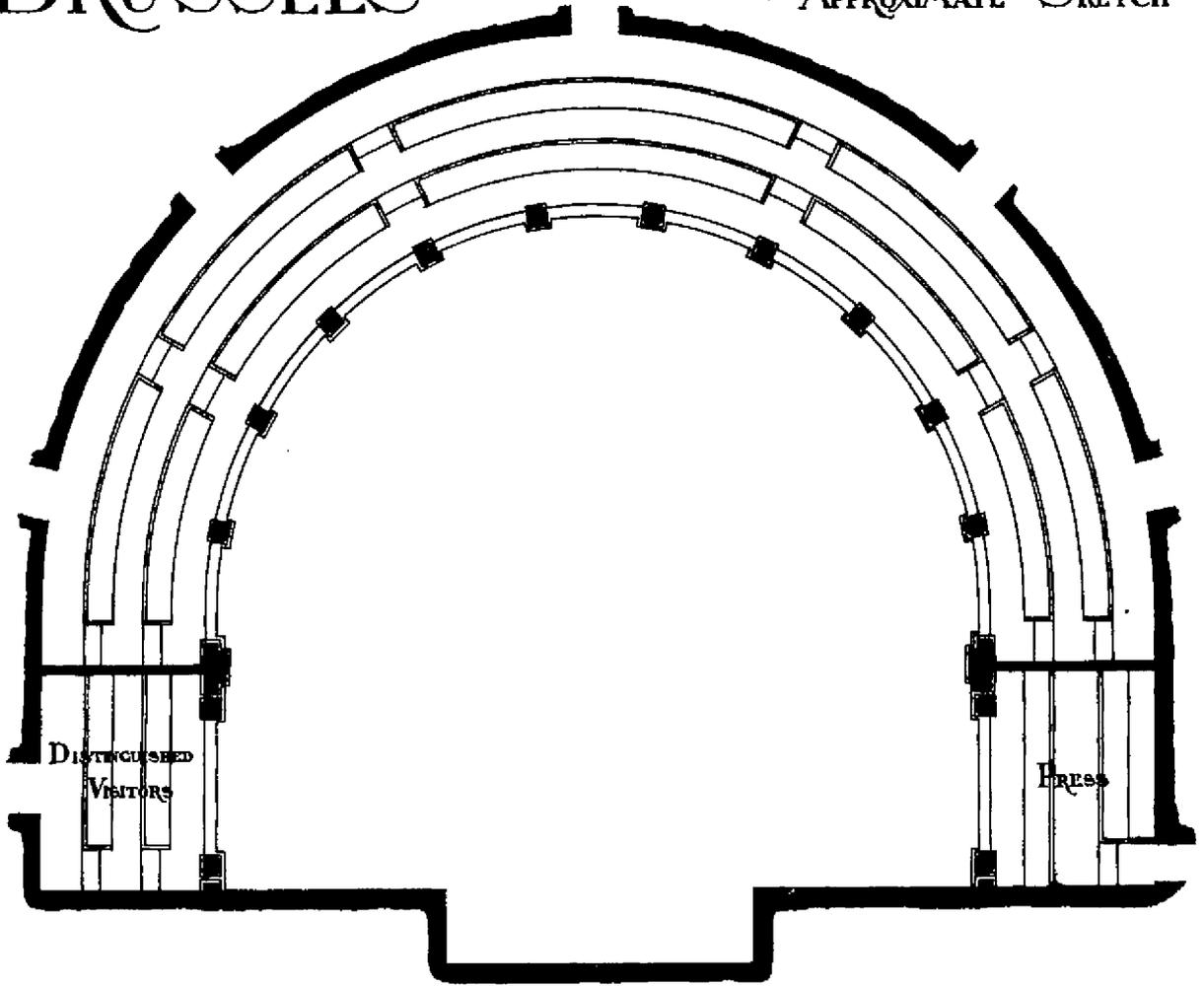


Plan.

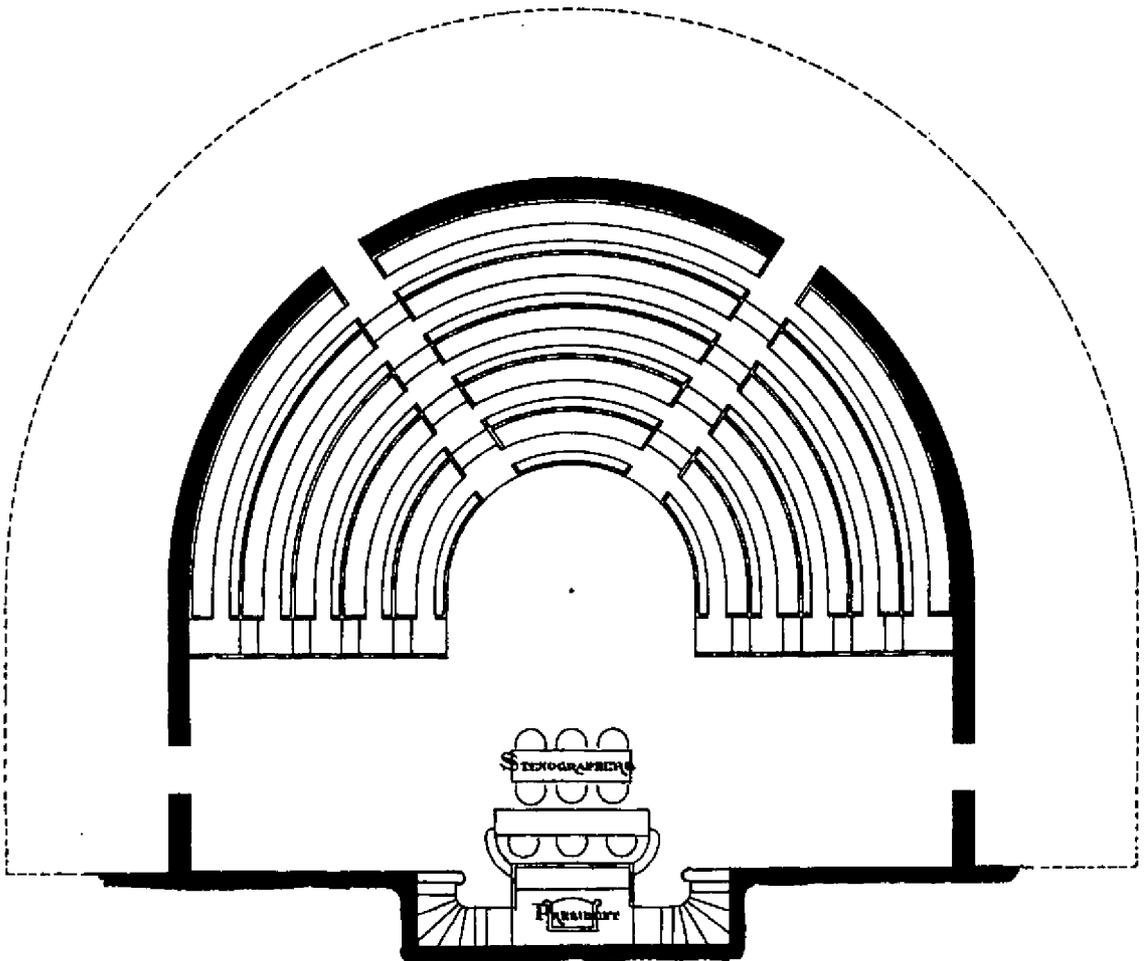
SCHEME FOR HARD-LABOUR (PUMPING) BASED ON ARRANGEMENT AT WANDSWORTH PRISON SURREY.

· CHAMBER · OF · REPRESENTATIVES ·
· BRUSSELS ·

· APPROXIMATE SKETCH ·



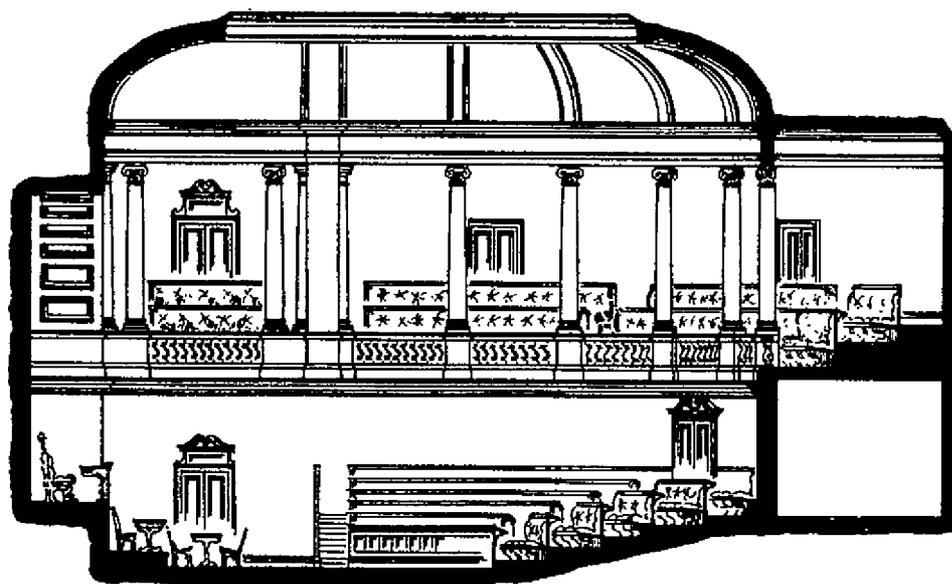
PLAN OF GALLERY



GROUND FLOOR PLAN

· CHAMBER · OF · REPRESENTATIVES ·
· BRUSSELS ·

· APPROXIMATE SKETCH ·



· SECTION ·

SIG. 398

PHOTO-LITHOGRAPHED AT THE GOVT. PRINTING OFFICE,
SYDNEY, NEW SOUTH WALES.

15345

1897.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

NORFOLK ISLAND.

(CORRESPONDENCE RELATING TO THE TRANSFER OF, TO THE GOVERNMENT OF NEW SOUTH WALES.)

Printed under No. 15 Report from Printing Committee, 12 August, 1897.

Presented to Parliament by Command of His Excellency the Governor, 11 August, 1897.

TABLE OF CONTENTS.

Serial No.	From or to whom.	Date.	Subject.	Page.
1	Viscount Hampden ..	1895. Aug. 21	Requests to be furnished with the Secretary of State's views respecting the future administration of Norfolk Island.	
2	To Viscount Hampden	Sept. 18	Requests him, on his arrival in New South Wales, to consider the matter, and report, after consultation with his Ministers, as to the best course to be adopted.	
3	Governor Viscount Hampden.	Dec. 13 (Rec. Dec. 13.) Telegram.	States that his Ministers agree in principle to the transfer of the Island; inquires whether he may proceed with the matter and forward the agreement for approval.	
4	To Governor Viscount Hampden.	Dec. 14 Telegram.	States that there is no objection to course proposed; but if terms proposed affect Her Majesty's Government, requests him to telegraph them.	
5	Governor Viscount Hampden.	1896. Jan 20 (Rec. Feb. 25.)	States that his Ministers have agreed to the suggested transfer, subject to certain conditions, and indicates the measures he proposes to take.	
6	Agent - General for New Zealand.	March 4	Encloses copy of telegraphic correspondence with his Government on the subject of the proposed annexation of Norfolk Island to New South Wales, and expresses a hope that the completion of the proposed arrangement may be deferred pending any further representations which his Government may desire to make.	
7	Governor Viscount Hampden.	March 10 (Rec. March 10.) Telegram.	Considers that the Island should be placed under the administration of New South Wales without incorporation, but Law Officers advise that an Order in Council will subject the Island to all laws of the Colony. Inquires whether he has authority to appoint Resident Magistrate.	
8	Governor the Earl of Glasgow (New Zealand).	(Rec. March 11.) Telegram.	Submits that it would be desirable to consult the Government of New Zealand before cancelling existing arrangements.	
9	To Governor Viscount Hampden.	March 14 Telegram.	States that no steps will be taken in the matter of the transfer of the Island until the arrival of despatches, and that the appointment of a magistrate must stand over, as the New Zealand Government raises objection.	
10	To Governor the Earl of Glasgow (New Zealand).	March 14 Telegram.	States that the Secretary of State will await arrival of despatches before taking any steps.	
11	To the Agent-General for New Zealand.	March 14	States that the Governors of New South Wales and New Zealand have been informed by telegram that no further steps will be taken in the matter of the annexation of the Island pending the receipt of despatches from both Colonies.	
12	Governor Viscount Hampden.	March 3 (Rec. April 13.)	Reports the appointment of a Commission to investigate the matter referred to in No. 5.	
13	Ditto	March 5 (Rec. April 13.)	Transmits copy of a letter covering a protest from the House of Representatives of Norfolk Island against the proposed annexation; states that the Law Officers advise that the transfer should be deferred until the form of document effecting it is settled; and requests authority in the meantime to appoint a Resident Magistrate.	
14	Ditto	March 19 (Rec. April 27.)	Transmits copy of a letter from the Hon. J. H. Carruthers covering a copy of a report, by himself and Mr. Oliver, on the affairs of the Island; observes that Imperial assistance will be necessary.	

TABLE OF CONTENTS—continued.

Serial No.	From or to whom.	Date.	Subject.	Page.
15	To Governor the Earl of Glasgow (New Zealand).	1896. May 23 Telegram.	Inquires when his despatch respecting the proposed transfer may be expected.	
16	To Governor Viscount Hampden.	May 30	States the arrangements made for providing the salary of a magistrate, and, if necessary, a clerk.	
17	Mr. Byron Adams and other inhabitants of Norfolk Island.	March 27 (Rec. in Colonial Office June 2.)	Memorial to the Queen, setting forth their views as to the position of affairs in the Island, and deprecating any change in the administration.	
18	Governor Viscount Hampden.	June 15 (Rec. June 15.) Telegram.	Considers that the administration of the Island should not be transferred to New Zealand without again referring to his Ministers.	
19	To Governor Viscount Hampden.	June 18 Telegram.	States that Secretary of State is waiting despatch from New Zealand, and before taking action will communicate with him.	
20	Governor the Earl of Glasgow (New Zealand).	May 26 (Rec. July 7.)	States the objections of his Government to the control of the Island by New South Wales, and suggests, on behalf of his Government, that, pending the settlement of the question of laying a new Pacific cable, no change should be made.	
21	To Governor Viscount Hampden.	July 9.	Informing him that a memorial has been received from certain inhabitants of the Island respecting the position of affairs, and deprecating any changes in the administration; and requests him to inform the memorialists that their representations will receive full consideration.	
22	To Governor the Earl of Glasgow (New Zealand).	July 16 Telegram.	Proposes to arrange transfer of the Island to New South Wales without waiting for the settlement of the question of the new Pacific cable, as the matter is urgent, unless reasons for further delay are sent by telegraph.	
23	Governor the Earl of Glasgow (New Zealand).	July 22 (Rec. July 22.) Telegram.	States that Colonial Government have nothing to add to their representations contained in despatch of May 26th, but consider that Norfolk Island shows preference to New Zealand.	
24	To Governor Viscount Hampden.	July 31 Telegram.	States that Her Majesty's Government are willing to attach Norfolk Island to New South Wales if Colonial Government are ready to undertake expenses of future administration.	
25	Governor Viscount Hampden.	June 29 (Rec. Aug. 4.)	Encloses copy of a further Report by the Commissioners appointed to inquire into the affairs of the Island.	
26	Ditto	August 5 (Rec. August 5.) Telegram.	States that his Government accepts offer of Norfolk Island, with a grant of, say, £1,000, which is considered equitable, but not an essential condition.	
27	Ditto	August 5 (Rec. Sept. 12.)	Encloses Minute from his Ministers accepting the administration of the Island, and suggesting a grant of £1,000 from Imperial funds towards cost of repairing buildings; also sends copy of a letter addressed to Colonel Spalding, C.M.G., who has accepted the appointment of Resident Magistrate.	
28	To Governor Viscount Hampden.	September 25 Telegram.	Proposes to annex the Island to New South Wales by Order in Council, with provisos, and inquires whether proposals meet views of his Ministers.	
29	Governor Viscount Hampden.	October 14 (Rec. Oct. 14.) Telegram.	States that Ministers propose that administration only should be transferred, legislative powers remaining as before, and that complete annexation be deferred; meanwhile New South Wales Government will bear expense of administration.	
30	To Governor Viscount Hampden.	October 23 Telegram.	States that Treasury agrees to grant £1,000, also £100 for Colonel Spalding's passage, and that Order in Council will be sent out as soon as possible vesting the administration in the New South Wales Government.	
31	Ditto	October 30	States the financial arrangements made in connection with the transfer; an Order in Council is being drafted providing for the change of administration, and, in the meantime, the existing laws require amendment before Colonel Spalding can act as Magistrate.	
32	Governor Viscount Hampden.	October 9 (Rec. Nov. 18.)	States that a special expenditure of £1,115 10s. will be involved by the transfer, in addition to an annual charge of £100 a year; also that his Ministers are considering the method of transfer, and incline to the opinion that an Imperial Statute will be necessary.	
33	Ditto	October 16 (Rec. Nov. 23.)	Transmits copy of memorandum by the Premier, stating that Ministers propose that the Island should not be annexed formally to New South Wales, and that their services should be administrative only, legislation being conducted as formerly, it being understood that the Island is secured to New South Wales, or the future Federal body, when it is found expedient to ask for its annexation.	
34	To Governor Viscount Hampden.	December 28 Telegram.	Proposes to submit Order in Council conferring on Governor of New South Wales powers at present possessed by him as Governor of Norfolk Island.	
35	Governor Viscount Hampden.	1897. November 28, 1896. (Rec. Jan. 4, 1897.)	Reports the steps taken by him on his visit to Norfolk Island to inaugurate the new system of Government.	
36	To Governor Viscount Hampden.	January 14	Approves of his proceedings on the occasion of his visit to the Island, and thanks him for his labour in connection with the introduction of a system of better Government.	
37	Governor Viscount Hampden.	December 16, 1896. (Rec. Jan. 25, 1897.)	Transmits copies of two despatches from the Chief Magistrate, showing that the change in the laws and regulations of the Island had been satisfactorily effected; that the election of the Council of Elders had been efficiently conducted; and that a salutary effect had already been created by the conviction and punishment of offenders.	
38	To Governor Viscount Hampden.	January 27.	Transmits Order in Council providing for the future administration of Norfolk Island.	

TRANSFER OF NORFOLK ISLAND TO THE GOVERNMENT OF NEW SOUTH WALES.

No. 1.

Viscount Hampden (Governor Designate of New South Wales) to Colonial Office.

(Received 22 August, 1895. Answered by No. 2.)

Sir,

The Hoo, Welwyn, August 21, 1895.

It will be of great assistance to me if, prior to my departure for New South Wales, I can have the opportunity of obtaining your views respecting the affairs of Norfolk Island.

By Royal Order in Council of the 24th June, 1856, the Governor of Norfolk Island has vested in himself full powers of legislation, subject only to Royal instructions, and as to these he is guided by Royal instructions issued to Sir William Denison in the same year as the Order in Council aforesaid was issued.

Acting upon these instructions, Sir William Denison, and the Governors of Norfolk Island who have succeeded him, appear to have preserved as far as possible the laws and usages by which the inhabitants of Norfolk Island had been accustomed to govern themselves when they inhabited Pitcairn Island.

These laws and usages, which for many years were sufficient for the wants of the small community existing on the Island, have been found of recent years to be quite inapplicable to the times and to the condition of the existing population of some 900 persons.

In the Island there is no court of justice nor prison, no sheriff, nor paid policeman; there are consequently no means for the recovery of debt nor for the punishment of serious crime, and in the event of a direction being issued by the Governor for the trial of a person charged with serious crime, there is in case of conviction no power to transport such a criminal, nor is there any prison in the Island in which a prisoner can be detained.

It appears that Lord Ripon, in a despatch of January 1, 1895,* acknowledged the receipt of a despatch from Sir Robert Duff of the 15th October, 1894,* enclosing a report of Commissioners who were appointed to inquire into matters connected with the administration of justice in Norfolk Island.

The recommendations of these Commissioners were generally approved by Lord Ripon, but His Lordship, while admitting that it was out of the question that the revenue of the Island could be made sufficient to meet the cost involved in the appointment of a Resident Magistrate, intimated that a sufficient case had not been made out to justify him in asking the Lords Commissioners of the Treasury to sanction any expenditure from Imperial funds.

Upon the question of sufficiency of revenue, I have reason to believe that, with proper administration, sufficient funds can be obtained to meet the cost of the charges proposed by the Commissioners.

This belief is founded on a report forwarded to me by His Excellency Sir Frederick Darley of a Mr. McFarland, a retired District Court Judge of New South Wales, who has recently visited Norfolk Island, and has always taken a keen interest in its welfare.

Mr. McFarland asserts that of 9,000 acres of land in the Island, nearly every foot is very fertile; that there are now not more than 200 acres under cultivation; that there are still unalienated at least 4,500 acres of rural land, worth at present selling rate £3 an acre, or £13,500; and that, in addition, there are 200 acres or more of a town reserve adjoining Government House well adapted for building.

If these statements are confirmed by competent examination, it would follow that the increased cost of a better administration of justice will be a charge only temporary in its character, and under these circumstances it is a question for consideration whether, pending the sale of these lands, if such a course be sanctioned, the necessary funds may not be obtained by a taxation upon imports.

At the same time, I venture to express an opinion that considerations of convenience, of local interests, of economical administration, and of the treatment of criminals, point to the desirability of persuading the Government of New South Wales to assume the charge of Norfolk Island; and it is upon this point specially that I desire to obtain your opinion before I leave for Sydney.

I have, &c.,
HAMPDEN.

No. 2.

Colonial Office to Viscount Hampden.

(Answered by No. 5.)

My Lord,

Downing-street, September 18, 1895.

I am directed by Mr. Secretary Chamberlain to acknowledge the receipt of your letter of the 21st ultimo† expressing your desire to be made acquainted with his views respecting the affairs of Norfolk Island.

2. I am to observe, in the first instance, that Her Majesty's Government would regard with much satisfaction the taking over of the administration of Norfolk Island by the Government of New South Wales, and Mr. Chamberlain is glad that this view appears to be shared by yourself.

3. Norfolk Island, as you are doubtless aware, was at one time a part of New South Wales, and was mentioned in the Governor's Commission; but in 1843 it was annexed to Tasmania, or Van Diemen's Land, as it was then called. In 1856, however, it was separated from Tasmania, and created into a separate settlement, doubtless in consequence of the recommendation in Sir W. Denison's despatch of the 27th February, 1856, that the Island should be withdrawn from the jurisdiction of the adjoining Colonies, on grounds which do not seem to hold good at the present day. Moreover, on reference to that despatch it will be seen that Sir W. Denison's original proposal had been that the Island should be re-transferred to New South Wales.

4. Mr. Chamberlain will be glad, therefore, if, on your arrival in New South Wales, you will take the whole matter into your consideration, and will favour him with your opinion, after consultation with your Ministers, as to the best course to be adopted.

5. The correspondence enclosed,* some part of which has been communicated to you before, is annexed for reference, and I am to request that you will be good enough to return the original despatches before leaving this country.

I am, &c.,

JOHN BRAMSTON.

No. 3.

* Not printed.

† No. 1.

See O. in C. of 24th June, 1856
P.P. of June, 1857, Part II., p. 12
See P.P. 5th Feb 1857, p. 29, para. 12.
P.P. 5th Feb. and June, 1857. Report on Norfolk Island, August, 1885, C. 4942.

No. 3.

Governor Viscount Hampden to Mr. Chamberlain.

(Received December 13, 1895. Telegram. Answered by No. 4.)

MINISTERS agree in principle transfer of Norfolk Island. Can I go on with and forward agreement for your approval?

No. 4.

Mr. Chamberlain to Governor Viscount Hampden.

(Sent December 14, 1895. Telegram.)

No objection to course proposed. Norfolk Island. If terms proposed affect Her Majesty's Government, you should telegraph them.

No. 5.

Governor Viscount Hampden to Mr. Chamberlain.

(Received February 25, 1896.)

Sir,

Government House, Sydney, January 20, 1896.

I have the honor to inform you that, acting on the instructions which I received on leaving London, I directed my attention to the affairs of Norfolk Island as soon as I arrived in Sydney.

I have had the advantage of discussing the position and prospects of the Islanders with my predecessor Sir Frederick Darley, and with several gentlemen resident here who, having visited the Island themselves, and being well acquainted with the people, were well qualified to give me valuable advice.

These gentlemen concur generally in their description of the affairs on the Island.

The administration of justice, which is now in the hands of a Magistrate elected by the community, has been partial and unsatisfactory. Crime is rarely punished, and debts are not recoverable.

The public buildings, including the gaol, are in a ruinous condition, and those utilised for a lock-up are unfitted for such use.

The land, which is extremely fertile, is, with the exception of a small area, untilled, the people making no effort to develop the resources of the Island.

This short but significant statement of facts clearly establishes the failure of the experiment made in 1856, when the immigration of other settlers was discouraged, and it was hoped that the Pitcairn Islanders transferred to Norfolk Island, and governing themselves under a simple code of regulations, would develop the resources of its fertile soil, and form a prosperous community.

This being the condition of affairs in the Island, it is evident that immediate steps should be taken to enforce the administration of the law, and to encourage the introduction of fresh settlers.

Acting upon the opinions I expressed to you in my letter of 21st August, 1895† (with which you were pleased to concur), that the reasons against a re-transference of the Island to New South Wales, as stated by Sir William Denison in his despatch of February 27th, 1856, no longer existed, I requested my Ministers to consider a suggestion which I made to them, that Norfolk Island should be transferred to New South Wales.

I am pleased to be able to inform you that my Ministers have agreed to the suggestion made to them, and I have the honor to forward to you their assent to the transfer, subject to the conditions that the rights of existing landowners shall be protected by the deed of transfer, and that the Pitcairn Fund shall be transferred, the proceeds to be applied to meet the expenses of administration of the Island.

It will be necessary to incur some cost in making arrangements preliminary to the transfer, with the view that no questions shall hereafter arise as to rights acquired by grants of land from the Crown, or by transfer otherwise. I am informed that the records of dealings in land have not been accurately kept, there being no reliable register of landowners, and I am consequently of the opinion that a Commission should be appointed to examine such documents as exist, to take evidence, and to prepare a register of all those having legal and equitable rights to the possession of the land.

I desire to confine the inquiry to the examination of rights founded upon grants made by the Crown, as the action taken by Her Majesty's Government in discontinuing the practice of making free grants of land, disposes of the claim that an equitable right to a free grant of land accrues to every person born on the Island.

Pending the transfer to New South Wales, I desire authority to alter the laws and regulations of the Island so as to ensure the administration of justice.

The present Chief Magistrate, Mr. Byron Adams, ignores instructions given him, and he has been quite systematic in the non-performance of his duties.

For instance, my predecessor, Sir Frederick Darley, issued a decree in the spring of 1895 disfranchising all voters who had not paid their medical and school fees, and I am informed, by trustworthy persons who were present in the Island at the time, that the Chief Magistrate on receiving this decree called a meeting, condemned the Governor's action, and caused a roll of the inhabitants to be prepared for electoral purposes inclusive of these disfranchised persons. Upon a poll being held for the election of a Chief Magistrate for the year 1896 these persons voted, and the present Chief Magistrate, Mr. Byron Adams, was re-elected.

I feel assured that Mr. Byron Adams will ignore any instructions that I may send him as he has ignored the instructions of my predecessor, and I am confident that if he is continued in office the laws and regulations of the Island will, in the main, be disregarded. I

* See Parliamentary Paper of 5th February, 1857. † No. 1.

Sir William Denison to Colonial Office, September 3, 1855.*
Colonial Office to Sir William Denison, January 21, 1856.*
Sir William Denison to Colonial Office, February 27, 1856.*

I propose, therefore, to issue a Proclamation repealing all existing laws and regulations, to apply to the Island the laws of New South Wales, except the land and electoral laws, to supersede Mr. Byron Adams, and to appoint as Chief Magistrate, Mr. Francis Nobbs.

This gentleman is a resident on the Island, and has served as Chief Magistrate. I am in communication with him, and I have every reason to believe that he will accept the nomination at a salary of £100 per annum.

In addition, it will be necessary to provide accommodation for two policemen to be employed, to build a small lock-up, and a store for tobacco or other goods which may have to be placed in bond.

I suggest that authority be given me to expend a sum not exceeding £500 in carrying out the proposals contained in this letter.

As to all these matters, I shall act in consultation with Ministers, and I shall proceed to Norfolk Island as soon as the time has arrived when I can inform the inhabitants of the decision of Her Majesty's Government.

I enclose a form of Proclamation declaratory of the alteration in the laws which I have suggested, and an Order in Council to be issued when arrangements are complete for the transfer of the Island.

I have, &c.,
HAMPDEN.

[Enclosure 1 in No. 5.]

MINUTE FOR THE HONORABLE THE PREMIER.

December 2, 1895.

I DESIRE to make a proposal to you with reference to Norfolk Island, and I shall be obliged if you will give me the opinion of your Government thereon.

Norfolk Island was at one time part of New South Wales, and was mentioned in the Governor's Commission; but in 1843 it was annexed to Tasmania, or Van Diemen's Land, as it was then called. In 1856, however, it was separated from Tasmania, and created into a separate settlement, doubtless in consequence of the recommendation in Sir W. Denison's despatch of the 27th February, 1856, that the Island should be withdrawn from the jurisdiction of the adjoining colonies, on grounds which do not seem to hold good at the present day.

Moreover, on reference to that despatch, it will be seen that Sir W. Denison's original proposal had been that the Island should be re-transferred to New South Wales.

In 1894 Sir Robert Duff appointed commissioners to inquire into certain matters connected with the administration of justice and the government of Norfolk Island. I enclose their report for your consideration.

I also enclose a report from Mr. McFarland to Sir Frederick Darley, dated May 4th, 1895.

The general purport of these reports is that the Island itself is fertile, but that the population, partly from inherited character and habits, and partly from the absence of any controlling authority, have no desire to cultivate the land and provide the means of defraying the costs of a proper administration of justice. Mr. McFarland, as you will observe in his report, is of the opinion that a sufficient revenue could be found for all necessary purposes.

Assuming that this is the case, I am inclined to the opinion that considerations of convenience, local interests, uniformity of administration and treatment of criminals, point to the desirability of a re-transfer of Norfolk Island to New South Wales.

HAMPDEN,
Governor.

[Enclosure 2 in No. 5.]

TREASURY MINUTE FOR HIS EXCELLENCY THE GOVERNOR.

Subject.—Norfolk Island.

The Treasury, New South Wales, Sydney, December 31, 1895.

THE Cabinet having considered the Minute of his Excellency the Governor, dated 2nd instant, on the above subject, desires to state that if Her Majesty's Government is of opinion that Norfolk Island should be attached to this Colony, we are quite prepared to administer its affairs.

Of course the transfer would be made so that the Island would become a part of New South Wales, and subject to its laws; all vested interests and all obligations incurred by Her Majesty's Government to be treated justly, and as to the latter, duly honoured in our dealings with the inhabitants.

I understand that there is a fund in connection with the Pitcairn Islanders; this, I presume, would be handed over to us for administration too.

G. H. REID.

[Enclosure 3 in No. 5.]

LAWS AND REGULATIONS FOR NORFOLK ISLAND.

WHEREAS by an Order of the Queen in Council dated the 24th day of June, 1856, the Island called Norfolk Island was declared to be a distinct and separate settlement, and the Governor and Commander-in-Chief for the time being of the Colony of New South Wales was constituted and appointed Governor of the said Island, with power to make laws for the order, peace, and good government of the said Island: And whereas it was further ordered by Her Majesty in Council that, until annulled by competent authority, all laws, ordinances, and regulations, civil and ecclesiastical, which might be in force within the said Island at the time of the proclamation of the said Order in Council, should continue in force, subject only to such changes as should necessarily be consequent on the changes of government.

And whereas on the 14th day of October, 1857, Sir William Thomas Denison, being then Governor of the said Colony of New South Wales, in pursuance of the powers vested in him, did declare and enact that all laws, ordinances, and regulations which were then in force within the Island called Norfolk Island

were

were thereby repealed and annulled, so far the Governor was competent to repeal them. And the said Sir William Thomas Denison, in pursuance of such powers, did thereby make other laws for the order, peace, and good government of the said Island; and the said laws have been since altered and amended by subsequent Governors of the said Colony of New South Wales:

And whereas by the said Order in Council hereinbefore referred to it was ordered and declared that the Governor for the time being of the said Island called Norfolk Island should have full power and authority to constitute and appoint Judges, Justices of the Peace, and other necessary officers and Magistrates in the said Island for the administration of justice:

And whereas Her Majesty did, by Commission, dated the 5th day of July, 1895, duly appoint the Right Honourable Henry Robert Brand Viscount Hampden to be Governor and Commander-in-Chief of the Colony of New South Wales:

And whereas, in the interests of the community inhabiting Norfolk Island, and for the better promoting the advancement and welfare of the said Island and its inhabitants, and the better and more certain administration of justice therein, it has been considered wise and expedient to repeal all existing laws and regulations respecting the said Island and now in force therein, and appoint an officer or officers for the administration of justice therein, and to pass other laws and regulations for the better management of the affairs of the said Island:

Now, therefore, I, Henry Robert Brand Viscount Hampden, the present Governor and Commander-in-Chief of the said Colony of New South Wales and its Dependencies, and Governor of Norfolk Island, do, in pursuance of the power vested in me, declare and enact as follows:—

1. All laws, ordinances, and regulations which have been and are now in force within the Island called Norfolk Island are hereby repealed and annulled.

2. The Executive Government of Norfolk Island, during the absence of the Governor, shall be vested in a Chief Magistrate (who must be a resident in the Island), to be appointed by the Governor of Norfolk Island, and who shall hold office during the pleasure of such Governor.

3. The first duty of the Chief Magistrate shall be the taking of a census of the inhabitants of the Island, in which shall be set forth the age of the inhabitants, the dates and places where born, and the dates of marriage. All males who shall by such census be returned as having attained the age of 25 years, and shall be residents in the Island, shall be termed "Elders," and from this body shall be chosen a jury or juries for the trial of crimes and misdemeanours as hereinafter provided for.

4. The Chief Magistrate shall, with all convenient despatch, compile a registry of all alienated lands in the said Island, showing the names of the original grantees of such lands, and the names of the present holders thereof, and the interests held by them respectively therein, and shall continue such registry for the recording therein all future dealings with such lands and all future alienations of and subsequent dealings with the waste lands of the Island.

5. The Chief Magistrate shall keep a registry of all births, deaths, and marriages that may take place in the Island in the form now in use in the Colony of New South Wales, or as near thereto as circumstances will admit.

6. The Chief Magistrate shall have power to establish a Court of Civil and Criminal Jurisdiction, which court shall be a Court of Record, and shall have the like jurisdiction, and with the like powers of recovering debts and inflicting punishment, as the District Courts, Court of Quarter Sessions, and Courts of Petty Sessions now have in the Colony of New South Wales, so far as they can be applied to the circumstances and requirements of the Island; but the Chief Magistrate shall not have any jurisdiction in the case of capital offences beyond taking evidence as at an information filed in a Police Court in the Colony of New South Wales; and in case of a committal for trial, he shall forthwith report the same (which report shall be accompanied with a copy of the depositions taken) to the Governor of the Island, to abide his decision as to the future action to be taken in connection therewith.

7. For the purpose of carrying out the powers and duties of the said Court, the Chief Magistrate shall have power, and he is hereby authorised, to appoint such bailiffs and other subordinate officers as may appear to him to be necessary.

8. For the preservation of order in the community of the said Island, the said Chief Magistrate shall have the same powers as are now vested in Justices of the Peace for the City of Sydney, in the Colony of New South Wales, so far as the same can be applied to the said Island, and shall have the like power of enforcing any judgment given by him in any case as the said Justices for the City of Sydney now possess.

9. All crimes and misdemeanours not determinable by the Chief Magistrate when sitting as a Court of Petty Sessions shall be triable before the Chief Magistrate presiding as at a Court of Quarter Sessions in New South Wales, and a jury of twelve persons to be chosen as next hereinafter provided for; and all such offences shall be dealt with in accordance with the laws now in force in New South Wales, so far as applicable.

10. Inasmuch as the method of summoning juries in the Colony of New South Wales is inapplicable to the circumstances of the Island, the power of summoning a jury or juries for the trial of any crime or misdemeanour (not punishable summarily by the Chief Magistrate) is hereby vested in the Chief Magistrate, who shall summon such jury or juries in manner following:—

(a) He shall, by his writ, direct such person as he may appoint for the purpose to summon so many of the Elders as he may think sufficient, to attend at the time and place to be fixed by him for the trial.

(b) The said Elders shall be chosen by lot, in such manner as the Chief Magistrate may prescribe, from amongst those whose names appear on the census beforementioned, and such other male members of the community as to the knowledge of the Chief Magistrate shall have attained the age of 25 years.

(c) The persons so named by the Chief Magistrate shall thereupon issue a summons to the Elders in the following form:—

"Mr. A.B. (naming the juror), you are hereby required to appear as a juror at the Court to be holden at _____ on the _____ day of _____ next, and there to attend from day to day until you be discharged by the said Court,"

and shall serve the same by causing it to be left at the usual or last known place of abode of, or served personally on, the said Elders.

known as Norfolk Island shall be transferred to, and shall thereupon become annexed to, the Colony of New South Wales, and the said Island and the land thereof shall be vested in the said Government, and the care, management, government, and control of the inhabitants thereof shall be committed to, and upon such proclamation as aforesaid shall be vested in, the Government of New South Wales.

And we do further order, direct, and empower the said Government of New South Wales to make such laws and regulations for the sale and disposal of the waste lands of the said Island, and to make grants thereof, as such Government may in its wisdom consider desirable, and that such sale and disposal of the said lands shall not be limited to the present inhabitants of the said Island, but in the interests of such inhabitants, and for the promotion of the moral, economic, and commercial interests of such inhabitants, and for the more completely developing the resources of the said Island, the lands thereof may be sold and disposed of to strangers, who shall be British-born subjects, or shall have been naturalised, and who shall be desirous of settling in the said Island.

And we do further order, direct, and empower the said Government of New South Wales to make and promulgate such laws and regulations, and to constitute and appoint such Judges, Justices of the Peace, and other necessary officers and Magistrates as it may consider fit and expedient for the establishment of superior and inferior courts of justice of civil and criminal jurisdiction in the said Island for the due administration of justice therein, and also to make and promulgate such laws and regulations as it may consider desirable to promote the social, commercial, and industrial interests of the inhabitants of the said Island, and from time to time to repeal, alter, and amend all or any of such laws as the said Government may consider necessary for all or any of the purposes aforesaid.

And we do further order, direct, and empower the said Government of New South Wales to raise from time to time from the inhabitants of the said Island, or from any person or persons trading or dealing with them, a revenue for the purposes of the said Island, by such ways and means as the said Government may consider fit and expedient for so promoting the interests of the present and future inhabitants of the said Island.

And we do further order and direct that our Governor of New South Wales shall, immediately upon such proclamation as aforesaid of this our Order, transfer to the Government of New South Wales the fund known as the Pitcairn Island Fund now vested in him or under his control, for the purposes of the income arising therefrom being applied towards the due support of the governing and social institutions that may be introduced into or made applicable to the said Island.

[Enclosure 5 in No. 5.]

MAY IT PLEASE YOUR EXCELLENCY,

Granville, January 1, 1896.

In accordance with my undertaking at our conversation upon Norfolk Island matters, I have consulted with Mr. J. L. Watkins, Parliamentary Draftsman, who was my co-Commissioner to Norfolk Island, and Mr. W. R. Beaver, Clerk of the Peace, who acted as our Secretary.

I informed them that it was not your Excellency's intention to ask the Imperial Government for any subsidy, as it is your view that the residents of the Island should defray all the costs of their Government, including the administration of justice; and that you also propose to discontinue the Chaplain's stipend, and to transfer the duties of his office to the missionaries of the Melanesian Mission resident on the Island.

We agree that it is essential for the due administration of justice that a Resident Magistrate should be appointed, as recommended in our report to the late Governor, and that as the revenue is not, for some time to come, likely to afford the salary for a qualified person from elsewhere, as is desirable, the next best course would be to appoint one of the Islanders as Police Magistrate during pleasure, dissociating the administration of justice entirely from the municipal government of the Island.

We agree to recommend to your Excellency for such appointment Mr. Francis Mason Nobbs, as being the best, and we think the only, person in the community who unites the qualifications of ability, education, experience, and uprightness of character. I found that he had provided himself with some standard law-books, and had made himself fairly acquainted with the principles of law during his administration of the office of Chief Magistrate. We think that if he were invested with the powers of a Police Magistrate, and paid a salary of £100 per annum, some of the disadvantages attendant upon the appointment of an Islander would be minimised. These are set out in a letter subsequently addressed to me by Mr. Watkins, which he permits me to submit to your Excellency.

We also agree that it would be advantageous to transfer the ecclesiastical duties to the Bishop of Melanesia, within whose diocese we believe Norfolk Island now is; but we do not think that the whole of the Chaplain's stipend could be saved thereby, though perhaps one-half might. The clergy of the Melanesian Mission are supported through missionary societies by contributions from the general public for a definite purpose, and it is obvious that they would have no right to devote themselves to other duties without receiving contributions to their support in respect of those duties.

Considering the economic conditions of the community, we think that there would be no possibility of collecting such contributions directly from the individual members, and that a subsidy must come out of the funds within your Excellency's control.

We discussed the question of increasing the revenue by Customs duties, which we think desirable, but we do not possess sufficient technical knowledge of the subject to enable us to make any recommendations with respect to it, and we would venture to suggest that as to this matter an expert, such as the Collector of Customs, should be consulted.

We are of opinion, however, that the imposition of duties will be distasteful to the Islanders generally, and any opportunities of evading them would be eagerly seized. We also feel convinced that the law would receive no support from the present chief authority in the Island.

We do not think it would be incompatible with his judicial duties if the person whom we recommend as Police Magistrate were also appointed local Collector of Customs. In some of our inland towns the duties of Police Magistrate and of receiver of local revenue are combined.

I have just received letters from Norfolk Island, and there are some matters reported by reliable correspondents which it seems to me it is my duty to bring under your Excellency's notice, as indicating the urgent necessity for a change in the constitution and administration of the Island. One

One writes—in November—referring to the enactments of the Lieutenant-Governor, Sir F. Darley, as to public debtors:—"This law, or collection of laws, came on the people like a thunder-clap, and, as you may imagine, caused great consternation; but they are just what was required. . . . At the last public meeting the Chief Magistrate read the new laws, and a footnote after them, in which the Lieutenant-Governor stated he hoped the Chief Magistrate would not have to put them in force, and as soon as read, after some remarks, he passed to other subjects, and, as usual, permitted everyone present to vote, whether a debtor or not, not realising, I suppose, that the new laws came into effect as soon as proclaimed. I quite expect at the next general election for Chief Magistrate there will be a great deal of excitement. . . . To show the peculiarity of legal administration here, I must tell you of a case tried a short time since. One Timothy Christian was convicted by a jury of indecent assault, &c., and fined £4, besides appointed to clear so many yards of the stream running through the township. This work the jury said (as is their custom) was to begin on September 24th next, and the foreman explained that they meant the following Monday; but the accused was told by an outsider that the verdict did not require him to work till September, 1896, and for some time the young man refused to work, and defied the Chief Magistrate. Being present a few days after his conviction at a public dance, to which no one then or there objected, he found plenty of partners. The Chief Magistrate has been much annoyed over this case, but he did ultimately make him do the work. But the fact that he could defy the authorities as he did speaks badly for the Island Constitution."

With regard to this case, I am unable to say—not having the laws of October 14th, 1857, before me—whether it came within the jurisdiction of the local Magistrate's court and jury; but it may be that a miscarriage of justice has taken place. The proclamation of the late Governor of May 20th, 1894, enacts that all crimes not within the jurisdiction of such court shall be dealt with in accordance with the laws at that date in force in New South Wales. By our laws this offence is a misdemeanour (in certain cases a felony), and is not punishable by fine, but by imprisonment.

Another correspondent, writing on 26th December, informing me of the re-election of Byron Adams as Chief Magistrate, says:—"The Magistrate ignores the instructions with reference to a law sent down from the Lieutenant-Governor some three months ago with instructions to the Magistrate to see that the law be strictly carried out. . . . Instead of obeying the commands of the Lieutenant-Governor, he called a public meeting, condemned the Governor's action, appealed to the House, a great many of whom are indebted for fees, and some for fines, who, of course, supported the Magistrate's action, and the law, as I have already stated, was ignored. At the election for the Magistrate and Councillors to-day, the Magistrate certified the electoral roll as correct, though there are a great many defaulters on the list. By so doing he, of course, gave himself a large majority of votes, defeating the other two candidates."

I presume that your Excellency will receive a report from the Returning Officer, and if the facts be as represented to me, I would respectfully express my opinion that you should declare the whole proceedings invalid.

These reports confirm the results of our personal observations, that the person who has been elected as Chief Magistrate is utterly unfit to be your Excellency's representative in the Island.

I would venture, in conclusion, to urge the great importance of a visit to the Island by your Excellency at the earliest opportunity. It would have a strong moral effect upon the people, and you would be able to form from personal observation a better opinion of the condition and wants of that neglected community than from any report, however elaborate.

To His Excellency Viscount Hampden,
Governor of Norfolk Island, &c., &c.

I have, &c.,
ERNEST B. DOCKER,
Judge.

[Enclosure 6 in No. 5.]

My dear Docker,

Parliamentary Draftsman's Office, Sydney, December 21, 1895.

On thinking over the proposal to recommend the appointment of Mr. Francis Nobbs as Resident Magistrate at Norfolk Island, the following considerations have occurred to me:—

1. The advantages of a Resident over a Visiting Magistrate appear to me to be the following:—
 - (a) The prompt punishment of offenders and recovery of debts;
 - (b) Continuing supervision over the punishments awarded and the execution of orders; and
 - (c) The presence of a trustworthy man who will inform the Governor as to the state of the Island.

2. The appointment of one of the Islanders to the position will have this good effect, that it will open a career to the more ambitious men, and lead to a higher standard of education and conduct. It would also carry out the previous policy of the British Government—that the Islanders should, so far as possible, manage their own affairs.

3. The disadvantages are:—

- (a) The numerous family ties which the Magistrate would have on the Island.
- (b) The absence of that prestige which a Visiting Magistrate would have.

I think these disadvantages would to a certain extent be diminished by the personal probity of Mr. Nobbs, and the influence which the possession of an assured position and an income comparatively large would be likely to have over the minds of the rest of the Islanders.

4. The appointment should only be made after a visit by His Excellency to the Island. It would be desirable to allow some time after the annual election to elapse before the appointment is notified, and the new Magistrate should be inducted by His Excellency or by some person of standing nominated by him for that purpose.

5. An arrangement might be made by which the Melanesian Mission would undertake the chaplaincy of the Island, as soon as His Excellency has satisfied himself that the change would be beneficial. I would strongly recommend that this arrangement be made. It would bring the Islanders under the best kind of outside influence. It might also effect a saving of perhaps £50 a year, and the question might then be considered whether any duties of Customs or other imposts would be necessary to meet the extra charges occasioned by the establishment of a proper civil and criminal jurisdiction within the Island.

6. If the imposition of duties is necessary, then they should be imposed on the induction of the Magistrate. It would not be well to impose them before a sufficient controlling power exists on the Island, and it would be prejudicial to the revenue to postpone the collection of the new duties, as the proposal to impose them must be well known on the Island.

This, which I intended as a letter, has taken the form of a report, and if you think it desirable you may show it to His Excellency.
 Yours, &c.,
 Judge Docker. JOHN L. WATKINS.

[Enclosure 7 in No. 5.]

Sir,

January 6, 1896.

I am instructed by His Excellency the Governor to say that he has heard with regret that the law is not administered in Norfolk Island; that few offenders are brought to trial; and that, on conviction being obtained and sentence passed, the penalty is very rarely enforced.

His Excellency has further been informed that you have ignored the decree of his predecessor, Sir Frederick Darley, disfranchising all electors who had not paid their school fees, and that at the last election for Chief Magistrate this disqualification was not enforced.

I have to instruct you to furnish His Excellency by return of mail with full particulars as to this election; and I have further to inform you that if on inquiry His Excellency finds that the facts as reported to him are as stated, he will take immediate steps to put an end to a condition of things which must, if continued, result in great injury to the best interests of the whole population.

It has been reported to His Excellency that Mr. William Adams had in his possession stores belonging to H.M.S. "Orlando," which he sold to Mr. Waterhouse. His Excellency has instructed Mr. Waterhouse to return the balance of these stores remaining in his possession to the first ship of Her Majesty's service calling at Norfolk Island, and his commands are that Mr. William Adams should at once refund to Mr. Waterhouse the value received for these stores.

In reply to your letter of December 17th, I am to inform you that His Excellency will not make any further free grants of land.

I have, &c.,

G. GATHORNE-HARDY,
 Private Secretary.

The Chief Magistrate, Norfolk Island.

No. 6.

Agent-General for New Zealand to Colonial Office.

(Received March 5, 1896. Answered by No. 11.)

Westminster Chambers, 13, Victoria-street, London, S.W.,

March 4, 1896.

Sir,

Referring to my interview with you of the 2nd instant, on the subject of Norfolk Island and its proposed annexation to the Colony of New South Wales, I beg herewith to transmit copy of the cablegram which I received from my Government, and which I then brought under your notice.

I also enclose copy of the cablegram which I sent in reply, and which communicates to my Government the statements which you were good enough to make to me on the subject.

I beg to express a hope that the Imperial Government may see its way to defer the completion of the proposed arrangement, pending any further representations which my Government may desire to be considered in regard to the matter, as it affects the interests of the Colony of New Zealand.

I have, &c.,

W. B. PERCEVAL

P.S.—Since writing the above I have received a further cablegram from my Government, copy of which I also transmit.

[Enclosure in No. 6.]

Copies of Cablegrams.

NEW ZEALAND GOVERNMENT TO THE AGENT-GENERAL.

March 2, 1896.

RUMOURED here proposed annexation Norfolk Island to New South Wales. Inhabitants protest. The Island is an ecclesiastical province of New Zealand, and the Bishop of Melanesia and all the Bishops here favour New Zealand control, or that Island should not be interfered with. Geographically, Island is nearer New Zealand, and before rumoured change be given effect to, we claim, as matter of courtesy, to be consulted. Inform Colonial Office.

AGENT-GENERAL TO THE NEW ZEALAND GOVERNMENT.

March 2, 1896.

COLONIAL Office states Norfolk Island was part New South Wales until 1843, then annexed Tasmania, and has been under Governor New South Wales since 1856. At request of Colonial Office the Government of New South Wales consents to annex. Matter awaits Order in Council. Colonial Office unaware New Zealand had any desire make any claim in respect thereto.

NEW ZEALAND GOVERNMENT TO THE AGENT-GENERAL.

March 5, 1896.

NORFOLK Island. New Zealand Government did not take exception as matters stood in last. Islanders practically enjoyed self-government, with suzerainty Government of New South Wales. Knowing great interest New Zealand has evinced in respect to Island, consider, as matter of courtesy, should have been consulted.

No. 7.

11.

No. 7.

Governor Viscount Hampden to Mr. Chamberlain.

(Received March 10, 1896. Telegram. Answered by No. 9.)

LAW OFFICERS of the Colony advise that Order in Council will make Norfolk Island subject to all laws of this Colony. Consider it undesirable. Norfolk Island should be placed under administration of the Government without incorporation. Authority of Governor of New South Wales must be established. Have I authority to appoint Resident Magistrate, 20 January? Ministers concur fully.

No. 8.

NEW ZEALAND.

Governor The Earl of Glasgow to Mr. Chamberlain.

(Substance of Telegram received March 11, 1896. Answered by No. 10.)

If rumour correct that New South Wales applies to Imperial Government proposing to annex Norfolk Island, respectfully submit that the Island is an ecclesiastical province of New Zealand, and that it is geographically nearer to New Zealand than to New South Wales. Bishops of province prefer annexation to New Zealand, and before cancelling existing arrangements for government I consider it desirable that you should consult New Zealand Government.

No. 9.

Mr. Chamberlain to Governor Viscount Hampden.

(Sent March 14, 1896. Telegram.)

REFERRING to your telegram of 10th March,* I shall await arrival of despatches before taking any steps. Question of Magistrate must stand over. New Zealand raises objection.

No. 10.

NEW ZEALAND.

Mr. Chamberlain to Governor The Earl of Glasgow.

(Sent March 14, 1896. Telegram.)

REFERRING to your telegram of March 11,† I shall await arrival of despatches before taking any steps Norfolk Island.

No. 11.

Colonial Office to The Agent-General for New Zealand.

Sir,

Downing-street, March 14, 1896.

I am directed by Mr. Secretary Chamberlain to acknowledge the receipt of Sir W. B. Perceval's letter of the 4th instant,‡ enclosing copies of a telegraphic correspondence with the New Zealand Government on the subject of Norfolk Island.

2. I am to inform you that in suggesting to the Government of New South Wales the annexation of Norfolk Island to that Colony no discourtesy was intended to the Government of New Zealand. It has for many years been recognised that the Colony of New South Wales is primarily interested in the Island, and the Governor of New South Wales has been officially responsible for the administration of its affairs. The telegrams communicated by Sir W. B. Perceval were in fact the first intimation that the New Zealand Government regarded themselves as in any way interested in the matter.

I am to add that Mr. Chamberlain has now informed the Governors of New South Wales and New Zealand by telegraph that he will take no further steps in the matter pending the receipt of despatches from both Colonies.

I am, &c.,

R. H. MEADE.

No. 12.

Governor Viscount Hampden to Mr. Chamberlain.

(Received April 13, 1896.)

Sir,

Government House, Sydney, March 3, 1896.

In continuation of my Norfolk Island despatch of the 20th of January last,§ I have the honor to inform you that I duly appointed a Commission to investigate the matter referred to in my previous despatch, it being my opinion that, having regard to Her Majesty's Government's approval of the proposal to transfer the administration of Norfolk Island to the Government of New South Wales, it was desirable to avoid any delay in giving effect to it.

The Commissioners are the Honorable J. H. Carruthers, Secretary for Lands, and Mr. Charles Oliver, one of the Commissioners for Railways in this Colony. The latter gentleman has visited the Island on several occasions, and is thoroughly acquainted with the Island and its community.

A surveyor of the Lands Department and a private secretary also accompanied the Commission.

In order to facilitate the movements of the Commission, I applied to the Naval Commander-in-Chief for the use of a man-of-war to convey them to and from the Island. Admiral Bridge was pleased to comply with my request, and the vessel is expected to return to Sydney during the next few days.

I trust that my efforts to bring the wish of the Imperial Government to a successful issue will meet with your approval.

I have, &c.,

HAMPDEN.

No. 13.

* No. 7

† No. 8.

‡ No. 6.

§ No. 5.

No. 13.

Governor Viscount Hampden to Mr. Chamberlain.

(Received April 13, 1896.)

Sir,

Government House, Sydney, March 5, 1896.

I have the honor to enclose a copy of a letter which I received last week. It is signed by Mr. Byron Adams and by Mr. O. Masey Quintal.

This letter is a summary of another document, copy also enclosed, which purports to be a memorial from the Elders and members of "the House" in Norfolk Island.

I make no comment on these documents, as I shall shortly be in a position to send you a report of a Commission which returned here yesterday from the Island.

This report will deal fully with the condition of affairs on the Island.

My Ministers are advised by their Law Officers that the draft Order in Council for the transfer of the administration of Norfolk Island to New South Wales, transmitted to you under cover of my despatch of the 20th of January last,* will in its present form subject the Island to all the laws of this Colony; and as they consider that many of the laws of New South Wales are not adapted to the community of Norfolk Island, they are of opinion that proceedings for the transfer should be deferred until further consideration can be given to the form of the document effecting it.

In the meantime it is desirable that I should have authority to supersede the present Chief Magistrate, and appoint a Resident Magistrate who will administer the law.

At the present time there is in Norfolk Island no sufficient protection for person or property, and if matters are allowed to continue in their present condition the consequences will be very serious to that portion of the population which looks to the due administration of the law for protection.

I have, &c.,
HAMPDEN.

[Enclosure 1 in No. 13.]

Your Excellency,

"Alice May," Campbell's Wharf, Sydney, February 24, 1896.

In submitting to you the annexed memorial and protest from the Elders—members of "the House of Representatives"—of Norfolk Island, we respectfully desire to summarise its leading contents by stating that those representatives object to annexation of that Island to New South Wales for governmental purposes because (amongst other reasons) such a measure would:

- 1st. Involve the destruction of the distinctive character and race of the people, as well as of the ancient laws, institutions, and customs of themselves and of their Pitcairn fathers, which were carried with them to Norfolk Island in 1856, and were guaranteed to them by Her Majesty's Order in Council of that year, and which its successive Governors were thereby enjoined to "preserve and maintain."
- 2nd. It would subject the people of Norfolk Island to a code of laws (that of New South Wales) entirely different from their own, and unsuited to their circumstances.
- 3rd. It would inundate the Island with strangers, and expose all its unalienated lands (which are the property of the Islanders by gift) to be appropriated by those strangers within a few days' time, and at a price very insignificant indeed.
- 4th. It would lead to the introduction of large quantities of spirits, the importation of which has hitherto been strictly prohibited under the ancient laws of the Island.
- 5th. It would subject the Island to taxation without, we fear, adequate representation; and deprive the Islanders of the rights of electing their own magistrates, which they have exercised for 100 years past (upon Pitcairn and Norfolk Islands); and
- 6th. In May, 1888, it was resolved by "the House of Representatives" at a meeting presided over by His Excellency Lord Carrington, at Norfolk Island (just as has been now resolved upon), that Norfolk Island should remain a Crown colony, and not be annexed to New South Wales, and nothing has occurred since then which affects that decision.

There are various other reasons which could be readily assigned why the present project should be abandoned, as we sincerely hope it may; but should it be proceeded with, notwithstanding the memorial and protest now submitted to your Excellency, we respectfully request that that paper and this letter be forwarded to the Secretary of State for the Colonies, and that he be asked to submit them to Her Majesty the Queen, who has ever exhibited a like regard for the wishes and happiness of the humblest of her colonies as of the greatest.

We are, &c.,

BYRON ADAMS,

Chief Magistrate, Norfolk Island,

O. MASEY QUINTAL,

Barrister and Solicitor of the Supreme Court of New Zealand, Norfolk Island,

His Excellency Vicount Hampden, Governor of Norfolk Island.

Delegates.

[Enclosure 2 in No. 13.]

Minutes of a Public Meeting.

Norfolk Island, February 5, 1896.

THE meeting opened in the usual manner with prayer by the Acting Chaplain.

The Chief Magistrate, in his opening speech, informed the House that the reason for his calling the meeting was on account of most important subject—that is, the annexation to New South Wales. That he had read a paragraph in the two leading newspapers of New South Wales to the effect that the Imperial Government

Government had asked the Government of New South Wales to take over the management of Norfolk Island, and that the Ministers are considering the subject. The Chief Magistrate read the paragraph, and said that the question to be considered by the House is, "Is it, or is it not, the desire of the Norfolk Islanders that Norfolk Island should be annexed to New South Wales," also "he wishes to read a few letters from the Governor."

Proposed by Mr. Stephen, seconded by Mr. Johnnie Quintal (senior):—

"That we do not go under the New South Wales Government, but that a civil letter be written to His Excellency stating our reasons."

Mr. Joseph Quintal spoke strongly on the same subject.

Mr. Henry Menges called for the minutes of the meeting at which Lord Carrington presided. Minutes were read; then Mr. John Young spoke plainly on the subject, and also supported the proposition of Mr. Stephen Christian.

Two letters were read from Governor Darley, and one from Gathorne-Hardy, Private Secretary of the present Governor.

Mr. Francis Nobbs spoke on the naval stores in William Adams's possession at this stage.

The Chief Magistrate then challenged the members of the full House to bring anything against him in the administration of the law, as mentioned in His Excellency's letter.

Mr. Macey Quintal also spoke in reference to the naval stores.

Mr. John Young proposed, seconded by Mr. Charles Evans:—

"That two policemen be sent to Mr. R. S. Waterhouse's residence to see that the goods be safely delivered on board the first of Her Majesty's ships to arrive."

Mr. F. M. Nobbs spoke on a letter relating to Mr. David Peacock, which he thinks ought to be read.

Captain Champion then informed the House that the Governor used the word "annexation." This was in answer to Mr. F. M. Nobbs.

It was proposed by Mr. Macey Quintal, seconded by Mr. Joseph Quintal:—

"That we be not annexed to New South Wales."

Carried unanimously.

Mr. Buchanan also spoke on the subject, recommending us strongly not to be annexed to New South Wales, pointing out our disadvantages.

Mr. Waterhouse then informed the House that he did not see the Governor, nor did he inform His Excellency of anything mentioned in the Governor's letter. His interview with His Excellency was after the date of the letter that was read.

Mr. John Young spoke at some length on the doctor's fees in reference to the law by Sir Frederick Darley for debt, and said that he thought it would be as well to let His Excellency know that the doctor is receiving more than what he really agreed for, but that we ourselves gave it gratuitously.

Mr. F. M. Nobbs spoke on the law. He said he thought the Chief Magistrate should have written to His Excellency giving him a full explanation.

Mr. Charles Nobbs spoke on the new law, and also the annexation, and said it is a mere newspaper report, and to take any steps in the matter would be premature.

Proposed by Mr. Gustave Quintal, seconded by Mr. William Adams:—

"That we petition the Imperial Government, enclosing the paragraph in the *Sydney Morning Herald*, of the 17th January last, asking them not to annex us to New South Wales under any circumstances."

Proposed by Mr. William Adams, seconded by Mr. Joseph Quintal:—

"That the Chief Magistrate go to Sydney with Mr. Macey Quintal to interview the Governor on the subject of annexation and other matters."

Carried by a large majority. Fifty-nine in favour and nine against the resolution.

For the next meeting:

Proposed by Mr. Hodson Evans, seconded by Mr. Meade Adams:—

"That no more strangers be admitted as members of this community."

Mr. Phillip McCoy spoke as to the advisability of bringing in a law for "breach of promise," and asked that the matter be referred to the Governor.

The meeting closed by singing the National Anthem.

No. 14.

Governor Viscount Hampden to Mr. Chamberlain.

(Received April 27, 1896.)

Sir,

Government House, Sydney, March 19, 1896.

I have the honor to enclose a copy of a letter from the Honorable J. H. Carruthers, M.L.A., Minister for Lands, covering a copy of a report drafted by Mr. Carruthers and Mr. Charles J. Oliver, who were appointed by me as Commissioners to make full inquiry into the affairs of Norfolk Island.

2. I would here invite your attention to that portion of the joint report of Messieurs Carruthers and Oliver pointing out that the application of the laws and system of government in force in this Colony would not prove suitable to the Island community, which confirms the opinion already expressed by my Ministers, as intimated to you in the fifth paragraph of my despatch of the 5th inst.*

3. The letter dated the 9th March was drawn up by Mr. Carruthers after consultation with myself, and the proposals contained therein have my entire approval.

4. You will observe that the superseding of the Chief Magistrate is recommended as necessary, but upon consideration it has been thought desirable to carry out this change as part and parcel of a permanent amendment of the Constitution.

5. Accordingly I have notified the inhabitants of Norfolk Island by Proclamation (copy of which is enclosed) that arrangements will be made for the appointment of a Resident Magistrate to administer the law. Pending a final settlement I have decided to leave matters on the Island as they stand at present.

6. I had hoped to make the arrangements for transfer without charge to the Imperial authorities, but I find that the cost of administration will in the first instance be so much heavier than was anticipated that I have been compelled to admit the justice of the contention that Her Majesty's Government should contribute a sum of £3,000 to defray the cost of repairs to buildings, and to meet some portion of the increased cost of administration during the first three or four years following the transfer.

7. I desire to have your authority to request the co-operation of the Admiral in the management of the affairs of Norfolk Island, should I find occasion to do so. I have, &c.,
HAMPDEN.

[Enclosure 1 in No. 14.]

My dear Lord Hampden, Sydney, March 9, 1896.

I am forwarding to you to-day the joint report of Mr. Oliver and self on Norfolk Island affairs, so far as we at present can report.

As to expenditure, I estimate that £1,000 per annum should be provided, and it should be found as follows:—

	£	s.	d.
From the fund	265	0	0
From the Imperial Government	367	10	0
From the New South Wales Government	367	10	0
	£1,000 0 0		

I gather, however, from my interviews with your Excellency, that the Imperial authorities are averse to any continued charge towards the local government of the Island; and in view of this fact, and also of the probability that a revenue will be obtainable sooner or later from various local sources, I desire to suggest that the sum of £2,000 cash contribution be paid by the Imperial Government, as its quota towards the expenditure to be incurred in governing the Island through this Colony.

Any additional expense for repair of buildings incidental to the change of Constitution should, I think, be borne by the Imperial Government, in consideration of the fact that this Government will incur, and has incurred, expense in connection with land surveys, titles to land, and other administrative work outside of the Island, without benefiting in any way. The expense to be borne in the repairs, &c., might be limited to, say, £1,000, and it will be moneys well expended to save valuable property from ruin.

In the next place, New South Wales has no naval force, and the affairs of the Island cannot be thoroughly attended to without the assistance of a naval authority. I strongly urge that, as an absolute essential to the success of any change of Constitution, that the Home Government be asked to provide for the co-operation of the Admiral and his fleet in Norfolk Island affairs. Some distinct understanding should be arrived at whereby in times of need and at other occasional periods one of Her Majesty's ships should call at the Island under instructions issued by your Excellency after consultation with the Admiral, so as not to unduly interfere with more important arrangements.

In case of any serious trouble on the Island (and possibly it might occur sooner or later) the people of New South Wales would be far from tolerant to any movement on the part of the New South Wales Government to despatch either military or police to the Island. It would be argued that it was not the business that the taxpayers of New South Wales paid their forces to do, and all eyes would be turned to the fleet at our doors, to whose maintenance we contribute what to us is a large sum, £37,000.

The patrol work of the fleet is already performed in regard to the South Seas, and its extension to Norfolk Island could easily be effected. The value of such extension would be manifest in the support openly guaranteed to the Resident Magistrate and in the oversight so necessary where authority in isolated places is apt to become tyrannical.

I think also that the New South Wales Government should be prepared, on the consummation of federation, to hand over its jurisdiction over Norfolk Island and Lord Howe Island to the Federal Government. A verbal understanding on this point would no doubt be easily attainable.

As to the Constitution of the Island, I would suggest that the Crown Solicitor should receive instructions to frame laws on these lines:—

- (i) To preserve the present code in its workable elements.
- (ii) To provide for a Government Resident, with magisterial powers equal to that of our Stipendiary Magistrates and Chairmen of Quarter Sessions.
- (iii) To establish the authority of the police—to provide for the enforcement of punishment suitable for the Island and its conditions.
- (iv) To provide for land titles and a registry of deeds, wills, births, &c., &c.
- (v) To provide for the jurisdiction of our Supreme Court in more serious offences and the operation of certain of our criminal laws.
- (vi) To establish a simple form of municipal government.
- (vii) To provide for the raising of revenue by certain taxes to be levied and imposed under the authority of the Governor in Council.
- (viii) To regulate the future occupation and alienation of Crown lands on the Island.
- (ix) For the recovery of certain debts.

It will be necessary to have a proper and legal change of administration to bring the Island under the authority of the New South Wales Ministers without making the Island a part of New South Wales. I think that the Law Officers of the Home Government are better qualified to draft the necessary legal documents and to advise on this question than anyone here, and, therefore, it will be wiser to despatch instructions from here to the Home Authorities, and to trust to them giving legal effect to those instructions without any more than a short cable intimating the form and shape of the formal acts to be done there.

I cannot, however, conclude my observations on this question of a new Constitution without proposing an alternative course for your consideration. I am aware that doubts exist as to whether the desired change can be effected by a mere Order in Council or whether an Act of the Imperial Parliament is necessary.

* * * * *

If urgency be not thought essential, then perhaps all questions might be set at rest by the passage of an Act to grant a new Constitution to the Island, and to legally empower New South Wales to govern the Island as a Dependency.

The Act should be drawn to empower the New South Wales Legislature at any time, and from time to time, as deemed advisable, to pass a law regulating the future government of the Island, and until such law is passed, to vest the administration and government of the Island in the Governor and Executive Council of New South Wales, with power to promulgate laws and regulations fully and effectually operative. Such an Act would satisfy the people of New South Wales as to their constituted authority and control, exercisable at the discretion of the Legislature, and would strengthen the hands of the New South Wales Executive.

* * * * *
I may add that I think the total expense of the Commission would be covered by £100, but until the surveyor completes his task I cannot definitely fix the amounts.

I have, &c.,
J. H. CARRUTHERS.

[Enclosure 2 in No. 14.]

To His Excellency the Right Honorable HENRY ROBERT VISCOUNT HAMPDEN, Governor and Commander-in-Chief of the Colony of New South Wales and its Dependencies, and Governor of Norfolk Island.

MAY IT PLEASE YOUR EXCELLENCY—

As Commissioners appointed by your Excellency on the 4th day of February, 1896, "to make full and complete inquiry, generally, into all and every the state of affairs in and the status and condition of the inhabitants of the said Island, nothing excepted, and more especially into the mode of administration of justice, the enforcement or observance of the laws or of any orders issued or proclamations made by any of my predecessors as Governors of the said Island, and also into the holding titles of the lands in the said Island, and any claims that may be made to the ownership of land therein"—we have now the honour to report on several of the matters referred to, but on others, more particularly those relating to the titles of land, we are as yet, from lack of data (now in course of preparation) unable to lay before your Excellency the result of our inquiries.

Mr. Oliver personally visited the Island during the term of the Commission. A public meeting was held for the purpose of reading the Commission, and announcing the decision of your Excellency with reference to the informal election of Chief Magistrate.

After the disposal of the formal business, some of the Islanders spoke, with an apparent desire to challenge the authority upon which Mr. Oliver was acting. Irritation was displayed, and intemperate language was used; but fortunately this was checked, and the meeting terminated in a most orderly manner.

Subsequently Mr. Oliver procured a considerable amount of information relating to the Island generally, and prior to leaving attended another public meeting, and drew attention to a number of matters demanding the serious consideration of the community, and the laws and regulations in force on the Island were read for general information.

Very little discussion followed, and nothing of importance occurred, beyond a general expression of concurrence in some remarks which were made in support of the wish of the inhabitants that the Island should not be annexed to New South Wales, but in some way remain a Crown Colony.

In addition to the evidence procured on the Island by Mr. Oliver, we have together examined in Sydney the records relating to the affairs of the Island, and we have also received the testimony of several witnesses (amongst others, Mr. Byron Adams, the Chief Magistrate) who have been in Sydney during the term of our Commission.

From our joint and several inquiries, we find that the laws and regulations of the Island are not observed with proper loyalty and respect, either by the people generally or the officials locally administering them. Several instances of maladministration have been brought under our notice, especially in cases of assault upon females.

The chief cause of this state of affairs is the system of elective magistracy. The Community is so small, the individuals are so closely related, and the local-influences are so great, that it is next to impossible to have an election of the man best fitted to really govern the Community locally; and even if such a man were elected he would, for the same reasons as just given, be unable for any length of time to firmly and properly administer justice without incurring the resentment of the majority of the people. There is no opportunity of a proper training of men for the important position of Chief Magistrate, and the local choice is so limited that it is scarcely to be wondered at if men devoid of any proper qualifications are chosen for the post.

Of late, a desire to disregard the authority of the Governor has apparently arisen. Some even go so far as to assert complete ownership of the Island, to the entire exclusion of any but local authority, it being claimed that "the House"—which means majority at a public meeting—should rule. Mr. Oliver, when on the Island, was careful to explain clearly the position of the Community, both as regards the framing and the administration of laws, and also as to the Island not having been, as claimed, ceded to the Islanders.

The moral condition of the Island is not good, but is perhaps not much, if at all, worse than might be expected of any Community similarly isolated, and being, on one side, of Tahitian descent.

The failure of the young men to continuously follow anything like an industrious life tends to the present unsatisfactory moral condition. Although there are many exceptions, the male portion of the Islanders are the reverse of industrious.

The integrity of the greater portion of the community in matters of trade is by no means of a high standard. Indebtedness is far too general, and the non-observance of contracts made in connection with supplies obtained common. This follows the absence of any law compelling the payment of debts, which is a matter requiring attention.

Petty theft is of frequent occurrence, and the malicious injury and destruction of property is said to be resorted to against persons who attempt to take advantage of the laws to endeavour to obtain redress in matters in which they deem themselves aggrieved.

Considerable disunion in religious matters has occurred, attributable in no small degree to the unpopularity of the Chaplain.

Difficulties

Difficulties have arisen in the school, owing mainly, if not wholly, to the impossibility of one of the Community maintaining proper discipline, or teaching up to a moderate standard. Recently a vast improvement has taken place, the Right Reverend Cecil Wilson, Bishop of Melanesia, having, at the request of the people, placed one of his duly qualified teachers in charge. The Bishop has also consented to select a permanent teacher from outside the Community.

There is evidence of the deterioration of the race. The physique of the young people is not equal to that of their parents, and there is a prevalence of disease common to the issue following close inter-marriage. The mental capacity of the children, the direct issue of members of the community, is not equal to that of the offspring of white men who have settled on the Island and married women of the Community.

The buildings which were upon the Island when the Pitcairn Islanders first landed have undergone a great change. Some have been almost altogether demolished—notably the old prison building, for which there was no use—and others of a residential character, at first occupied on sufferance, and that occupation continued, are, with the exception of about four, in a bad state of repair.

The roads are not in good order, little proper maintenance having been done by the Islanders. This is particularly noticeable in wet weather.

The fertility of the Island is probably unsurpassed. Oranges, grapes, passion-fruit, figs, pineapples, and other fruits, grow abundantly. Lemons and guavas are plentiful in most of the gullies. The former is not of a good marketable quality, but the best lemons could be grown. Potatoes, onions, and other vegetables can be largely produced; also maize and arrowroot. Coffee can be cultivated abundantly; indeed the whole Island is capable of being made productive.

The fertile nature of the land has been by no means taken full advantage of, the greater proportion of the areas granted remaining unfenced and uncultivated. A complete list of grants issued, and other information relating thereto, will be found in a separate paper.*

The recent decision to stop the issue of further grants of land was most wise, but it appears to need some slight reconsideration so far as it affects land already occupied and improved under a system of permissive occupancy locally authorised. These matters will be referred to in a special paper.

Excepting, perhaps, in connection with these permissive occupations, no lands should, in future, be alienated until the affairs of the Island have been placed in a more satisfactory position. There is ample alienated land available for any beneficial occupation and cultivation which is likely to take place in the near future.

The population of the Island is:—

Norfolk Island Community	...	...	...	594
Melanesian Mission...	...	...	...	288
Total	...	...	...	882

The exports from the Island for the year 1895 amounted in value, so far as we have been able to ascertain, to £2,425, the principal items being: whale oil and whalebone, £1,500 (£1,400 and £100 respectively); onions and potatoes, £225; bananas and oranges, £550. To this, treated as an income, may be added on account of expenditure on the Island by the Melanesian Mission of £500, making a total of £2,925.

The imports amounted to £3,207 10s. in value, and included chiefly flour, tea, sugar, drapery, tobacco, and things usually consumed in ordinary life; also a quantity of barbed fencing wire.

As to the future of the Island, we have no hesitation in saying that an immediate change in the system of local administration is absolutely necessary. It may be here stated that the unanimous feeling of the Islanders is that annexation, as they understand it, to the Colony of New South Wales is most undesirable.

To meet the immediate necessities of the case it is, we think, a question for consideration whether the present Chief Magistrate . . . should not at once be superseded and a Chief Magistrate, to be selected from the Community, appointed in his stead, to act only pending the appointment of a Magistrate in the person of someone at the present time in no way identified with the Island. Should supersedure be decided upon, the most eligible person for the temporary position is Mr. F. M. Nobbs. The remuneration at present attached to the office could be paid, it being left to future consideration whether, on the appointment of a permanent Magistrate, Mr. Nobbs should receive any additional sum for his services while temporarily acting. We are not satisfied, however, that it will be wise to make any change at present, if there be any immediate prospect of a change in the constitution of the Island.

If it be deemed undesirable to make any change, pending a final settlement of the future administration of the affairs of the Island, it is suggested that the Chief Magistrate should be formally notified of the disapprobation of his recent action in failing to carry out the laws and regulations, and informed he must act strictly in accordance therewith while he remains in office. It is desirable that this notification should take such a form as to ensure it being made public in the community.

In regard to the contemplated permanent change, we would respectfully point out that the application of the laws and system of government in the colony of New South Wales would not prove suitable to the Island community, and, further, that it is desirable to introduce a form of government which, while being effective, will not be altogether dissimilar to what the people have been accustomed to. This, it is thought, could be done by the Governor continuing his present independent control and authority, under advice from the New South Wales Ministers. The local administration to be entrusted to a Government Resident.

It would be quite useless to attempt to permanently carry on the administration of law in the Island by the appointment of a member of the present Community as Government Resident. Not one of them could command that respect within the Community which is indispensable, their terms of equality of position preventing it. Further, family connexions and local interests are an absolute bar to the satisfactory discharge of the functions by a member of the Community.

The existing laws and regulations could be amended, and extended powers granted to the Government Resident for enforcing punishment, the recovery of fines, and also certain private debts to a limited extent, not, however, in either case, to go further than the sale of personal property, the sale of land being by express words prohibited.

For

For the present system of conducting the business by public meeting, which means an assemblage of the whole adult community, designated by them their "House," we would suggest a local council of twelve, to be elected annually by the male members of the community of the age of 21 years and upwards; the qualification for election being a duly recognised member of the community of the age of not less than 30 years, and, in future, except as regards the offspring of present residents, such membership or permanent residence on the Island to be permitted only by the Governor. This local council to be presided over by a chairman, to be elected by the council, who in his absence shall have power to elect an acting chairman. The executive functions of the local council to be confined to local works, such as the care of the roads, public buildings, &c. They should also have power to frame by-laws for controlling the business entrusted to them, and submit them to the Government Resident, who should forward them, with a report, for confirmation or rejection by the Governor.

The council might be permitted to suggest amendments of, and additions to, the laws and regulations to the Government Resident, who should forward them, with a report, to the Governor in the manner suggested in connection with the proposed by-laws; but no proposed law, regulation, or by-law should be operative until duly notified as approved by the Governor. The present provision for proposed laws and regulations being operative pending confirmation or otherwise is objectionable, and now unnecessary, and has only resulted in laws and regulations being made which have never even been submitted for confirmation.

In connection with the designation "Community," as just previously used, we beg to recommend that it should include male members of the Melanesian Mission (white) of the age of 21 and 30 years as is applicable to the suggestions.

The person to be selected for the position of Government Resident should have no previous connection, in any way, with the Island. He should be married, of undoubted character, capable of administering the laws, and, by example, guiding the people. Practical ability in the cultivation of land is also most desirable; in short, he should be a man, not "of the town," but "of the country," who can readily adapt the modern occupancy of land in advanced countries to the fertile soil now lying idle in the hands of the settlers of the Island and their primitive ways.

He will require a clerk, who should act as Registrar for the Island, and be in charge of postal and other internal Government matters.

Two policemen—married men—are required for police and lock-up duties, and these men should be specially selected from men who know something of the cultivation of land.

The duties of the Government Resident and of the two policemen will be but light, and, as idleness will be dangerous, both as an example and as a corrupting influence in itself, it is necessary that there should be provided some fuller occupation which will be valuable both to the Community and to the Crown, whilst not of such a character as to beget want of respect. We recommend, therefore, that there be established a small State farm, under the active control of the Government Resident, and worked by his officials and by occasional labour, as required. Eventually, this farm will be self-supporting, and, if properly managed, it should tend to revolutionise agriculture on the Island, and lead up to valuable production and increased commerce. It could be used also for the purpose of "task" punishments under the penal code, saving thereby other useless and expensive methods in vogue for inflicting penalties and punishments for minor offences.

It would economise the expense of administering justice, and would utilise valuable labour that could not be better bestowed.

We recommend the following expenditure in relation to the foregoing, viz. :—

- Government Resident, £250 per annum with residence provided in the old Government House.
- Clerk and Registrar, £75 per annum and residence.
- One policeman, £130 per annum with quarters.
- One policeman, £100 per annum with quarters.
- Total, £555 per annum.

Add to this sum the cost at the present rate of payment, for doctor, chaplain, and mail service, viz. :—

	£	s.	d.
Doctor's allowance, including drugs	155	0	0
Chaplain	50	0	0
Mail service	26	16	4
	231	16	4
Maintenance, tools, &c., of farm	100	0	0
	£331	16	4

making a total expenditure of £886 16s. 4d. per annum.

To meet this expenditure, there is, we understand, available a sum of £265 per annum, drawn from interest on the Norfolk Island Fund.

A small addition to this might be made by the imposition of some slight taxation. It would require to be limited and moderate, as there is but little ready money at present in circulation on the Island. We think a duty on tobacco might be very fairly imposed. A tax on stock depasturing on Crown lands could not be objected to.

A timber license, if imposed under regulations authorising the cutting of timber on Crown lands, and limiting the size and class of timber to be cut, would be beneficial, and produce a small revenue.

A registration fee on dogs is desirable in order to limit their number, dogs at the present time being most destructive among the stock.

A fee for the registration of land transactions and other legal documents, and an Island postage stamp, might also be introduced.

A rental, perhaps only of a nominal character to present occupants, subject to the house being kept in repair, could be very properly charged for the residential buildings now occupied on sufferance, and a small charge be made for stone taken for building or other private purposes from partially demolished old public buildings.

It

It is difficult to estimate the revenue which would be derived from these sources, particularly as we were unable to obtain thoroughly reliable information upon which to base a calculation; but as the principal return would be from tobacco, consumption of which can be approximately estimated, and assuming that a duty of 2s. per lb. is imposed, the receipts under the proposals as a whole may be stated, for the purposes of estimate, at £200 per annum. This would make a total income of £530 per annum, leaving a deficiency on the proposed expenditure of £356 16s. 4d. until such time as the rent or other returns from the Crown lands and other sources of revenue which might be developed, will make the Island self-supporting.

In addition to this annual expenditure, a limited outlay would be necessary in connection with the repairs to building required for police and gaol purposes, quarters for police, and possibly the old Government House; but this would only be a small matter as compared with the suggested annual expenditure.

As regards church and school matters, it would be well if it could be arranged for the Melanesian Mission authorities located on the Island to take over the control. This would probably not result in economy on the present expenditure, but unquestionably it would be the most satisfactory arrangement which could be made.

With reference to the Mission, we deem it only proper to say that their influence on the Island has always been most beneficial, and the personal interest now taken by the Right Reverend Cecil Wilson, Bishop of Melanesia, in all matters affecting the welfare of the community is far reaching.

The possibility of the Island becoming a cable station is worthy of notice. Should this come about, the Island must be brought more in touch with the outer world, which will no doubt be followed by better facilities for trade than at present exist, which is all-important for the advancement of the place.

In conclusion, we venture to express a hope that the representations which have been made in this report will assist in settling the question now pending with regard to Norfolk Island, and the people—with all their faults—have many good qualities, and are capable of great improvement under proper control and influence.

We have, &c.,

J. H. CARRUTHERS.
CHARLES J. OLIVER.

Sydney, 10th March, 1896.

[Enclosure 3 in No. 14.]

PROCLAMATION.

By His Excellency the Right Honourable HENRY ROBERT, VISCOUNT HAMPDEN, Governor and Commander-in-Chief of the Colony of New South Wales and its Dependencies, and Governor of Norfolk Island.

WHEREAS from time to time various rules and regulations under the authority of Her Majesty's Orders in Council have been promulgated by the Governor of New South Wales and of Norfolk Island for the better regulation of the affairs of the said Island, and for the due administration of justice therein: And whereas the said rules and regulations have frequently been disregarded by the inhabitants of the said Island, and other rules and regulations have been improperly made by the inhabitants of the said Island, and which have not been submitted to the Governor of the said Island, and the same are therefore void and of no effect: And whereas it is essential that the authority of Her Majesty the Queen shall be respected and upheld by the inhabitants of the said Island: Now, therefore, I, Henry Robert, Viscount Hampden, Governor of the said Island, having made due inquiry into the administration of justice in the said Island, and into the social state and condition of the inhabitants thereof, do hereby notify to the Chief Magistrate and all officials and inhabitants of the said Island that the non-observance of the laws and regulations governing the said Island is inimical to the good order, well-being, and advancement of the community, and that the conduct of all officials and others, who should in duty bound see to the proper observance of the said laws, in failing to see that such laws are properly, faithfully, and strictly observed, is viewed with much disapproval by me as such Governor, and in order to prevent the recurrence of such disregard of the laws and regulations a Government Resident will, at an early date, be appointed by me to supersede the Chief Magistrate, and further that the Constitution of the Island will be by me amended to legally provide for the administration of justice and the local enforcement of the laws being in the hands of such Government Resident, and in the meantime I direct and enjoin that the said laws of the Island be more strictly and faithfully observed. And I further require all the inhabitants of the said Island, as dutiful and faithful subjects of Her Majesty the Queen, by all means in their power, cheerfully and loyally to co-operate in the carrying out of such laws, and otherwise so to conduct themselves as to promote their well-being and advancement. And I further require that this my Proclamation shall be read in open Court at a meeting of the inhabitants to be duly convened for that purpose.

As witness my hand at Government House, Sydney, in the Colony of New South Wales, the sixth day of March, in the fifty-ninth year of the reign of Her Majesty the Queen, and in the year of our Lord 1896.

No. 15.

NEW ZEALAND.

Mr. Chamberlain to Governor The Earl of Glasgow.

(Sent May 23, 1896. Telegram. Answered by No. 20.)

REFERRING to your telegram of 11th March,* Norfolk Island, when may I expect your despatch?

No. 16.

* No. 8.

No. 16.

Mr. Chamberlain to Governor Viscount Hampden.

Sir,

Downing street, May 30, 1896.

I have the honor to transmit to you, for your information, copies of a correspondence between this Department and the Treasury,* from which you will learn that Her Majesty's Government authorise your incurring an expenditure, to be borne by Imperial funds, not exceeding £25 a month, for the ten months commencing on the 1st June, 1896, in providing the salary of a Magistrate, and, if necessary, a clerk, for Norfolk Island, with the view of checking the state of lawlessness now prevailing in the Island.

You will, doubtless, on receipt of my telegram, report to me what steps you take in the matter of such appointments, which, of course, must be of a provisional character, and I will only add here that the receipts of the person or persons so paid should be sent Home to this Department at least every quarter, with a certificate of performance of duty, when repayment can be made by this Department to the Agent-General for New South Wales, as is done in the case of payments for the Norfolk Island mail service.

I have, &c.,

J. CHAMBERLAIN.

No. 17.

MEMORIAL signed by Mr. Byron Adams and other Inhabitants of Norfolk Island, sent to Her Majesty the Queen, and forwarded to the Colonial Office by Lieut.-Col. Sir Arthur John Bigge (the Queen's Private Secretary), June 2, 1896.

(Answered by No. 21.)

Norfolk Island, March 27, 1896.

To Her Most Gracious Majesty Queen Victoria. May it please your Majesty,—

We, the undersigned, do humbly beg to lay our present condition before your Most Gracious Majesty. We have been informed by His Excellency the Right Honourable Henry Robert, Viscount Hampden, Governor of New South Wales and Norfolk Island, that he intends at an early date to appoint a Government Resident to supersede our Chief Magistrate, and that he also intends to amend our Constitution to suit such a change. He said that such changes are to be made for the better administration of justice in the said Norfolk Island.

He has also stated that the rules and regulations have been frequently disregarded by the inhabitants of the said Island; and other rules and regulations have been improperly made by the said inhabitants of Norfolk Island, and have not been submitted to the Governor of Norfolk Island for his approval. We are not aware that laws have been improperly made by the inhabitants of Norfolk Island, and which have not been submitted to our successive Governors for their approval; as each and all of our ex-magistrates declared publicly, that all rules and regulations made by the inhabitants of Norfolk Island have been forwarded on to the different Governors from time to time for their approval.

We have a system for the administration of justice which may be faulty; but, under the present state of things, we consider that crimes have been properly dealt with according to our laws and usages.

We hope that your Majesty will remember that our Magistrates, in the execution of their duties, in dealing with criminal cases, can only impose a fine of forty shillings. The highest power we have here is vested in a jury of seven Elders, which can only fine to the amount of ten pounds; and neither the Magistrate nor jury has the power to imprison any offender. Under these circumstances it is extremely difficult to punish crimes of grave natures. If our Magistrates be vested with more power, we are sure that we can administer justice legally and impartially in all criminal cases of serious natures.

With regard to the Island being generally in a retrograde position—as represented by the New South Wales Government—we humbly offer a few facts for your Majesty's consideration. When we first landed on the Island, there were only two homesteads on private allotments. Since then nearly eighty had been built by landholders on their allotments; and the majority of these with beautiful orchards of oranges, grapes, figs, guavas, &c., &c., and not one of them is mortgaged in any way; and there are about twenty houses more in the course of erection, waiting for a favourable reply from our Governor to proceed with improvements.

Formerly we were at the mercy of strangers, on whom we depended for our exports and imports; but the community is in much more favourable and comfortable circumstances at present, owing to the fact that we have a vessel of our own, which has lately opened up our trade, and consequently we have established a profitable outlet for our produce; and managed by ourselves.

We have also succeeded in establishing another industry, viz., that of fish-curing, which has proved a great success, and which, we fear, we shall have to ask the Imperial Government to protect for us.

We were informed by Mr. C. Oliver, the late Commissioner appointed by the Governor, that the Imperial Government requested the New South Wales Government to take us over.

We humbly beg your Majesty to consider seriously the changes that are to be made by the Governor; as we think that they will prove detrimental to the welfare of your loyal subjects, the community of Norfolk Island.

1. We have already been informed, on reliable authority, that certain parties in New South Wales are already waiting for the intended changes, to introduce public-houses here—which hitherto have been strictly prohibited on our peaceful little Island—and which, if permitted, will bring all their attendant evils with them. Drunkenness, &c., hitherto have been extremely rare; and what few cases we have seen, have been caused by individuals going on board vessels, and getting liquor on board.

The importation of spirituous liquors on our Island will prove ruinous to our temperance, which is one of the distinctive characteristics of our community.

2. Elective Rights.—Should a resident be appointed, we shall be deprived of our elective rights and privileges, which right every British subject enjoy; and which we have enjoyed for more than 100 years past, and also granted to us by your Majesty in Council. This

This Constitution, which we humbly beg your Majesty to protect, will be greatly injured, if not wholly cancelled, by the change His Excellency is about to make.

After assuring your Majesty that we do administer justice according to our laws and usages, and that we do punish crimes, and that we are progressing commercially, financially, and educationally, we humbly beg that your Majesty will not think us unreasonable in soliciting your assistance to prevent the proposed changes, which will prove disastrous to our nearest and dearest interests both spiritually and temporarily.

Hoping that our petition will be favourably received by your Gracious Majesty, we subscribe ourselves your most loyal and obedient servants,

BYRON ADAMS, Chief Magistrate.
MARSH ADAMS, Q. Councillor.
ARTHUR QUINTAL, 80 years.
THOMAS BUFFETT.
JONATHAN ADAMS.
WILLIAM QUINTAL, 79 years.
DRIVER CHRISTIAN, 65 "
JOHN QUINTAL, 75 "
STEPHEN CHRISTIAN, 51 "
DAVID BUFFETT, 67 "
G. M. F. YOUNG, 75 "

No. 18.

Governor Viscount Hampden to Mr. Chamberlain.

(Received June 15, 1896. Telegram. Answered by No. 19.)

HAVING regard to offer of administration Norfolk Island by Government of New South Wales, I consider that you should not transfer to New Zealand without again referring to my Ministers.

No. 19.

Mr. Chamberlain to Governor Viscount Hampden.

(Sent June 18, 1896. Telegram.)

IN answer to your telegram of June 15*, as to Norfolk Island, I am waiting despatch from New Zealand, and before taking action I will communicate with you.

No. 20.

NEW ZEALAND.

Governor the Earl of Glasgow to Mr. Chamberlain.

(Received July 7, 1896.)

Sir,

Auckland, May 26, 1896.

I yesterday had the honor of receiving your telegram† inquiring when you might expect to hear from me relative to the protest made on the advice of my Government by cable, as to the proposed administration of Norfolk Island by New South Wales.

My Government having delayed to follow up their advice by any further communications, pending developments regarding the proposed new Pacific cable, I telegraphed to inform them of the receipt of your cable message, and I now have the honor to give you the purport of their reply.

In amplification of, and addition to, their previous representations, my Government raise the following objections to the control of Norfolk Island by New South Wales.

In the event of a new Pacific cable being laid on British territory alone, in all probability Norfolk Island would be selected as the station from which a branch cable would be laid to New Zealand.

Under such circumstances, and without desiring in any way to adopt an unfriendly attitude towards a neighbouring colony, with whom New Zealand has always been on the most friendly terms, my Government have the strongest objection to the junction of the New Zealand branch with the main cable being on territory controlled by any other colony, even if that colony be New South Wales.

I am further advised to bring to your notice the agreement which was originally made with the Islanders, that, while their Island was, and would remain, an integral portion of the Empire, they should enjoy local self-government without interference; also that, as far as my advisers have been able to ascertain, there has not been sufficient ground for the contemplated abrogation of the rights and privileges of the Islanders.

Should, however, the Imperial authorities decide that the time has arrived for placing Norfolk Island under more direct control, it is the opinion of my Government that the claims of this Colony to administer Norfolk Island are superior to those of New South Wales. It is true that New South Wales has always exercised a sort of suzerainty or superiority over Norfolk Island, but that arose from the fact that New South Wales was the centre and headquarters of British authority in Australasia in the days when Norfolk Island was first settled, but it does not give that Colony any claim to continue the present shadowy control, nor to convert it into a more effective one, if a better arrangement in the interests of the Island can be effected.

If

21

If any change has to be made, it appears to my Government that other circumstances have to be taken into consideration. Norfolk Island is some 300 miles nearer New Zealand than New South Wales; it is a part of the Diocese of Melanesia, which is, ecclesiastically speaking, a part of the province of New Zealand; thus there is a considerable amount of sympathy and community of feeling between Norfolk Island and this Colony, which subscribes liberally to the cost of the Melanesian Mission; and for this and other reasons I am informed that the Bishop of Melanesia, as well as the other Bishops in New Zealand, demur to the Island passing under the government of New South Wales.

Finally, I am advised that, as far as my Ministers can ascertain, if any change is to take place in the government of Norfolk Island, the Islanders, while protesting against any change, would prefer to come under the control of New Zealand rather than that of New South Wales. Should the claim of New Zealand be given effect to, the proper arrangements for the administration of the Island, similar to that in the Cook Islands, would at once be made.

My Government, therefore, begs to suggest that, pending the settlement of the question of laying a new Pacific cable at any rate, no change should be made in respect to the control of Norfolk Island.

I have, &c.,
GLASGOW.

No. 21.

Mr. Chamberlain to Governor Viscount Hampden.

My Lord,

Downing-street, July 9, 1896.

I have the honour to inform you that I have received from Her Majesty the Queen a memorial dated the 27th March,* and signed by Mr. Byron Adams and other inhabitants of Norfolk Island, setting forth their views as to the position of affairs, and deprecating any changes in the administration.

2. I have to request that you will inform the memorialists that their memorial has been received by Her Majesty, and will also inform them that they may be assured that their representations will receive full consideration at the hands of Her Majesty's Government when tendering any advice to Her Majesty as to the future government of Norfolk Island.

I have, &c.
J. CHAMBERLAIN.

No. 22.

NEW ZEALAND.

Mr. Chamberlain to Governor the Earl of Glasgow.

(Sent July 16, 1896. Telegram. Answered by No. 23.)

REFERRING to your despatch 26th May,† Norfolk Island. Trade and communication are with New South Wales, through whose Governor administration has been conducted. Island is British possession, and requires administration not only Resident, which would be sufficient for Protectorate. Estimated annual expenses of administration, £1,000; present revenue only £265. £2,000 required immediately repairs of buildings. I have no information as to grounds for believing that inhabitants prefer New Zealand, and as definite decision matter of urgency, impossible to await Pacific cable. I propose to arrange with New South Wales unless you send by telegraph strong reasons for further delay.

No. 23.

NEW ZEALAND.

Governor the Earl of Glasgow to Mr. Chamberlain.

(Received July 22, 1896. Telegram.)

REFERRING to your telegram of 16th July,‡ Norfolk Island. Government have nothing more since my despatch,† but nevertheless consider that Norfolk Island shows preference to New Zealand.

No. 24.

Mr. Chamberlain to Governor Viscount Hampden.

(Sent July 31, 1896. Telegram. Answered by No. 26.)

REFERRING to my telegram of 18 June,§ Her Majesty's Government, after communicating with New Zealand, are willing to attach Norfolk Island to New South Wales if Colonial Government ready to undertake expenses of future administration, in which case application will be made to Treasury for contribution towards cost of repairs of buildings.

No. 25.

Governor Viscount Hampden to Mr. Chamberlain.

(Received August 4, 1896.)

Sir,

Government House, Sydney, June 29, 1896.

In reference to my Norfolk Island Despatch of 19th March last,|| I have now the honor to transmit to you the enclosed copy of a further report, with appendices,¶ that I have received from the Commissioners appointed by me to inquire into the affairs of Norfolk Island.

I have, &c.,
HAMPDEN.

[Enclosure

[Enclosure in No. 25.]

To His Excellency the Right Honorable Henry Robert, Viscount Hampden, Governor and Commander-in-Chief of the Colony of New South Wales and its Dependencies, and Governor of Norfolk Island.

MAY IT PLEASE YOUR EXCELLENCY,—

When reporting, under date the 10th March last, on matters in connection with Norfolk Island, we were unable, from the lack of data, then in course of preparation, to report upon land matters and several other questions mentioned in your instructions.

Land Matters.

A list of grants, compiled from the books of the Land Registrar at Norfolk Island, is now enclosed, showing 124 grants have been issued for a total area of 5,303 acres. In only one instance—the grant of 919½ acres to the Melanesian Mission—was the compensation money stated, the amount in that case being £1,330 10s.

Transfers of Land.—The information given in the list embraces all the details obtainable from the Island records. It will be seen that a large number of the grants are not now held in the one interest, having been subdivided and either bequeathed or sold to various persons.

Registration of Land Titles.—So far as we have been able to ascertain, no record of grants issued, or of subsequent transactions in connection therewith, exists outside of the Island. It would seem very desirable that copies of all documents dealing with land, and especially of deeds of grant, should be retained. Copies of the forms at present in use, with explanatory memoranda, will be found attached.

The descriptions in deeds of grant issued prior to a survey of the Island made in 1887 were based on a survey by the sappers and miners about 1859. These descriptions do not accord with the boundaries determined by the survey of 1887, and it was then found necessary to apportion the areas embraced therein as could be best arranged by the surveyor. This, no doubt, was a desirable course to follow, but it is a matter for regret that no steps were then taken to amend the original grants to accord with the more recent survey. The differences in the areas granted and those available are generally not great, and as regards the cases where the areas available are in excess of those specified in the description, there would be apparently no difficulty in obtaining a surrender of the original grants, and issuing fresh grants; but objection may be taken by the holders of original grants, who would suffer some loss of specified area by correction. However, it is fair to assume that the grants referred to portions of land approximately embraced by the descriptions, and so long as the grantees or their representatives obtain correct grants of these lands they should be quite agreeable to the correction being made. The matter is one which can only be dealt with by a person having local authority for the purpose, and then it will require to be handled with tact.

The question of titles to land under private sales, bequests by will, and what is known as “partition,” will be much more difficult to deal with, owing, in many instances, to the absence of definite information as to the particular portions of land referred to, and in others the want of evidence of the right of persons signing the documents to deal with the land.

It is not easy to suggest a course of action to meet these difficulties beyond pointing out that they can only be met by definite regulations of as simple a character as possible, empowering some authorised person to determine the different interests. The regulations should also provide for the proper record of future land transactions. These matters may perhaps await a final decision as to the proposed alteration in the administration of the affairs of the Island.

Existing Rights to Grants.—In our report previously referred to, mention was made to permissive occupations, locally granted, under which, subject to the fulfilment of certain conditions, grants were subsequently issued. Attached is a schedule* of the applications made for such grants.

Apparently the intention was to enable young people to occupy land whereon they could erect residences, and subsequently obtain a grant of land.

Five of the applicants proved the *bond fides* of their applications—Edgar Nobbs, Henry Quintal, and Edward Laing having erected residences, and are, with their wives, in occupation; and Eustace Christian and Charles M. Evans were erecting residences. In these cases we deem it proper to recommend to your Excellency that the decision to withhold all future grants should be so far reconsidered as to permit of grants being issued. As regards the other applications referred to, the decision should, we submit, be confirmed, and the applicants informed that they will be permitted to either lease or purchase the areas, should they desire to do so, when a decision is arrived at as to how the remaining Crown land in the Island is to be dealt with. In the event of their not purchasing or leasing the land, any improvement which may, when the land is hereafter dealt with, be thereon, should be valued, and the future purchaser or lessee required to pay for the same. We think that if the course suggested meets with approval, the decision should be communicated to each applicant, in order to authoritatively and finally dispose of the applications.

In the matter of Henry Everett: This man has fenced in an area of 6 acres 1 rood 13 perches, it is alleged, under a misapprehension as to the correct boundaries of his property. He has effected considerable improvements upon the 6 acres 1 rood 13 perches, planted some 500 or 600 banana trees, a large patch of sweet potatoes, and a number of grape-vines and fruit-trees thereon, and Mr. Commissioner Oliver, with a view to facilitating a settlement of the case, directed the surveyor to survey the encroachment, which was done. We would recommend that Everett be allowed to purchase the 6 acres 1 rood 16 perches at the rate of £3 per acre.

With respect to the claims put forward by Mr. Dwight Allen, Mr. Bailey, and Mr. Waterhouse, for free grants of land, we submit that it would establish an awkward precedent to admit such claims, and that they be advised that the issue of free grants has ceased, and their applications cannot be complied with; but they will be permitted to purchase or lease land when a decision has been arrived at as to how the remaining Crown land is to be dealt with.

Disposal of Crown Lands.—The Island contains 8,528 acres altogether, of which about one-quarter (say 2,000 acres) remains unalienated. This land is generally not so good as that already alienated, being mostly mountainous, but the greater portion of it is fit for cultivation. It

It will be unwise to part with all the Crown land upon the Island, and, in addition to other necessary reserves, there should be reservations for timber. If the residents made fuller use of what land has been alienated, there is an ample area parted with to meet the requirements of the present population (about 600 souls exclusive of the Mission), who have, roughly, 5,000 acres; but there is the natural increase of population to be considered, and closer cultivation should be practised.

About 25 acres is enough for a large family to live upon, whilst half that area should suffice for a man and wife.

If, say, twenty families of really good respectable settlers could be induced to emigrate to Norfolk Island, and each family be leased $12\frac{1}{2}$ or 25 acres, it would only require the disposal of an additional 250 to 500 acres, and such a course would be of great benefit, for the following reasons:—

1. It would produce revenue.
2. It would ultimately tend to check the present evils of close intermarriage in the community, and if men were well selected as good farmers, they would by example infuse a spirit of industry into the present residents, and educate them in agricultural pursuits.

Protection of Timber.—A timber tax has been suggested in our previous report. When the Resident Magistrate is appointed he should inspect and report as to the reservation of any particularly fine patches of timber. In the meantime strict instructions should be issued to check the destruction of the finer timber on the Island.

Noxious Weeds.—A considerable portion of the Island is infested with the following noxious weeds: Wild tobacco, poison berry, acacia scrub, red salvia (locally known as mint), and about half a dozen patches of prickly-pear. It is very desirable that some means should be adopted for the eradication of these pests, which, if not checked, will at no distant date overrun the whole Island. A regulation might be made compelling landowners to keep their properties free from such weeds, and providing for fines for failure to do so; or, if punitive measures be not thought advisable, a prize of, say, £5, might be offered annually to the holder of the best-kept farm. In view of the trouble prickly-pear has been in the Hunter River district of this Colony, we would recommend that instructions be issued for the immediate extirpation of the few clumps of prickly-pear on the Island.

Registration of Births, Deaths, and Marriages.

The Registrar (Mr. Isaac Robinson) was temporarily absent from the Island, Mr. Pearson acting as his *locum tenens*. The books in use were obtained from New South Wales, and similar to those in use in this Colony. The particulars were apparently correctly filled in, but it was ascertained at an interview with Mr. Robinson in Sydney that the registration of births, deaths, and marriages is not compulsory, and he obtains the necessary information from the church register. A regulation seems desirable compelling the attendance of relations at the office of the Registrar, and the registration of births and marriages within a specified period, and the production of a doctor's certificate and registration of death before the interment of the deceased is permitted.

Public Officers.

The performance of official functions by the magistrates has been dealt with in our previous report.

Dr. Metcalf, the official medical man of the Island, is a capable, conscientious gentleman, held in high esteem by the residents, and performs his duties in an eminently satisfactory manner.

The Chaplain (the Rev. Mr. Thorman) was absent from the Island, but from inquiry made it appeared that he was unpopular with a considerable section of the community, and does not in consequence wield that influence for good which we think he ought to.

The Acting Chaplain (the Rev. Mr. Ivens) is most energetic in all matters coming within his sphere. He takes a great interest in his work, and conscientiously strives to minister to the spiritual and social welfare of the people. Until recently he was deservedly popular with the whole of the inhabitants; but his action in regard to the informal election of Chief Magistrate in December last (action worthy of commendation) has affected his popularity with a section of the community.

The Registrar for Lands (Captain Bates) was also temporarily absent from the Island, recruiting his health in New Zealand. He appears to be a careful official, and conscientious in the performance of his work, but apparently lacks the training necessary to deal with documents relating to land titles.

The Registrar of Births, Deaths, and Marriages (Mr. Isaac Robinson) was absent from the Island, but was seen in Sydney prior to his return. His duties are not arduous, and appear to be performed satisfactorily.

We have, &c.,
J. H. CARRUTHERS.
CHARLES OLIVER.

No. 26.

Governor Viscount Hampden to Mr. Chamberlain.

(Received August 5, 1896. Telegram. Answered by No. 31.)

REFERRING to your telegram of 31st July,* New South Wales accepts offer of Norfolk Island, with a grant of, say, £1,000, for repairs of building from Imperial funds. Letter follows to explain that this grant considered equitable, but not stated as an essential condition.

No. 27.

Governor Viscount Hampden to Mr. Chamberlain.

(Received September 12, 1896. Answered by No. 31.)

Sir,

Government House, Sydney, August 5, 1896.

I have the honor to acknowledge the receipt of your telegram of the 31st July,* having reference to the transfer of the administration of Norfolk Island to the Government of New South Wales:

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I placed the substance of this telegram before the Executive Council at their meeting on Tuesday, August the 4th, and I enclose the result of their decision, embodied in a minute signed by Mr. Reid, the Premier.

I am desired by my Ministers to say that the grant of £1,000 is not stated as a condition of acceptance, but as an expression of their opinion.

They consider that this amount is the lowest that can be named, having regard to what is equitable; but they prefer to make no condition, and to leave the question of a contribution to be settled by Her Majesty's Government in such a manner as they may think to be just and equitable.

I conclude the necessary documents to effect the transfer will be prepared by Her Majesty's Government, and will in due course be forwarded to me with instructions.

With reference to your Despatch of the 30th May last,* giving me authority to appoint a Resident Magistrate, I am able to say that Colonel W. W. Spalding, C.M.G., late of the Royal Artillery, has accepted the appointment under the conditions and terms stated in the enclosed copy of a letter dated the 4th instant.

It will be necessary to make an allowance of £100 to this officer to enable him to transfer his family, household furniture, &c., to Norfolk Island.

I propose also, with the advice of my Ministers, to give Colonel Spalding authority to employ a policeman at a salary of £100 per annum, with quarters.

I am not able to state the amount of these expenses, which will be chargeable to the Imperial funds, as it is not possible to fix exactly the date when the transfer will be completed. The amount required, however, should not exceed £200, and I request your authority to expend that amount for these purposes.

I request that you will send the reply to this application by wire, as it is my intention to visit Norfolk Island in October for the purpose of giving effect to the alteration in the administration of the Island which has been approved by Her Majesty's Government.

I am, &c.,

HAMPDEN.

[Enclosure 1 in No. 27.]

TRANSFER of Norfolk Island from the Immediate Control of His Excellency the Governor, as representing the Imperial Government, to the Government of New South Wales.

His Excellency the Governor.

August 4, 1896.

The Cabinet accept the offer of Her Majesty's Government to place the government and control of Norfolk Island under New South Wales; it being understood that a sum, say, £1,000, be granted from Imperial funds towards the cost of repairing buildings.

G. H. REID.

[Enclosure 2 in No. 27.]

Sir,

Government House, Sydney, August 4, 1896.

I have the honor to state that his Excellency the Governor has received a despatch from the Secretary of State for the Colonies authorising him to appoint a Resident Magistrate at Norfolk Island, with salary at the rate of £25 per month, for a period of ten months.

His Excellency desires me to inquire whether, in the event of your being appointed to the position, you would be prepared to discharge the various duties for this period at that salary.

I am to add that one of the Government buildings, until recently occupied by the Chaplain, and known as Government House, will be placed at the disposal of the Resident Magistrate for the above-mentioned period.

You will understand that, as Mr. Chamberlain has only authorised the appointment and consequent expenditure as a temporary measure, his Excellency cannot guarantee its continuance for a longer term than ten months; and that there will be no pension attached to the office.

With regard to the cost of passage to the Island, his Excellency will probably make a grant from the Island Fund for the service, but, in the event of your deciding to accept the position, it will be necessary to submit a statement of the amount required for his Excellency's approval before embarkation.

His Excellency is having a Code of Regulations drawn up by the Crown Law Officers, defining the powers of the Resident Magistrate, and should you decide to accept the post, they will be forwarded to you when completed.

I have, &c.,

A. F. H. FERGUSON, Captain,
Acting Private Secretary.

Colonel W. W. Spalding, C.M.G.

No. 28.

Mr. Chamberlain to Governor Viscount Hampden.

(Sent September 25, 1896. Telegram. Answered by No. 29.)

NORFOLK ISLAND.—Propose to annex to New South Wales by Order in Council, at the same time declaring Norfolk Island to be exempt from laws of New South Wales, and giving to Governor power of legislation until Legislature of New South Wales provides otherwise. Will obtain Law Officers' opinion whether Order in Council fit for the purpose; if not, whether, simultaneously with annexation, Act should be introduced New South Wales. Telegraph whether this meets views of your Ministers.

No. 29.

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No. 29.

Governor Viscount Hampden to Mr. Chamberlain.

(Received October 14, 1896. Telegram.)

NORFOLK ISLAND.—With reference to your telegram of 25th September,* Ministers propose that administration only should be transferred, legislative powers remaining as before. Order in Council will probably be sufficient. Complete annexation to New South Wales or future Federal body to be postponed till Colonial Government think it desirable. Meanwhile, Government of New South Wales will bear expense of administration. Despatch follows by mail.

No. 30.

Mr. Chamberlain to Governor Viscount Hampden.

(Sent October 23, 1896. Telegram.)

NORFOLK ISLAND.—Treasury agree to £1,000 grant; also £100, Spalding's passage. Order in Council will be sent out as soon as possible by which Government will be administered by Governor, New South Wales, under advice of Executive Council.

No. 31.

Mr. Chamberlain to Governor Viscount Hampden.

My Lord,

Downing-street, October 30, 1896.

In my telegram of the 23rd instant† I informed you that the Lords Commissioners of the Treasury had agreed to ask Parliament for a grant of £1,000, being the sum mentioned, both in your telegram and in your despatch of the 5th of August,‡ as the contribution suggested by your Ministers towards the cost of putting the public buildings in Norfolk Island in repair in connection with the transfer of that Island to the administration of New South Wales.

I have now to enclose for your information and guidance copy of the correspondence§ which has passed on the subject.

As provision for this grant is to be made on the Supplementary Estimates for the current year, the money will be available in the early part of next Session, before the 31st of March next, and can be paid over to the Agent-General for New South Wales, unless your Ministers wish other arrangements made.

In regard to the appointment of Colonel Spalding, if, as I gather, he has not yet assumed his duties in Norfolk Island, the provision of £250, which was made for a Magistrate's and his clerk's salary for ten months, on the assumption that such an officer would be appointed about the beginning of June last, will be more than sufficient to provide for his pay for the period between the date of his departure from New South Wales and the 31st of March; and the balance, you will perceive from the correspondence, may be utilised for the payment of a constable for the same period.

As after that date the liability of the Imperial Government for the administration of Norfolk Island and the mail service will cease, it is of importance that, with a view to prevent any available money of this £250 lapsing, these officers and the contractor for the mail service should be settled up with, either by advances from the New South Wales Government or by bills on this Department, before the financial year actually closes, and I request that you will arrange accordingly.

An Order in Council is being drafted, providing for the abolition of the office of Governor of Norfolk Island, and giving the administration of the Island and the power of legislating for it to the Governor of New South Wales, with the advice of his Executive Council.

I hope to submit this Order to Her Majesty in Council at an early date, but in the meantime there is no reason why you should not proceed to Norfolk Island and inform the inhabitants of the changes which have been resolved upon, and instal Colonel Spalding as Magistrate.

Some considerable amendment of the existing laws will be necessary before Colonel Spalding can act, but on this point I have no doubt your Ministers will advise you, and prepare the necessary amending law, which you can pass, as Governor of Norfolk Island, pending the arrival of the Order in Council.

I have, &c.,

J. CHAMBERLAIN..

No. 32.

Governor Viscount Hampden to Mr. Chamberlain.

(Received November 18, 1896.)

Sir,

Government House, Sydney, October 9, 1896.

In continuation of my despatch of the 5th of August last,|| I have now the honor to inform you that I have accepted the tender of Messieurs. Hordern Brothers, of this city, to effect certain repairs and alterations to the building known as Government House, Norfolk Island, for the sum of £786.

In this connection I might point out that the Government architect, to whom the matter was referred, expressed the opinion that the tender was a reasonable one.

It has been found necessary to increase the amount to be allowed to Colonel Spalding, for the conveyance of his furniture and household effects to the Island, to £134 10s., this being the lowest rate available for the service.

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In addition to this sum an expenditure to the extent of about £45 will be necessary to defray the cost of passages to the Island.

I have also authorised Colonel Spalding to purchase furniture for the equipment of certain rooms at Government House, Norfolk Island, to the extent in value of £150, the furniture to remain the property of the Government.

A policeman at a salary of £60 a year and quarters, and a clerk with pay at the rate of £40 per annum, will accompany Colonel Spalding to the Island.

The above will involve a special expenditure of £1,115 10s., and in addition an annual charge of £100 a year for the policeman and clerk.

I have applied to the Colonial Treasurer for an advance to meet these expenses, which, to the extent of £1,000, will be recovered from the proposed grant on the transfer of the administration.

The method of transfer of the administration of Norfolk Island is occupying the attention of my Ministers, who expect to arrive at a decision in the matter in the course of a few days.

They incline to the opinion that it will be necessary to pass an Imperial Statute vesting the administration in the Governor of New South Wales in Council, as the Order in Council annexing the Island to New South Wales will necessarily subject the former to all the laws of this Colony.

I hope to visit the Island early in the month of November, and for this service the Naval Commander-in-Chief on the Station has placed one of the ships under his control at my disposal.

I have, &c.,
HAMPDEN.

No. 33.

Governor Viscount Hampden to Mr. Chamberlain.

(Received Nov. 23, 1896. Answered by Nos. 34 and 38.)

Sir,

Government House, Sydney, October 16, 1896.

Referring to my telegram of the 14th instant,* I have the honor to enclose a copy of a memorandum by the Premier, dated the 13th idem, having reference to the proposed transfer of the administration of Norfolk Island.

You will perceive that the Government of New South Wales desire to have the administration placed in the hands of the Governor-in-Council, the expenses to be defrayed out of colonial funds by an annual vote, and they are of opinion that in the order effecting the transfer of administration there should be a recital to the effect that, upon request being made, Her Majesty's Government will be prepared to annex the Island either to New South Wales, or, in the event of federation of the Australian Colonies, to the Australian Federal Government.

My Ministers consider that the transfer of the Norfolk Island Fund, and the contribution by Her Majesty's Government of £1,000 to repairs of buildings, will be consequent upon the completion of the proposed arrangement.

Within a few days I hope to be in a position to forward a draft of the new ordinance and laws and regulations for Norfolk Island.

I have, &c.,
HAMPDEN.

[Enclosure in No. 33.]

MEMORANDUM FOR HIS EXCELLENCY THE GOVERNOR.

MR. REID presents his humble duty to your Excellency, and begs to state, in reply to the Governor's letter of 9th instant, that he is ready to advance £1,000 as therein requested, pending settlement of account on transfer of administration.

The question as to the future government of Norfolk Island has been seriously considered by Ministers, and I beg to acquaint your Excellency with the result of our deliberations.

Whilst ready to assist your Excellency, in fact to be your Excellency's advisers upon all matters of concern respecting the Island, we foresee great difficulties in the way of legislation either by the Governor with our advice or by the Legislature of the Colony.

We propose, therefore, that the Island should not be annexed formally to New South Wales, and that our services should be administrative only, legislation being conducted as formerly, or in such manner as may seem fit to Her Majesty's Government.

It should be understood, however, the Island is, as part of the arrangement, secured to New South Wales, or the future Federal body, when it is found expedient to ask for its annexation.

This will be a tangible basis for an annual vote out of Colonial funds towards the expenses of the Island.

I may repeat that our main object in entering upon this matter at all was to meet the wishes and convenience of the Imperial Government, being fully sensible of the great consideration shown to Colonial requests by the Home Government upon all occasions.

The Treasury, N.S.W., October 13, 1896.

G. H. REID.

No. 34.

Mr. Chamberlain to Governor Viscount Hampden.

(Sent December 28, 1896. Telegram.)

NORFOLK ISLAND.—Law Officers of the Crown advise Order in Council conferring on Governor, New South Wales, powers at present possessed by you in capacity of Governor, Norfolk Island, coming into force when published in the Colony. Proposed to submit at first Council meeting at the beginning of the year.

No. 35

No. 35.

Governor Viscount Hampden to Mr. Chamberlain.

(Received January 4, 1897. Answered by No. 36.)

Sir,

Government House, Sydney, November 28, 1896.

I have the honor to inform you that I returned to Sydney on Saturday, the 21st November, from an official visit to Norfolk Island.

Leaving Sydney in H.M.S. "Katoomba" on the 10th November, I arrived off Norfolk Island on the morning of the 14th November, and immediately gave instructions to Mr. Byron Adams, late Chief Magistrate, to call a meeting of all the male inhabitants for 3 o'clock p.m. on that afternoon. At that meeting I proclaimed the New Laws and Regulations for Norfolk Island, copies of which are enclosed for the assent of Her Majesty, if you approve and deem such assent necessary.

I also formally installed Colonel Spalding as Resident Magistrate of the Island.

Colonel Spalding, with my approval, made the following appointments:—

Lieutenant Warner Spalding to be Clerk of the Court, Mr. John Knuckey to be Sergeant of Police, and Mr. F. Nobbs and Captain Bates were confirmed in their offices of Postmaster and Registrar of Lands respectively.

I remained on the Island until the 18th November, and the opportunity was thus afforded me of interviewing many of the leading inhabitants, who assured me that the Resident Magistrate would be loyally supported by the community.

The Island is small in area, but has, in proportion to its size, great capabilities, owing to the fertility of the soil; and I have every reason to believe that the security given to property by recent changes will operate to encourage inhabitants to cultivate the land more systematically than they have in the past.

I have, &c.,

HAMPDEN.

[Enclosure in No. 35.]

PROCLAMATION by His Excellency The Right Honorable Henry Robert Brand, Viscount Hampden, Governor and Commander-in-Chief of the Colony of New South Wales and its Dependencies, and Governor of Norfolk Island.

WHEREAS by an Order of the Queen in Council, dated the 24th day of June, 1856, the Island called Norfolk Island was declared to be a distinct and separate settlement, and the Governor and Commander-in-Chief for the time being of the Colony of New South Wales was constituted and appointed Governor of the said Island, with power to make laws for the order, peace, and good government of the said Island: And it was therein ordered that until annulled by competent authority, all laws, ordinances, and regulations, civil and ecclesiastical, which might be in force within the said Island at the time of the proclamation of the said Order in Council should continue in force subject only to such changes as should necessarily be consequent on the changes of Government: And it was therein further ordered and declared that the Governor for the time being of the said Island called Norfolk Island, should have full power and authority to constitute and appoint judges, justices of the peace, and other necessary officers and magistrates in the said Island for the administration of justice. And whereas, in pursuance of the powers vested in them, the Governors for the time being of Norfolk Island did from time to time declare and enact that certain laws and regulations should be in force within the said Island. And whereas Her Majesty did, by commission dated the 5th day of July, 1895, duly appoint the Right Honorable Henry Robert Brand, Viscount Hampden, to be Governor and Commander-in-Chief of the Colony of New South Wales. And whereas in the interests of the community inhabiting Norfolk Island, and for the better promoting the advancement and welfare of the said Island and its inhabitants, and the better and more certain administration of justice therein, it has been considered wise and expedient to repeal all existing laws and regulations respecting the said Island and now in force therein, and to appoint an officer for the administration of justice therein, and to pass other laws for the better management of the affairs of the said Island: Now, therefore I, Henry Robert Brand, Viscount Hampden, the present Governor and Commander-in-Chief of the said Colony of New South Wales and its Dependencies, and Governor of Norfolk Island, do, in pursuance of the power vested in me, declare and enact as follows:—

The Chief Magistrate.

1. The executive government of Norfolk Island shall, during the absence of the Governor, be vested in the Chief Magistrate appointed by the Governor from time to time, who shall hold office during the pleasure of the Governor, and shall reside on the Island. Executive government vested in Chief Magistrate.

The Governor may from time to time appoint some person who shall, if the Chief Magistrate should die or be absent from the Island, or become incapable of acting in his office, have the powers and perform the duties conferred and imposed on the Chief Magistrate until a successor is appointed, or during such absence or incapacity as aforesaid.

2.—(i) The Chief Magistrate shall, in pursuance of the authority hereby vested in him, exercise a general supervision over the affairs of the Island, and shall from time to time and when required by the Governor report to him as to the condition of the Island, and all matters occurring therein, and shall carry out any instructions given him by the Governor. Power and authority of the Chief Magistrate.

Provided that the power of alienating, leasing, or authorising the occupation or use of the waste lands of the Crown shall be exercised by the Governor alone.

(ii) He shall carry out and enforce obedience to these laws, and for that purpose may summon to his assistance any person on the island, who shall forthwith obey the summons under a penalty not exceeding two pounds.

(iii) He shall also preside at the Magistrate's Court and administer justice therein to all persons, without fear or favour, affection, or ill-will, and in the administration of justice or in the conduct of any inquiry authorised by these laws he may administer oaths to jurors, witnesses, and others.

(iv) He may also, with the approval of the Governor, establish gaols, prisons, and houses of correction, and appoint a Registrar and gaolers, constables, bailiffs, and other officers, and remove any officer.

Provided that he may, without obtaining the approval of the Governor, suspend any officer, and appoint another temporarily in his place.

The

The Magistrate's Court and the Grand Jury.

Jurisdiction of Magistrate's Court.

3.—(1.) There shall be a Court presided over by the Chief Magistrate (herein called the "Magistrate's Court") which shall be a Court of Record, and shall have jurisdiction—

- (a) To punish all crimes and offences (except crimes punishable by death); and the jurisdiction may be exercised summarily or on indictment as hereinafter provided;
- (b) To adjudge on all civil pleas whatsoever, irrespective of the amount claimed or in issue; and
- (c) To grant probates and letters of administration of and orders to collect the estates of persons dying possessed of real or personal property in the Island.

(11.) The jurisdiction of the Magistrate's Court shall extend to crimes and offences committed, and causes of action accrued, before or after the day on which these laws take effect, and to the estates of persons dying after the making of these laws.

Mode of exercising powers of Magistrate's Court.

4.—(1.) Subject to these laws, and so far as applicable, the provisions of the Imperial Acts eleven and twelve Victoria, chapter forty-two, and eleven and twelve Victoria, chapter forty-three, and the Acts of the Parliament of New South Wales, thirty-two Victoria number six, forty-six Victoria number three, forty-six Victoria number seventeen, fifty-two Victoria number six, fifty-five Victoria number five, and fifty-seven Victoria number twenty-three, shall have force and effect within Norfolk Island, and the jurisdiction and powers conferred by the said Acts on Judges and Justices of the Peace shall be exercised by the Chief Magistrate.

Provided that all criminal proceedings before the Chief Magistrate and a jury shall be commenced by a bill of indictment preferred to and found by a Grand Jury, to be constituted as hereinafter provided: Provided also that the jury to try criminal issues shall be a jury of seven Elders:

Provided further that where a bill of indictment charging a capital offence is found by a Grand Jury, the Magistrate may inquire into the same in a summary way, and shall forward the evidence produced before him, with a report thereon, to the Governor, to be dealt with by him as he may think fit.

(11.) In the exercise of civil jurisdiction the provisions of the Acts of the Parliament of New South Wales, ten Victoria number ten, and forty-five Victoria number twenty-seven relating to Courts of Petty Sessions in the Colony of New South Wales, and of such enactments as amend or are in that Colony ancillary to the exercise of the jurisdiction and powers conferred by those Acts shall, subject to these laws and so far as applicable in the circumstances of the Island, and without any limitation as to the amount claimed or in issue, be followed by the Chief Magistrate and apply to the Magistrate's Court.

Provided that the Chief Magistrate shall have no jurisdiction in any case where title of land is in question; but he may in any such case, or on the petition of any person, make inquiry in a summary way into the facts of any disputed title to land, and shall thereupon forward the evidence and his report thereon for the consideration of the Governor, who may adjudicate thereon, and whose orders in the premises shall be enforced by the Chief Magistrate.

(111.) In granting probate and letters of administration and orders to collect the Magistrate shall follow the law and practice of the Supreme Court of New South Wales in its probate jurisdiction so far as they are applicable.

(1v.) The Chief Magistrate shall be sole judge whether any of the enactments abovementioned are applicable in the circumstances of the Island.

The Grand Jury.

5. Upon the application of any person, supported by an affidavit disclosing an indictable offence, it shall be lawful for the Chief Magistrate to order the Registrar to summon a Grand Jury, and the Registrar shall thereupon summon thirteen Elders to be named by the Chief Magistrate to appear at a Court to be holden at a time and place to be mentioned in the summons to inquire, present, do, and execute all things which on the part of the Queen or her successors may then and there be commanded of them, and every finding of a Grand Jury shall be by not less than seven jurors.

Magistrate may make rules of procedure and practice, and fine persons for non-attendance.

6. The Chief Magistrate may, with the approval of the Governor, make, amend, and repeal rules providing for the exemption of certain of the Elders from being liable to serve on juries, for the summoning, impanelling, and swearing of grand and petit juries, for the conduct of trials, the summoning of witnesses, and regulating the practice and procedure of the Magistrate's Court and the Grand Jury, the forms of oaths to be taken by jurors and witnesses, and the forms of all proceedings, the compensation to be allowed to jurors and witnesses, and the costs of the parties, and for applying the Acts incorporated herewith to the circumstances of the Island.

He may also impose a fine not exceeding ten shillings on any person who fails to attend the Magistrate's Court or the Grand Jury in pursuance of a summons, or refuses to serve on a jury.

Crimes punishable by Death.

Crimes punishable by death.

7. Crimes punishable by death shall, unless otherwise provided by laws made by the Governor, be dealt with in accordance with the laws now in force in the Colony of New South Wales. The trial of such crimes as aforesaid shall be held in Norfolk Island.

The Council of Elders.

Constitution of the Council of Elders.

8. There shall be a council of twelve persons (herein called the "Council of Elders") elected as hereinafter provided. And the Council of Elders may from time to time choose one of their number as President, who shall preside at all meetings for the discharge of administrative duties, and shall have a casting vote only.

Powers of the Council of Elders.

9.—(1.) The Council of Elders shall have the care, construction, and management of the public roads of the Island, and the care and management of all commons and public reserves, and may, subject to the approval of the Chief Magistrate, make, amend, and repeal by-laws for the above purposes, and regulating proceedings at meetings of the council for administrative purposes, and providing for the construction and maintenance of the public roads by the labour of the residents on the Island, or by means of rates to be levied on the said residents; and may in those by-laws impose penalties not exceeding two pounds for any breach of the same.

The Magistrate may approve or disapprove of the making, amending, or repealing of any by-laws, or may reserve the consideration thereof for the Governor. By-laws when approved as aforesaid shall, subject to any laws enacted for the governing of the Island, and subject to any regulations made by the Chief Magistrate, have the force of law.

(11.)

(ii.) The Council of Elders may also, subject to the provision hereinafter mentioned, make suggestions to the Chief Magistrate as to any changes in the laws and regulations of the Island which they may think desirable.

10.—(i.) The first meeting of the Council of Elders for the discharge of their administrative duties shall be held on a day to be appointed by the Chief Magistrate, and meetings may thereafter be held on such days as may be prescribed by the by-laws of the said council, and if no days be so prescribed on any day named by the President. Meetings of Council of Elders.

(ii.) Meetings of the Council of Elders for the consideration of suggested alterations of the laws and regulations of the Island shall be summoned by the Chief Magistrate on the receipt by him of a petition signed by twenty or more of the Elders. The Chief Magistrate shall preside at those meetings.

11.—(i.) The Council of Elders shall be elected on some day to be named by the Chief Magistrate as soon as convenient after the day on which these laws take effect, and thereafter on the first Tuesday in January in each year; and, on failure to elect any or all of the members of the Council of Elders, the Chief Magistrate may appoint a sufficient number. Election of Council of Elders.

The members of the council shall be Elders of the age of thirty years or upwards; but any person who is in any gaol or house of correction, or has within the previous three months been discharged from some gaol or house of correction to which he has been committed as a punishment for an offence against any laws made by the Governor, shall be disqualified to be elected to or to be a member of the council.

The council shall be elected by the elders in the manner prescribed by regulations made by the Chief Magistrate.

(ii.) Three of the council shall retire on the first Tuesday in January in each year. The order in which the members of the first council shall retire shall be determined by the Chief Magistrate by lot in the manner prescribed by regulations made by him, and when all the members of the first council have retired the members who have been longest in office shall be the first to retire. Retirements and vacancies.

Vacancies from death, absence from the Island, or incapacity, shall be filled by the appointment of the Chief Magistrate, and the persons so appointed shall retire when the persons to whose offices they have been appointed would retire in accordance with these laws.

The Elders.

12. The Chief Magistrate shall cause to be kept a register of the names of the male natural-born or naturalised subjects of Her Majesty of the age of twenty-five years and upwards who have for the previous six months resided on the Island, and those persons are herein referred to as "the Elders." Who are the Elders.

But no person who is in any gaol or house of correction, or has within the previous three months been discharged from some gaol or house of correction to which he has been committed as a punishment for an offence against any laws made by the Governor, shall be an Elder.

The School.

13. The father, or in case of his death or absence from the Island, the mother or other person having the custody or care of a child (not being a child under the care of the Melanesian Mission) between the ages of seven and fourteen years, shall pay to the Chief Magistrate, or any person authorised by him in respect of each such child as aforesaid, the sum of threepence weekly for schooling, and shall be responsible for the regular attendance of the child at school, except good cause be shown to the school-master for the absence of the child, and shall be liable to a fine of sixpence for every day that the child is absent from school, unless for good cause. Parents are responsible for attendance of children at school, and shall pay school fees.

Miscellaneous Offences.

14. No beer, wine, or spirituous liquor shall be landed on any part of the Island, except it be consigned to or to the care of the Chief Magistrate, under a penalty not being less than five shillings nor more than forty shillings. No beer, wine, or spirituous liquor to be imported unless consigned to the Chief Magistrate.

But the Chief Magistrate may, in his discretion, distribute to persons holding the permits hereinafter mentioned so much of the beer, wine, or spirituous liquor consigned to him or to his care as he may think fit.

15. No beer, wine, or spirituous liquor shall be kept in any place on the Island unless under the care and control of the Chief Magistrate, or under and in accordance with a permit issued by him. Seizure of beer, wine, and spirit illegally kept.

The Chief Magistrate, on receiving information on oath that there is reason to suspect that beer, wine, or spirituous liquor is in the possession of any person in contravention of these laws, may issue a warrant authorising search to be made on the premises of the suspected person; and if in pursuance of a search warrant or otherwise any beer, wine, or spirituous liquor is found in the possession of any person as aforesaid, the beer, wine, or spirituous liquor, and the vessels containing the same may be forthwith seized, and the said person shall be liable to a penalty not exceeding twenty shillings, and on conviction the said vessels and their contents shall be forfeited to Her Majesty.

16. Whosoever uses obscene or profane language in a street, highway, or public place shall be liable to a penalty not exceeding forty shillings nor less than five shillings. Penalty for using obscene or profane language.

17. The mother, or, in case of her death, the person having the care and custody of an illegitimate child, shall be entitled to recover in a summary way from the father of the child an allowance of not less than two shillings and sixpence nor more than seven shillings and sixpence a week for the maintenance of the child until it attains the age of fourteen years: Maintenance order for support of illegitimate children.

Provided that no order shall be made under this section on the evidence of the mother alone.

18. The Chief Magistrate may, with the approval of the Governor, make, amend, and repeal regulations— Magistrate may make regulations.

- (a) prescribing the duties of the registrar and of gaolers, constables, bailiffs, and other officers;
- (b) regulating proceedings at meetings of the Council of Elders for the consideration of suggested alterations of the laws and regulations of the Island;
- (c) regulating the election of members of the Council of Elders, and the retirement of the members of the first council;
- (d) prescribing the duties of the school-master, and regulating the management of the school; (e)

- (e) prescribing the conditions under which permits to keep beer, wine, or spirituous liquor may be granted, held, and revoked;
- (f) regulating the cutting of timber on land of the Crown, and prescribing the fees or payments to be made for timber so cut;
- (g) prescribing the measures to be taken for preserving the public health;
- (h) for carrying out these laws and prescribing forms for all matters and proceedings thereunder.

And may, in those regulations, impose any penalty not exceeding ten pounds for any breach of the same, or where the breach is a continuing one not exceeding one pound for every day that the breach continues.

All regulations so made and approved shall, when published in Norfolk Island by exhibiting the same in public at some place near the court-house, have the force of law.

Supplemental and Repeal.

Recovery of fines and penalties.

19. All fines and penalties imposed by these laws or by any regulations or by-laws made thereunder, may be sued and proceeded for by any person whomsoever and may be recovered in a summary way before the Chief Magistrate, who may, in the order imposing the fine or penalty, direct that in default of payment or satisfaction at the time and in the mode ordered it may be recovered by distress, levy, and sale of the goods and chattels of the defendant, and that in default of sufficient distress the defendant be imprisoned for any term not exceeding three months.

Application of fines and penalties.

20. All fees, fines, and penalties shall be paid to the Chief Magistrate or to any person appointed by him in that behalf, and shall be accounted for by the Magistrate to the Governor.

Powers may be exercised from time to time.

21. Where by these laws, or by any regulations thereunder, power is given to do, perform, or submit to any act, matter, or thing, the power may be exercised from time to time as occasion may require, unless the contrary intention appears.

Repeal.

22. All laws, ordinances, and regulations in force within Norfolk Island when these laws take effect are hereby repealed and annulled, and the offices of Chief Magistrate and assistants or councillors established under those repealed laws, ordinances, and regulations are hereby abolished.

Provided that such repeal shall not—

- (a) affect the previous operation of any law, ordinance, or regulation so repealed, or anything duly done, suffered, or commenced to be done under them; or
- (b) affect any right, privilege, obligation, or liability acquired, accrued, or incurred, under any law, ordinance, or regulation so repealed; or
- (c) affect any penalty, forfeiture, or punishment incurred in respect of any offence committed against any law, ordinance, or regulation so repealed; or
- (d) affect any investigation, legal proceeding, or remedy in respect of any such right, privilege, obligation, liability, penalty, forfeiture, or punishment as aforesaid;

and any such investigation, legal proceeding, or remedy may be instituted, continued, or enforced, and any such penalty, forfeiture, or punishment may be imposed and enforced, as if these laws had not been made.

Commencement of these laws.

23. These laws shall take effect on and after the day of their proclamation in Norfolk Island by the Governor or Chief Magistrate.

In witness whereof, I, as Governor of Norfolk Island, have signed this my Proclamation and have affixed hereto the seal of Norfolk Island, this 14th day of November, in the sixtieth year of the reign of Her Majesty the Queen, and in the year one thousand eight hundred and ninety-six.

HAMPDEN.

His Excellency the Governor of Norfolk Island has been pleased to approve of the following rules and regulations made by the Chief Magistrate under the authority of the laws of Norfolk Island:—

RULES for carrying out the provisions of the Acts of the Parliament of New South Wales 10 Vict. No. 10, and 45 Vict. No. 27, adopted by the laws of Norfolk Island, and for summoning, drawing, and empanelling juries.

Rules to carry out the provisions of 10 Vict. No. 10.

Sittings of the Court.

1. A Court for hearing and determining all civil pleas shall be held in the Court-house on such days as may be appointed by the Chief Magistrate.

Adjournment of the Court.

2. If the Chief Magistrate is not present at the time appointed for holding the Court, or within half an hour thereafter, the Registrar may adjourn the Court to such time as he may think fit.

Time of filing demands or plaints.—Issue of plaint note.

3. All demands or plaints shall be filed in the Registrar's office six clear days, and all summonses shall be served three clear days, prior to the day appointed for the return of the summonses. A plaint note shall be issued forthwith to the plaintiff on his filing the demand or plaint.

Demand before institution of proceedings.

4. In any action the nature of which admits of a demand being made before the action is brought a demand shall be made before the issue of the summons, otherwise the plaintiff shall not be entitled to recover his costs in the action.

Filing defence and service of notice (13).

5. Where it is intended to defend upon any matters of set-off or excuse, particulars of the same shall be filed in the Registrar's office two clear days prior to the day of hearing, and a copy of the particulars so filed shall, at least one clear day prior to the day of hearing, be served by the defendant on the plaintiff, in the same manner as a summons may be served upon a defendant: Provided that the filing and service of such notices of defence may be dispensed with by consent of the plaintiff or by order of the Court, and under such terms and conditions as the Court may direct.

Service of process by plaintiff or defendant. New trial.

6. In the discretion of the Registrar, a party to an action may receive summons or other process in the action from the Registrar for the purpose of serving the same.

7. When a new trial of a cause has been granted, the Registrar shall give notice in writing to the plaintiff and defendant of the time appointed for such trial; the notice may be given not less than three clear days before the day appointed for the trial.

Affidavit of service.

8. Affidavit of service of any process may be made and endorsed on the proceedings before the hearing.

9. The Court may adjourn the hearing of any matter on such terms as it thinks fit, and may award costs to either party on the adjournment. **Adjournment of hearing.**
10. The Court may at any time during the trial allow any amendment to be made in a summons, plaint, or plea, or other proceeding, either in form or substance, if the party against whom the amendment is sought to be made would not be misled or prejudiced thereby, and upon such terms as to adjournment, payment of costs, or otherwise, as the Court may deem fit. **Amendment of process.**
11. Should the plaintiff succeed in his cause of action the Court may in its discretion allow him reasonable costs for taking out, or service of, Court process. **Costs to plaintiff.**
12. In any action the Court may award expenses to any witness, exclusive of the plaintiff, at a rate not exceeding 6s. a day. **Expenses.**
13. The Registrar shall keep books of account and an execution book, and a record of all transactions before the Court. **Books of account and records.**
- The bailiff also shall keep an execution book, in which he shall enter particulars of all writs delivered to him for execution, the amounts received by him on levies made thereunder, and the return to the writs made by him to the Registrar.
14. The Registrar shall receive all moneys that may be paid into Court before or after the trial, and shall pay the same to the parties entitled thereto, in due course, on demand being made by them or their authorised agents. **Suitors' moneys.**
15. Payment of moneys out of Court may be made on production of the plaint note in the cause; agents to be paid such moneys only on presentation of an order signed by the person entitled to the moneys and witnessed. **Payment of suitors' moneys.**
16. Execution may be issued after the expiration of two clear days from the date of the judgment, on the application in writing of the party in whose favour a verdict has been given, or of his agent: Provided that the agent shall produce an authority for his application, signed by the party on whose behalf he is acting, and witnessed: Provided also that if it be shown on affidavit by a party entitled to take out execution that the judgment of the Court is likely to be defeated by delay, execution may issue at any time after judgment. **Execution.**
17. All sales under process from the Court shall be conducted publicly, and the goods levied on shall be sold by the bailiff or his deputy, at or near the hour of noon, to the highest bidder for ready money, at the place where the levy thereon has been made or as near thereto as circumstances (having regard to the best prices to be obtained) will admit. The bailiff shall, three clear days before sale (which day shall not be earlier than the sixth day from the day of levying upon the goods), affix notice of such intended sale in a conspicuous place at or near the entrance to the premises where the levy has been made, and at the place where such sale is to take place, and on or near the door of the Court-house: Provided that when requested by the owner of the goods levied upon, or when such goods are of a perishable nature, the bailiff shall put the goods up for sale as early as may be, with due regard to the interests of all parties, in which case the notices of intended sale which are prescribed by this rule shall be affixed as early as practicable. **Proceedings in connection with sales under levy.**
18. Where the party alleges that his goods and chattels so levied upon are more than sufficient to satisfy the execution, he may point out to the bailiff which portion of the same he desires to be first sold, and the same shall be sold accordingly; but if such portion be not sufficient to satisfy the execution, then the bailiff shall proceed to sell the whole of the goods and chattels, or such of them as may be sufficient to satisfy the claim, including all costs, and the bailiff shall, in all cases, within three days, pay the surplus (if any) arising from any level to the Registrar, so that he may render the same on demand to the person entitled thereto. **Order in which goods may be sold.**
19. The bailiff shall not be required to act upon any conditional order for suspending the execution of any process, but only upon an absolute order in writing to that effect, which order may at any time be withdrawn by the same party lodging with the bailiff a written instruction to execute the said process. **Suspension of execution of process.**
20. No person shall be employed by the bailiff to assist him in the performance of his duties except with the approval of the Court, and such approval may be withdrawn by the Court at any time if it thinks fit. **Deputy bailiffs.**
21. All suitors or their agents shall be at liberty to inspect the record book of the Court, and all books of the bailiff or his deputy, so far as such suitor may be interested therein, and to take a copy of such parts as relate to the same action, on payment to the Registrar for every such search of the sum of sixpence. **Search of record books.**
22. Bills of sale shall be registered with the Registrar in the manner provided in the Act 10 Victoria No. 10: Provided that no fee shall be charged for such registration. **Registration of bills of sale.**
23. All Court fees shall be paid in advance, and no process shall issue unless the fee for the same has been paid. **Fees to be paid in advance.**

Rules to carry out Provisions of 45 Vict. No. 27.

1. Any person in whose favour a judgment has been given under the laws of Norfolk Island may apply to the Chief Magistrate immediately or at any time thereafter during the time such judgment remains unsatisfied, for an order to examine the person against whom such judgment has been obtained; and the Chief Magistrate may thereupon grant such order in writing or otherwise, and proceed to examine such person, or may postpone such examination upon such terms as to costs, and to such time as he thinks proper. **Order to examine judgment debtor.**
2. If the judgment creditor does not apply for such order of examination on the same day judgment was given, but desires to obtain an order on some future date, and before satisfaction of his judgment debt and costs, he shall give a written notice to the Registrar and the other party of his intention to apply to the Chief Magistrate for such order, naming the day on which such application is intended to be made, and such notice shall be served upon the Registrar and other party five days at least before such day of hearing. **Application for order of examination on future date.**
3. The order for judgment provided by section 6 of the Act to be served on the garnishee shall conclude with as full particulars of the claim made against him as would be required if he were being sued by the judgment debtor, and shall set out fully and clearly any questions to be tried for determining his liability. **Order for adjournment.**
4. The mode of service of notice and summonses shall be the same as applies to summonses to appear to plaints. **Mode of service of notices, &c.**
- 5.

Fees. 5. The fees to be taken by the Registrar shall be the same as charged for summonses to appear to plaintiffs, and shall be paid in advance. The bailiff's fees for service of notices and summonses shall be the same as are charged for services of summonses on plaintiffs.

Rules for Summoning, Drawing, and Empanelling Juries.

Precept for jury panel. 1. The Chief Magistrate may issue a precept directing the Registrar to summon so many jurors as he may think sufficient for the trial of any indictable offence. The number of jurors to be summoned shall in each case be mentioned in the precept.

Panel to be chosen by lot from Elders. 2. The Registrar upon receipt of the precept shall, in the presence of the Chief Magistrate, place in a box the name of each Elder written on a separate card or piece of paper, and draw therefrom the names of the jurors to be summoned. Provided that the names of ministers of religion and of officials (including the Chief Magistrate, medical officer in charge, Registrar, constables, bailiffs, and gaolers) shall not be placed in or drawn from the box.

Summoning of jurors. 3. Grand or petit jurors shall be summoned by serving on them or leaving at their residences, three days at least before the day fixed for the sitting of the Grand Jury or for the trial, a summons in the form hereto.

Witnesses before Grand Jury. 4. It shall be lawful for the foreman of every Grand Jury, and he is hereby authorised and required to administer an oath to all persons who appeared before such Grand Jury to give evidence in support of any bill of indictment; and all persons attending before any Grand Jury to give evidence may be sworn and examined upon oath by such Grand Jury touching the matters in question.

The name of every witness examined or intended to be examined shall be endorsed on the bill of indictment, and the foreman of the Grand Jury shall write his initials against the name of each witness so sworn and examined.

Drawing the jury in cases for trial. 5. Upon calling on a case for trial the Registrar shall in open Court place cards containing the names of the jurors who have been summoned into a box provided for the purpose, and shall draw therefrom the cards one after another until seven jurors appear without just cause of challenge, who, being duly sworn, shall be the jury to try the case.

But if a sufficient number of jurors do not attend the number shall be completed by appointment by the Registrar from among such of the bystanders as are Elders and liable to serve on juries.

Compensation to jurors. 6. Every juror who attends a Court in pursuance of a summons, and every talesman, shall receive out of the funds in the hands of the Chief Magistrate the sum of two shillings and sixpence for every day of his attendance.

Form of summons.

Form of Summons.

Mr. A. B. (*naming the juror*).

You are hereby required to appear as a [grand or petit] juror at the Magistrate's Court, to be holden at _____ on the _____ day of _____ next, and there to attend from day to day until you be discharged by the said Court.

(Signed) C. D.,
Registrar.

REGULATIONS FOR THE ELECTION OF THE COUNCIL OF ELDERS.

The Returning Officer. 1. The Chief Magistrate, or some person appointed by him in that behalf, shall be the Returning Officer, and shall preside at all elections of the Council of Elders. Provided that the Chief Magistrate may, in case of the absence, or inability, or refusal of the Returning Officer to act, appoint another Returning Officer in his stead.

Nomination. 2. The seventh day before the day affixed by or in accordance with the laws of Norfolk Island for the election of members of the Council of Elders shall be "nomination day," and the nomination of candidates shall be effected by delivering to the Returning Officer at any time before nomination day a paper in the Form A hereto, containing the name in full of the candidate and his residence, and signed by two or more Elders qualified to vote at the election and by the candidate.

Public declaration of nominations. 3. The Returning Officer shall, at 12 o'clock noon, on the nomination day read out in public at the court-house the names of the candidates and their nominators, and if there appear to be no greater number of candidates than the number of members of the council to be elected, the Returning Officer shall then and there declare the said candidates to be duly elected; but if a greater number of candidates appear, he shall declare that a poll shall be held on the day fixed as aforesaid for the election, and shall forthwith cause to be exposed and kept exposed until the election, in some conspicuous place at or near to the Court-house, a notice to that effect containing the names of the candidates and their nominators. Provided that no person declared elected shall hold office as member of the Council of Elders until the day fixed for the election.

Election to be by ballot. 4. Every election shall be by ballot, and the voting shall commence at 8 o'clock in the forenoon and shall close at 3 o'clock in the afternoon of the same day. The poll shall be held at such place as the Chief Magistrate may appoint, and the Returning Officer shall preside at the poll. The Returning Officer shall have the assistance of the police and of such persons as may be appointed by the Chief Magistrate in that behalf to carry out the details of the polling and to keep order within and at the approaches to the polling-places.

Compartments for voting. 5. At the polling-place there shall be a separate compartment or compartments into which none but electors preparing their ballot-papers shall enter during the poll under a penalty not exceeding £1.

Ballot-papers and ballot-box. 6. The Returning Officer shall provide himself with a sufficient number of ballot-papers in the Form B hereto, which he shall sign or initial on the back thereof before delivering to an elector. He shall also provide a ballot-box, the front of which shall be of glass, and on the top of which there shall be an opening sufficient to receive a ballot-paper folded. The box shall be locked and the key kept by the Returning Officer.

Poll-clerk. 7. The Chief Magistrate may, in his discretion, appoint any person to act as poll-clerk, who shall assist the Returning Officer in the conduct of the ballot.

Mode of voting. 8. Every elector qualified to vote at the election shall receive from the Returning Officer at the polling-place a ballot-paper signed or initialled as aforesaid, and may in a compartment aforesaid, without leaving the same, strike through the names on the ballot-paper of those persons for whom he does not intend to vote, and shall then fold up the ballot-paper so as to conceal the interior and disclose only the name or initials of the Returning Officer, and shall openly, in the presence of the Returning Officer, deposit the ballot-paper in the ballot box :
Provided

I have read with much interest the new laws and regulations, and I trust that they will work satisfactorily.

I approve of the proceedings reported in your despatch, and desire to express to you my thanks for the labour that you have undertaken in connection with the introduction of a system of better government for the Island, which will, I sincerely hope, lead to the general advancement and prosperity of its inhabitants.

I have, &c.,

J. CHAMBERLAIN.

No. 37.

Governor Viscount Hampden to Mr. Chamberlain.

(Received January 25, 1897.)

Sir,

Government House, Sydney, December 16, 1896.

I have the honor to transmit herewith, for your perusal, copies of two despatches that I have received from Colonel Spalding, the recently-appointed Chief Magistrate at Norfolk Island, each bearing date the 28th of November.

The contents of these communications show that the change in the laws and regulations of the Island has been satisfactorily effected, that the election to the Council of Elders has been efficiently conducted, and that a salutary effect has already been created by the conviction and punishment of offenders.

I have, &c.,

HAMPDEN.

[Enclosure 1 in No. 37.]

FROM THE CHIEF MAGISTRATE TO HIS EXCELLENCY THE GOVERNOR.

Subject :—Convictions for Larceny.

My Lord,

Norfolk Island, November 28, 1896.

I have the honor to inform your Excellency that there have been two convictions for larceny. In both cases the defendants elected to be summarily dealt with. The first case, *Rossiter v. S. F. Quintal*, stealing oranges from enclosed lands, came on for hearing on the 24th instant. The evidence for the prosecution was conclusive, and the defendant's witnesses only more clearly demonstrated the defendant's guilt.

The accused had been previously convicted of a similar offence in October, 1896, when he received the totally inadequate punishment of a few hours' work in the drains.

The Court sentenced the accused to two months' hard labour on the public roads, &c.

The second case, *Henry Everett v. Shark Quintal*, for stealing a saw from a room occupied by the plaintiff, about July last, was taken on the 25th instant. The evidence established the charge. The defendant declined to go into the witness-box. He had also been previously convicted of breaking and entering. Taking into consideration the defendant's age (under 18 years), the Court sentenced the accused to one month's hard labour on the public roads, &c.

Small Debts Court.

Two cases were heard, viz. :—

Eugene Coutois v. William Adams.

Do *v. Fish Adams.*

The plaintiff was successful in one case and partially so in the other.

Orders were made for the payments of the amounts determined on, the plaintiff concurring as to terms of payment at the rate of one shilling a week.

The Registrar of the Small Debts Court represents there are several other cases for hearing next week.

I have, &c.,

WARNER SPALDING,

Colonel and Chief Magistrate.

His Excellency the Governor of New South Wales and Norfolk Island, Sydney.

[Enclosure 2 in No. 37.]

FROM THE CHIEF MAGISTRATE TO HIS EXCELLENCY THE GOVERNOR.

Subject :—Election of Council of Elders.

My Lord,

Norfolk Island, November 28, 1896.

I have the honor to enclose, for your Excellency's perusal, the capable report of the Returning Officer (Mr. I. Robinson) of the result of the election of the first Council of Elders under the recently proclaimed laws.

The election was carried out in the most orderly manner. The arrangements made by the Returning Officer were good. Great interest was manifested in the results, and a very considerable gathering of Elders were present at the declaration of the poll; after which three hearty cheers were given for Her Majesty, and the meeting dispersed.

I propose to convene the first meeting of the council on the 2nd proximo.

I have, &c.,

WARNER SPALDING,

Colonel and Chief Magistrate.

His Excellency the Governor of New South Wales and Norfolk Island, Sydney.

Sir,

Sir,

Norfolk Island, November 27, 1896.

I have the honor to inform you that, in accordance with your instructions, the election of twelve members to form the first Council of Elders took place on Wednesday, the 25th instant.

There were twenty candidates nominated, the election being held in the Court-house on the day named, the polling-place being open from 8 a.m. to 3 p.m. Two scrutineers from outside were called in, Messrs. Gustav Quintal and Lindsay Buffett, who, in addition to Lieut. Spalding, the poll-clerk, and myself, checked the papers and the counting. With the exception of three informal ones, the papers were correct. At 5 p.m. the result of the voting was declared publicly, and the following gentlemen, named in the order of precedence, were declared duly elected:—

John Buffett, senr.
Stephen Christian.
Wm. Henry Arthur Quintal.
John Forrester Young.
Cornelius Quintal.
Geo. Rowland Sinclair Evans.

Oliver Masey Quintal.
Isaac Godfrey Christian.
Wm. Roswell Marsh Adams.
Henry Menges.
Byron S. M. Adams.
Stanley Fredk. McCoy.

It may be remarked that the election was a very complete one; with the exception of two, all the Elders on the roll that were able to vote did so, the exceptions being as follows:—Three disqualified through the residence clause (Revs. Robin, Wilson, and Captain Champion); seven sick (four Quintals, Bates, Suell, and Jackson); two absent from the Island (Wilfred Quintal and Rigger Adams); two debarred (Returning Officer and poll-clerk); there are 126 names registered—110 recorded their votes; 14 were debarred as above stated, leaving two who did not vote (H. Everett and A. C. Miller).

I enclose three returns—"A," "B," and "C."

Return "A." Members returned and votes.
" "B." Candidates and votes.
" "C." Summary of roll.

Also an electoral roll marked off.

I have, &c.,

ISAAC ROBINSON,
Returning Officer.

Colonel Spalding, C.M.G., Chief Magistrate.

No. 38.

Mr. Chamberlain to Governor Viscount Hampden.

My Lord.

Downing-street, January 27, 1897.

I duly received your despatch of the 16th October,* enclosing a memorandum to the Premier of New South Wales relative to the proposed transfer of the administration of Norfolk Island, and I have now the honour to transmit to you an Order of Her Majesty in Council, dated the 15th instant, which was passed for the purpose at the last meeting of the Council, and which will, I trust, meet the wishes of your Government, and prove sufficient for all present purposes.

2. I had previously consulted the Law Officers of the Crown as to the measures which would be required in order to effect a complete annexation of Norfolk Island to the Colony of New South Wales, and whether this object could be effected by Order in Council under the Act 18 and 19 Victoria, chapter 56. I am advised that, in their opinion, the Island cannot be annexed to the Colony by Order in Council, and that the statute contemplates that Norfolk Island should remain a Crown Colony, governed under the directions of the Queen in Council, not that it should be annexed to another Colony. They thought, further, that the object in view should be effected by Acts of the Imperial Legislature and of the Legislature of New South Wales.

3. As there is no immediate intention of carrying out such annexation, there is no occasion at present to consider the form with such legislation should take; but if your Ministers should wish to make any observations upon the subject, I shall be ready to give them full consideration.

You will observe that the last paragraph of the Order in Council gives you full power to bring it into operation at whatever date may be found most convenient; but I anticipate that you would not interpose much delay before bringing it into effect.

I have, &c.

J. CHAMBERLAIN.

[Enclosure in No. 38.]

At the Court at Osborne House, Isle of Wight, the 15th day of January, 1897.

Present: The Queen's Most Excellent Majesty, Lord President, Lord Arthur Hill, Lord Balfour of Burleigh.

WHEREAS by the Australian Waste Lands Act, 1855 (18 and 19 Viet, cap. 56), it is among other things provided that it shall be lawful for Her Majesty at any time by Order in Council to make such provision for the Government of Norfolk Island as may seem expedient.

And whereas by an Order of Her Majesty in Council dated the 24th of June, 1856, it was amongst other things ordered that Norfolk Island should be a distinct and separate settlement, the affairs of which, until further order is made in that behalf by Her Majesty, should be administered by a Governor to be appointed by Her Majesty with the advice and consent of Her Privy Council. And it was thereby further ordered that the Governor and Commander-in-Chief for the time being in and over the Colony of New South Wales should be, and he was thereby, constituted Governor of Norfolk Island with the powers and authorities in the said Order mentioned.

And

And whereas it is expedient that other provision should be made for the Government of Norfolk Island, and that, in prospect of the future annexation of that Island to the Colony of New South Wales, or to any Federal body of which that Colony may hereafter form part, in the meantime the affairs of the Island should be administered by the Governor of New South Wales as herein provided.

Now, therefore, Her Majesty, by virtue and in exercise of the power in this behalf by the Australian Waste Lands Act, 1855, or otherwise in Her Majesty vested, is pleased, by and with the advice of Her Privy Council, to order, and it is hereby ordered as follows:—

1. The affairs of Norfolk Island shall henceforth, and until further order is made in that behalf by Her Majesty, be administered by the Governor and Commander-in-Chief for the time being of the Colony of New South Wales and its Dependencies. The said Governor and Commander-in-Chief is hereinafter called the Governor, and the title the Governor shall include the Officer for the time being administering the Government of New South Wales.
2. The Governor shall keep and use the public Seal of Norfolk Island for sealing all things that shall pass the said Seal.
3. The Governor may constitute and appoint all necessary Judges, Justices of the Peace, and other public officers for the said Island.
4. The Governor may, by proclamation published in the *New South Wales Government Gazette*, make laws for the peace, order, and good government of Norfolk Island, subject nevertheless to any instructions that may be given to him by Her Majesty under her sign manual and signet, or through one of Her Principal Secretaries of State.
5. The Governor may make grants or other dispositions of any lands within the said Island which may be lawfully granted or disposed of by Her Majesty.
6. All laws, ordinances, and regulations in force in Norfolk Island at the time when this Order takes effect shall continue in force until repealed or altered by competent authority.
7. The said Order of the 24th day of June, 1856, is hereby revoked, but without prejudice to anything lawfully done thereunder.
8. This Order shall be published by the Governor in the *New South Wales Government Gazette* at such time as the Governor may think fit, and shall take effect at the date of such publication, or at such later date as the Governor shall declare by notice in the said *Gazette*.

C. L. PEEL.

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

DISTRIBUTION OF BLANKETS BY THE GOVERNMENT.
(RETURN RESPECTING.)

Printed under No. 17 Report from Printing Committee, 26 August, 1897.

[Laid upon the Table of this House in accordance with promise made in answer to Question No. 12 of 24th August, 1897.]

(12.) Distribution of Blankets by the Government :—Mr. Schey asked the Colonial Secretary,—

- “ (1.) How many pairs of blankets have been distributed by the Government to charitable bodies, missions, Members of Parliament, and otherwise, since 1st January of this year ?
“ (2.) How many of such blankets were manufactured in New South Wales ?
“ (3.) How many of such blankets were procured from the firm of McArthur & Co. ?
“ (4.) What price per pair was paid for those manufactured in New South Wales.
“ (5.) What price per pair was paid for those procured from Messrs. McArthur & Co. ?”

Mr. Bruncker answered,—I will presently lay upon the Table a return giving the desired information.

Question (1).—Total quantity issued from 1st January, 1897,—10,161 pairs ; distributed as follows :—

Charitable Bodies	...	...	...	...	...	...	...	...	Pairs. 3,253
Missions	...	...	...	...	...	...	...	...	60
Members of Parliament	...	...	...	...	...	...	...	...	15
Government Institutions	...	...	...	...	...	...	...	...	6,833
Total pairs									10,161

Question (2).—3,958 pairs.

Question (3).—450 pairs.

Question (4).—(16s. 10d.) Sixteen shillings and tenpence per pair.

Question (5).—(10s.) Ten shillings per pair.

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

MOLONG MARBLE.
(CORRESPONDENCE RESPECTING.)

Printed under No. 11 Report from Printing Committee, 15 July, 1897.

RETURN to an *Order* of the Honorable the Legislative Assembly of New South Wales, dated the 1st July, 1897, That there be laid upon the Table of this House,—

“All papers, correspondence, and reports made by Mr. Roberts, an Inspector of Public Works, in reference to the quality of the Molong marble in the construction of Public Works undertaken by the Government.”

(*Dr. Ross.*)

SCHEDULE.

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1.	Wm. McMullen to the Minister for Public Works. Letter (with enclosure), 25th April, 1897, and minutes thereon	1
2.	W. Roberts, Clerk of Works, to the Government Architect. Report, 13th May, 1897	2
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No. 1.

W. McMullen, Esq., to The Secretary for Public Works.

Hon. Sir,

Molong, 25 April, 1897.

My object for addressing you is this: Learning that it was the intention of the present Government to erect new Parliamentary buildings at a cost of half a million of money, and also that it is your intention that all marble used in the erection of the new buildings must be Colonial marble, I take this opportunity of drawing your attention to the quality and inexhaustible supply that can be obtained in Molong. I visited the metropolis during last week, but was unable to obtain an interview with you in consequence of pressure of business. My object was to interview you personally, and to produce to you samples of the Molong marble for your inspection. I am informed that the Molong marble is equal to the best obtainable in any part of the world, and samples of which, I am informed, can be seen at the Museum at Sydney. Should you, sir, do me the honor of sending an officer to inspect the Molong marble, I will be only too happy to give the gentleman all the information that lies in my power, and also produce to him a block of Molong marble, about 12 cwt., which I have had dressed and polished at my own expense, and I will venture to say that its equal is not to be found in the Colony of imported marble. Trusting, sir, that you will be good enough to grant my request, and send an officer to report on the Molong marble.

I am, &c.,

WILLIAM McMULLEN.

P.S.—I have enclosed a clipping from the local paper for your perusal, sir.—W. McM.

MOLONG MARBLE.

If sceptical or inquisitive persons are anxious to know what the district of Molong can produce it will do their eyes good to call any day at the residence of Mr. Wm. McMullen, West End, and there they will see a sample or block of splendid marble, about 1 ton in weight, cut, dressed, polished, and beautifully engraved. The stone is to be found in abundance in the very heart of Molong, and can be landed in Sydney polished and lettered about as cheap as freestone gravestones. The stonemason or cutter now at work at West End is an artist of first-class order, and the design (a base stone) is nicely morticed to receive a head stone, and is without doubt a splendid piece of workmanship. He says, and we quite agree with him, that the Molong marble defies comparison in the Colony. Yet here it lies in abundant profusion, only awaiting the advent of capital to prove its worth. A gold reef is as nothing compared to our marble deposits, which it would be almost impossible to work out. A feature of our marble is that it requires no painting, the lettering when cut showing out with striking distinctness on its polished surface. For gravestones it is specially adapted, and in this line it would only require to be known and inspected to become a valuable and future industry of the Colony. The quality and rich high polish of the stone is well worthy of inspection, and we commend it to the notice of the public. We understand that efforts are being made to introduce capital in connection with this industry, and should the gentlemen concerned be successful in attracting the attention of capitalists, well there's a big future ahead for the Molong district. *Nous verrons.*

Mr. Vernon.—Jno. P., for U.S., 27/4/97. Mr. Roberts for report.—L.R., for Gov. Arch, 5/5/97. Report herewith.—Wm. R., 13/5/97. Mr. Robert's submitted. The sample referred to in McMullen's letter is a fine one, and the marble in the district is of good quality, but at present no further supply is necessary.—L.R., P.A.A., 14/5/97. The U.S. Works. In the event of a further supply being required Mr. McMullen's marble appears to be suitable. He might be informed that at present none is required.—J.D., 15/5/97. Under Secretary. Submitted for approval to do so.—R.H., 18/5/97. Under Secretary for Public Works and Commissioner for Roads. Approved.—J.H.Y., 18/5/97. Inform.—18/5/97. Mr. W. McMullen, 20/5/97.

No. 2.

The Clerk of Works, Bathurst, to The Government Architect.

Molong Marble.

Department of Public Works,

Government Architect's Branch, 13 May, 1897.

Sir,

Respecting Mr. McMullen's letter herewith relative to the above marble.

The special piece referred to in his letter I have inspected, and have to inform you that it is a very fine block about 1 ton, sound and neatly prepared and polished.

The marble generally in this district is of excellent grain and figure.

At present I cannot recommend any expenditure, but in the near future something may be done in the matter when the steam marble-plant is set going at the Bathurst Gaol, the steam-engine now only being required.

I have, &c.,

W. ROBERTS,

C. of W.

No. 3.

The Under Secretary for Public Works to W. McMullen, Esq.

Sir,

Department of Public Works, Sydney, 20 May, 1897.

In reply to your letter of the 25th ultimo in regard to supplying Molong marble for the erection of new public buildings, &c., I have the honor to inform you that this Department does not at present require any marble.

I have, &c.,

R. H. HICKSON,

Under Secretary and Commissioner for Roads,

(per Jno. P.)

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

OLD-AGE PENSIONS.

(PETITION FROM J. D. LANGLEY, RURAL DEAN, CHAPTER OF WEST SYDNEY, IN FAVOUR OF A BILL,
THAT, UNDER PROPER SAFEGUARDS, MAY PROVIDE STATE PENSIONS FOR THE AGED.)

Received by the Legislative Assembly, 6 October, 1897.

To the Honorable the Speaker and the Honorable the Members of the Legislative Assembly of New
South Wales in Parliament assembled.

The humble Petition of the Rural Deconal Chapter of West Sydney,—

SHOWETH:—

That as severe distress and much suffering frequently fall, because of poverty, upon persons who are old, and often through no fault of their own, the Chapter prays for the speedy passing of a law that, under proper safeguards, may provide State pensions for the aged.

And your Petitioner therefore humbly prays that your Honorable House will take the premises into favourable consideration, and grant such relief as may seem best to your Honorable House.

And your Petitioner, as in duty bound, will ever pray.

J. D. LANGLEY,
Rural Dean.

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

BIRDS PROTECTION ACT.

(PETITION FROM LANDOWNERS IN THE TARALGA DISTRICT, PRAYING FOR AN AMENDMENT OF.)

Received by the Legislative Assembly, 18 November, 1897.

To the Honorable the Speaker and Members of the Legislative Assembly of New South Wales, in
Parliament assembled.

The Petition of the undersigned landholders in the Taralga District,—

RESPECTFULLY SHOWETH :—

That the protection of the magpie has been conducive to a serious loss on the part of the
agriculturists.

That the said bird is very destructive to the young wheat crops, and should, at an early date, be
removed from the list of protected birds.

Your Petitioners therefore humbly pray that your Honorable House will be pleased to amend the
Birds Protection Act so that the magpie may not any longer be protected thereunder.

And your Petitioners, in duty bound, will ever pray.

[Here follow 80 signatures.]

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

CLAIM OF CAPTAIN ROSSI.

(PETITION FROM CAPTAIN COMTE DE ROSSI PRAYING TO BE HEARD BY COUNSEL AT THE BAR OF THE HOUSE.)

Received by the Legislative Assembly, 23 November, 1897.

To the Honorable the Speaker and to the Honorable the Members of the Legislative Assembly of New South Wales, in Parliament assembled.

The humble Petition of Francis Robert Lewis Captain Comte de Rossi, of Rossiville, Goulburn,—

HUMBLY SHOWETH:—

That in July, 1896, a Select Committee of your Honorable House was appointed to report upon your Petitioner's claim against the Government of this Colony.

That Committee sat and fully investigated such claim, finding in favour of your Petitioner, and recommended his case to the favourable consideration of the Government.

That, notwithstanding the most strenuous exertions on the part of your Petitioner to obtain the sanction of your Honorable House to the adoption of such finding, no progress has so far been achieved, the claim thus lying in abeyance.

That your Petitioner humbly prays that your Honorable House, in consideration of the premises, will grant that he may be heard by Counsel at the Bar of your Honorable House in relation to such claim.

And your Petitioner, as in duty bound, will ever pray.

DE ROSSI,
Captain Comte.

1897.

LEGISLATIVE ASSEMBLY.

NEW SOUTH WALES.

THE REVEREND JAMES CLARKE.

(PETITION FROM, PRAYING TO BE HEARD AT THE BAR OF THE HOUSE, OR FOR THE APPOINTMENT OF A SELECT COMMITTEE TO INQUIRE INTO CASE.)

Received by the Legislative Assembly, 24 November, 1897.

To the Honorable the Speaker and Members of the Legislative Assembly of New South Wales, in Parliament assembled.

The humble Petition of James Clarke, Clerk in Holy Orders, of the parish of Saint George, Kogarah, in the county of Cumberland, in the Colony of New South Wales,—

MOST FAITHFULLY SHOWETH :—

That on Sunday, the 21st of October, 1894, whilst your Petitioner was conducting Divine service, his lawful wife was forcibly abducted from Saint George's Vicarage, Kogarah, the house being broken and entered with the knowledge of the local police, who never interfered. On October the 22nd, the following day, your Petitioner, whilst seeking to recover his lawful wife and establish his legal rights, was violently and unlawfully arrested and detained at the Newtown Police Court, kept all day without food, removed to the Central Court at 4 p.m., and on the hearsay of his mother-in-law, who instituted the before-recited outrage, committed to the Reception House for the Insane, Darlinghurst. Your Petitioner in the Court asked for counsel, but his request was ignored. That the said Newtown police assaulted, overpowered, and searched your Petitioner, appropriated his keys, moneys, and belongings, took and gave possession of Saint George's Vicarage to your Petitioner's wife, who was domiciled therein after her abduction.

On the 23rd October your Petitioner was removed to Callan Park Asylum, and there further imprisoned and detained until, after communicating with and being interviewed by Dr. Manning, he was released on the 10th November, 1894. During your Petitioner's imprisonment nobody was allowed to see him. Reaching home on November 10th, your Petitioner discovered that all the money in his desk had been stolen, and likewise other goods and valuables, and found the house shut up, with nobody in charge.

Your Petitioner, being denied all communication with his lawful wife, shortly after his release endeavoured to regain possession of her as an abducted minor, and applied early in December to the Supreme Court for a writ of *habeas corpus*. A rule *nisi* was made by the Chief Justice, on December 19th, 1894; this rule was discharged by another Judge, December 29th, 1894; an appeal—deferred in hearing—was dismissed with costs against your Petitioner, 12th February, 1895.

Divorce proceedings were instituted against your Petitioner; and on February 20th, 21st, and 22nd, 1895, your Petitioner was assaulted, searched, and imprisoned in the Court three successive days, whereby he suffered in mind and body, was injured in his credit, and greatly prejudiced in the conduct of his case. On the afternoon of February 22nd, 1895, at the conclusion of the divorce suit, your Petitioner was arrested without warrant or charge, in King-street—immediately on leaving the Supreme Court—taken to the Central Police Court, and thence to the Reception House for the Insane, Darlinghurst, and there imprisoned until the 1st day of March, 1895. For these outrages against law and liberty your Petitioner got no redress, being imprisoned for eight days, and being unable to find the names of his assailants in time to take even a tort action for these great wrongs against the free rights and privileges of the subject. Your Petitioner after release sought refuge for a few days at Stanmore, amongst old friends with children, and on Sunday, March 4th, the local police forced an entrance after dark into St. George's Vicarage during his absence.

These various proceedings, having broken up your Petitioner's credit, drove him into insolvency, May 3rd, 1895. On May 27th, 1895, your Petitioner desired the Attorney-General to intervene before the divorce was made absolute, and placed before him grounds on which he might be justified—namely, perjury, uncorroborated testimony, wife a minor with no legal guardian appointed to proceed for the suit. Notwithstanding, the decree was made absolute, 29th May, 1895. Your Petitioner appealed on June 6th, 1895, within the time specified by law. On July 31st, 1895, your Petitioner's appeal was dismissed with costs unheard, because he could not give security for costs through insolvency; and a subsequent Petition for leave to appeal to the Privy Council in *forma pauperis*, August 3rd, 1895, was refused on the same ground,

August 9th, 1895. Consequently your Petitioner was denied that just, wise, and merciful provision of the law which gives every man the right to seek justice though poor. This failure to get the appeal heard moved the Ecclesiastical Authorities against your Petitioner, and on November 15th, 1895, your Petitioner was assaulted, searched, and imprisoned in the Supreme Court while defending himself from the arbitrary withdrawal of his license. For this your Petitioner gave notice of action in December, 1895, and on the 9th day of September, 1896, recovered a verdict for £100. The assault was admitted by payment into Court of 40s. On September 27th, 1896, before judgment was signed, the verdict (not being a debt) was ordered to be sequestrated for the alleged costs of a minor in divorce, who could not legally incur costs.

Your Petitioner complains that a verdict should be sequestrated—a thing unknown to British law—a verdict moreover involving damages granted by a special jury for a personal wrong acknowledged to have been committed by the administrators of law against the right and liberty of the subject.

Judgment was signed on the 23rd October, 1896. Your Petitioner took every right precaution to obtain justice—serving the Crown Solicitor with a notice not to pay, and the sequestrator not to receive—applying to the Bankruptcy Court to secure and protect your Petitioner according to statute law. Your Petitioner complains that this sequestrator's appointment was, and is, contrary to law, whether the Bankruptcy Acts or the Common Law Procedure Act: divorce costs, if owing, are a debt provable in bankruptcy. Those alleged were not so proved, and this sequestrator's appointment was equivalent to making a preferential creditor of one who could have proved in the first assignment, giving him the whole of the assets in the second enforced insolvency to the injury of every other creditor, the first insolvency being still unsatisfied—a state of things never contemplated by the Legislature—creating two Official Assignees at one and the same moment, and declaring that the second shall intercept and take into possession damages for a personal wrong, reserved by statute to the injured man, which the law expressly declares no Official Assignee whatsoever shall have any power over damages which can neither be intercepted before reaching, nor taken away after they have reached the hands of the wronged and suffering. This has been so from time immemorial in English law. Never in the whole course of the administration of justice, either in this or any other part of the British dominions, has an order been made intercepting the damages for a personal wrong done to an uncertificated bankrupt.

The unprecedented legal difficulty of the position was felt on all hands, and the Crown Solicitor having first sought your Petitioner's consent on December 6th, 1896, for paying the moneys into Court (which your Petitioner promptly refused), at length, after nearly half a year's delay, only handed the money to the sequestrator—£98, purporting to be the verdict—on February 25th, 1897, having first received from the said sequestrator a bond of indemnity in the sum of £300. The sequestrator paid the sum of £98 into the Divorce Jurisdiction of the Supreme Court, and after some complicated litigation between Bankruptcy and Divorce, His Honor the Chief Justice in Divorce, on March 23rd, 1897, dismissed the application for having the money paid out of Court for a minor's costs. On May 5th, 1897, the Full Court reversed this decision. Your Petitioner applied, on May 7th, 1897, to the Chamber Judge to appoint some person, other than the Sheriff, to whom a writ of *feri facias* should be directed in order to satisfy your Petitioner's due judgment. Your Petitioner was referred to another Judge, which caused delay. On May 13th, 1897, the sequestrator entered what is known as a satisfaction piece on the Judgment Roll. Your Petitioner, on May 11th, 1897, applied to the Common Law Jurisdiction of the Supreme Court as being an unsatisfied judgment creditor (with a due judgment). Decision was reserved. On May 17th, 1897, His Honor, Mr. G. B. Simpson, nominated and appointed, by order, at your Petitioner's suggestion, the Coroner of the City of Sydney, as the person to whom the writ of *feri facias* for the amount of your Petitioner's due judgment should be directed. On 17th May, 1897, the same day, your Petitioner lodged the writ in the Coroner's hands for execution.

On May 19th, 1897, some messenger attempted to serve your Petitioner with some process in the precincts of the Supreme Court. Your Petitioner both called at the Crown Law Offices, saw personally, and wrote to the Crown Solicitor on the subject.

Your Petitioner found, some time after, that the Crown Solicitor had the writ of *feri facias* set aside on the alleged ground of misdirection, on May 28th, 1897, though the writ was, in fact, addressed to the Sheriff's lawful deputy.

Your Petitioner complains that the law has been broken; that substantial justice has been denied to him, though cruel injuries have been done; and, feeling deeply aggrieved, he seeks redress for his legal rights, which have been invaded; for his privileges as a free-born subject, which have been trampled under foot—contrary to natural justice, contrary to the law of the land, contrary to the right of the subject secured by law, against the verdict of the jury and the plain facts of the case.

And your Petitioner, in this great cause—the cause of law, justice, and personal liberty—earnestly and humbly prays before the Most High God, in whose heart law has her home, and whose throne is the habitation of justice, that this Honorable House will be pleased to take the foregoing premises into full and right consideration, and to grant a fair measure of just relief, either by hearing your Petitioner before the Bar of this Honourable House, or by the appointment of a Select Committee to inquire into the true merits of this Petition, or as this Honorable House shall otherwise deem meet.

And your Petitioner, as in duty bound, will ever pray.

Kogarah, 20th November, 1897.

JAMES CLARKE.

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

WILLIAM MALLET, BOTANY.

(PETITION FROM, PRAYING THE HOUSE TO CANCEL A DEED OF TRANSFER OBTAINED FROM HIM BY FRAUD.)

Received by the Legislative Assembly, 2 December, 1897.

To the Honorable the Speaker and Members of the Legislative Assembly of New South Wales assembled.

The Petition of the undersigned, William Mallett, of Botany-road, Botany,—;

HUMBLY SHOWETH:—

That, in the year 1889, I was the holder of the fee-simple of a parcel of land and tenements thereon.

At the time I owed no person any moneys, and no person had any claim against me.

I wrote a will—the form of which I copied from a book,—in which I left my property to one Arthur Orr. I then sent for him, as I wished to tell him how things stood. He came with a man whom I never saw in my life before. They asked me what I wanted; I said to witness, “My will.” The man picked the will up, and said I wanted another witness. I sent my wife for John Bunce. He came, and asked me what I wanted him for. I told him to witness my will. He did so.

Three years afterwards I was offered £1,000 for the property. I decided to accept the offer. I asked Orr for the papers, as he had taken them away. He told me to meet him in Sydney, and he would give them to me. He took me to the office of Thomas K. Leeder, who turned out to be the man he brought to my place to witness the will. When in the office I heard them talking apart from me. I then said, “There is something crooked.” Mr. Leeder then ordered me out of the office. I went home, and told one of my neighbours, a Mr. Salmon, what had happened. He lent me money to pay Mr. Clayton, solicitor, who, upon investigation, found out that a transfer of the property had been effected instead of the will prepared by me.

Owing to the want of means I could not go to law. Eventually I placed the matter in the hands of Mr. R. W. Reid, who took my sworn statement, and J. Bunce's statement that nothing was read in his presence, and that he was asked to witness a will. Mr. Reid placed the matter in the hands of the Honorable the Attorney-General, who caused Detective Hines to investigate the matter. He obtained another sworn statement made by J. Bunce of the same effect as the previous one, thus clearly proving that I intended to will my property, not to transfer it.

The Honorable the Attorney-General having failed to give me any relief in the matter, I was placed in the hands of His Honor Judge Manning, who, on reading J. Bunce's affidavit, assigned me counsel and solicitor to proceed in equity in *pro forma pauperis*.

At the trial J. Bunce gave evidence contrary to the three sworn affidavits. This took my counsel by surprise, and, as at the time we were not prepared to rebut it, His Honor, in the face of the false evidence, gave the verdict against me.

Not having the means to appeal, I have been robbed of my means of subsistence.

I now solemnly declare that T. K. Leeder and A. Orr committed wilful perjury at the said trial.

As these persons have conspired to rob me of my property and stolen the deeds, I humbly pray that your Honorable House will take steps to cancel the deed of transfer which was obtained from me by fraud, otherwise myself and wife, who are now advanced in years, must seek relief in an asylum.

And your Petitioner, as in duty bound, will ever pray.

2nd December, 1897.

WILLIAM MALLET.

1897.

—
 LEGISLATIVE ASSEMBLY.
 NEW SOUTH WALES.

REPORT

OF THE

PROCEEDINGS OF A CONFERENCE

RESPECTING THE

RABBIT PEST IN NEW SOUTH WALES,

COMMENCED AT THE CHAMBER OF COMMERCE, SYDNEY,

ON TUESDAY, MARCH 9TH, 1897,

In response to invitations issued at the direction of the Hon. J. H. Carruthers,
 Minister for Lands.

Printed under No. 2 Report from Printing Committee, 6 May, 1897.



SYDNEY: WILLIAM APPLIGATE GULLICK, GOVERNMENT PRINTER.

1897.

THE RABBIT CONFERENCE,

HELD MARCH 9TH, 10TH, 11TH, 12TH, 13TH, 15TH, AND 17TH, 1897.

Report of Proceedings, for presentation to the Honorable J. H. Carruthers,
Minister for Lands.

THE proceedings were opened by the Minister, who had invited representatives from the different Stock and Pasture Boards, Selectors' Associations, and Farmers' Unions in the country, as well as from the leading Agency Firms of Sydney, to take part in the deliberations for the purpose of discussing the provisions of the Rabbit Destruction Bill, with a view to making fresh recommendations on which to base an amended Bill.

Mr. Allen Lakeman was unanimously elected Chairman of the Conference, in which the following gentlemen took part :—

A. Lakeman, Hay.	A. H. M'Collough, Deniliquin.
Alfred Brown, Narrabri.	E. A. Stinson, Coolamon.
A. Cudmore, Wentworth.	P. R. Brett, Urana.
John Dill, Hay.	J. J. Baylis, Narrandera.
F. W. Bacon, Brewarrina.	C. J. Bolton, Wagga.
Philip Oakden, Cobar.	G. C. Little, Bullock Creek, N.
J. Wilkes, Broken Hill.	T. Brown, M.L.A., Budgerabong.
J. W. Brougham, Mcindie.	T. Looney, Bullock Creek, S.
A. Laurence, Balranald.	R. H. Maund, O'Connell.
T. S. Pearce, Orange.	R. H. Kirkpatrick, Nyngan.
T. C. Worboys, Orange.	John Ward, Nyngan.
R. T. B. Gaden, Dubbo.	G. Davidson, Condobolin.
T. Leslie, Forbes.	E. Locke, Macquarie.
A. Anderson, Corowa.	J. R. Varcoe, Hillston.
W. T. Lawry, at invitation of Minister.	A. Cumming, Hillston.
J. Hayes, M.L.A., Deniliquin.	S. Nixon, Gunbar.
H. C. Taylor, Lands Department.	P. J. Gorman, Berrigan.
W. H. Armstrong, Canonbar.	J. R. Cook, Beringerry.
J. R. Black, Warialda.	W. R. Moore, Goodooga.
C. Fetherstonhaugh, Coonabarabran.	T. H. Hassall, M.L.A., Moree.
J. H. Davies, Gunnedah.	Honorable R. Carington, Jerilderie.
J. M. Atkinson, at invitation of Minister.	A. T. Brooke, Boggabri.
W. Alison, Canonbar.	John M'Aneney, Trundle.
R. Gibson, Hay.	Charles Hebden, Wanaaring.
A. L. P. Cameron, Ivanhoe.	J. Stephenson, at invitation of Minister.
J. Flanagan, Gunbar.	W. Vanston, Goodooga.
F. A. Oatley, at the invitation of Minister.	A. Ross, Hume.
E. Hayes, do.	J. Trefle, Temora.
G. G. Freeman, do.	J. M'Grath, Mossgiel.
— Sides, Hay.	

The Conference proceeded to discuss the subject for which they had assembled.

The result of the deliberations of the Conference was the adoption of the following resolutions :—

Clause 1, as printed, passed.

The

The Preamble and Clause 2 postponed.

Clause 3 was struck out.

Clause 4.

That clause 4 up to "Minister," line 19, should stand.

That the following be an addition to subsection (a) :—"That all municipalities, towns, and villages shall be declared separate districts, and shall not be attached to sheep districts, even if adjoining, or within the boundaries of, "Sheep Districts," unless with the consent of the Pastures and Stock Protection Boards."

That the following be added to subsection (b) :—"But no Sheep District shall be amalgamated with any other district, or subdivided, without the consent of a majority of the voters."

In line 13 after "be" the following be inserted "declared rabbit infested."

Clause 5.

That clause 5 be struck out, and the following clause inserted in its place :—

"That the Pastures and Stock Protection Boards be the Rabbit Boards for the district—*i.e.*, that the working of the Act be placed in the hands of the Pastures and Stock Protection Boards. That taxation under the Rabbit Act shall not be levied on holders not having a right of representation under the franchise of the Stock and Pastures Protection Acts."

That for the purposes of this Bill the constitution of the Stock and Pasture Boards be altered so as to provide for—(1) The appointment of a member by the Governor; (2) That three members be elected under the Stock and Pastures Protection Act as at present provided, with a minimum voting power of 10 (ten) head of large stock; and (3) That five members be elected under the Diseases in Sheep Act as at present provided, with a minimum voting power of 250 head of sheep.

That, where the returns which are sent in are below the minimum, occupiers of cultivated lands shall have the right to vote for the constitution of the Stock and Pasture Boards, such voting power to be proportionate to the number of sheep at which their lands are assessed, the minimum number of sheep qualifying for a vote to be 250.

And that as the Government have the right to nominate a member to the Board, they shall not have any voting power for the other members.

That the franchise for the Pastures and Stock Protection Boards be on the following basis;—

250 to 3,000 sheep	to have	1 vote.
3,000 "	10,000 "	" 2 votes.
10,000 "	20,000 "	" 3 "
20,000 "	30,000 "	" 4 "
30,000 "	40,000 "	" 5 "
40,000 "	50,000 "	" 6 "
50,000 "	60,000 "	" 7 "
60,000 and over	" "	" 8 "

A Rabbit Board shall, within such time as may be prescribed, appoint one of its members to be Chairman thereof, and if such Board shall fail to appoint a Chairman the Governor may appoint one of such members to be the Chairman of such Board; and the Chairman and other members shall be entitled to receive, out of the revenues of the Board, such fees as may be prescribed.

Clauses 6 and 7 were struck out.

Clause 8.

That the following words be substituted for the first paragraph:—"The Stock and Pastures Protection Boards shall be constituted corporate bodies and under such style and title shall have perpetual succession and a common seal, and be capable of suing and being sued."

That the word "eight" be substituted for "five," line 21.

That after the word "proclamation," line 24, the following words be inserted, "at the request of the Boards or on the requisition of two-thirds of the voting power."

That after the word "Board," line 28, the following words be inserted, "elected in accordance with the provisions of the Act."

That the words "Pastures and Stock Protection Board" be substituted for the words "Rabbit Board" throughout the Act, wherever consequentially necessary.

Clause 9.

That following words be added to subsection (a) :—"All officers appointed to be under the direct control of, and hold office during the pleasure of, the said Boards."

Clauses 10 and 11 were carried.

Clause 12.

That the word "stock" be substituted for "private holdings" in line 29.

That in line 32 the words "Stock returns under the Pastures and Stock Protection Act" be substituted for "respective carrying capacity of holdings and to that end."

That all words after "year," line 35, to end of subsection (r), be struck out and the following inserted in their place: "Public lands shall be taxed on the basis of one sheep to ten acres."

That in cultivated lands the taxation shall be on the basis of one sheep to five acres where no returns have been made under the Pastures and Stock Protection Act.

That subsection (11) be struck out.

That after "enclosed," line 50, "or which may in future be enclosed" be inserted.

That

That "(e)" and "(f)" of subsection (iii) and subsections (iv) and (v) be struck out.

That all owners and lessees who may make no returns, or who shall make what, in the opinion of the Boards, are misleading and inadequate returns, may be summoned before the Boards, and the Boards shall have power to rate or increase their returns, at a rate not exceeding one sheep to one acre, with a right of appeal to the Court of Petty Sessions.

Clauses 13, 14, 15, and 16 were carried.

Clause 17.

That "Court of Petty Sessions" be substituted for "Local Land Board" in lines 37 and 38. Clause, as amended, carried.

Clause 18.

That "a Court of Petty Sessions" be substituted for "two Justices" in line 19. Clause, as amended, carried.

Clause 19 was struck out.

Clause 20.

From the beginning of the clause to "mentioned" in line 29 was carried.

That "Pastures and Stock Protection Board" be substituted for "Local Land Board," lines 33 and 34.

That "private" in line 36 be struck out. Clause, as amended, carried.

Clause 21 was carried.

Clause 22 was struck out.

Clause 23.

That from "Local," line 2, page 10, to the end of the clause be omitted, and "Court of Petty Sessions" inserted.

Clause, as amended, carried.

Clause 24.

That after "shall," line 16, "if the two Rabbit Boards fail to agree" be inserted. Clause 24, as amended, carried.

Clause 25 was struck out.

Clause 26.

That the following be a new clause in place of clause 26:—

"That the Minister be empowered to purchase wire-netting and other materials necessary for the construction of rabbit-proof fences; also any machinery, plant, or substance required in the destruction of rabbits; and may contract to sell or let same to Rabbit Boards or private holders upon the following terms:—

- (a) That repayment of principal, together with interest, be on a similar basis as provided for the payment of principal and interest on conditionally purchased lands.
- (b) The value of the netting thus provided be secured to the Minister by a first mortgage on the land so protected.
- (c) The netting to be erected within twelve months after delivery has been taken.
- (d) The Minister to have discretionary powers as to how such advances are to be made.
- (e) The letting of any machinery, &c., to be a matter of agreement between the Minister and parties interested."

Clauses 27 and 28 were carried.

Clause 29.

That "two" be inserted before "months" in line 9.

That "private," line 11, be omitted.

That from "but," line 20, to "Gazette," line 22, be omitted.

That "private," line 24, be omitted.

That after "forthwith," in line 25, "use such efforts as may be deemed sufficient by the Board to" be inserted.

That "all," line 25, be omitted.

Clause 29, as amended, carried.

Clause 30.

That "or" in line 30 be omitted and "and" inserted.

That subsection (a) be struck out.

Clause 30, as amended, was carried.

Clause

Clause 31.

That the word "private," in line 3, be struck out.
That after the word "owner," line 4, the words "or occupier" be inserted.
Clause 31, as amended, was passed.

Clause 32.

That the word "all," line 11, be struck out.
That the last paragraph, comprising all the words from line 20, be struck out.
That for the purpose of this Act the Minister for Lands for the time being be deemed the owner of all unoccupied Crown Lands.

Clause 33.

That the words "one and a half inches" in line 33 be struck out and the following inserted, "one and a quarter inches for the lower eighteen inches, and the other two feet should be one and five eighths inches mesh."

That in line 11, page 14, the words "Court of Petty Sessions" be substituted for "Local Land Board."

Clause 34.

That after "thereof" in line 21 the following words be inserted, "or where boundaries are inaccessible or unfenceable, as near as possible to the boundaries thereof, having due regard to the natural formation of the country."

Clause 34, as amended, was carried.

Clauses 35, 36, 37, and 38 were carried as printed.

Clauses 39 and 40 as printed were passed.

Clause 41.

That subsections (a) and (b) be struck out and the following inserted:—

- (a) A private rabbit-proof fence forms a common boundary fence between private and public lands whether erected before or after the passing of this Act, and
- (b) Particulars of the said fence shall be furnished to the Minister.

That the whole of sub-section (c), be struck out.

Clause 41, as amended, was passed.

Clauses 42, 43, and 44, as printed, were carried.

Clause 45.

That the words "private" and "all" in lines 14 and 15 be struck out.

That after the word "cost" in line 15, the following be added, "and to the satisfaction of the Board."

That after the word "thereof," line 17, the following be added, "if enclosed by the said owner."

That "private" be struck out of line 18.

That "to the best of his means and ability" in line 20 be struck out.

That in lines 21, 22, and 24 the words "less than two nor," "less than five nor," and "less than thirty nor," respectively, be struck out.

That the words "and the existence of rabbits on any private holding or land shall be *prima facie* evidence that the owner or occupier thereof (as the case may be) has failed to fully and continuously perform such duty to the best of his means and ability" be struck out.

Clause 45, as amended, was carried.

Clause 46.

That in line 45 "less than two nor" be struck out.

That in line 33, before "wounding," and in line 42, before "wounds," the word "wilfully" be inserted.

Clause 46, as amended, was carried.

Clause 47, as printed, was carried.

Clause 48.

Line 1, that the words "on production of his authority on demand by the owner" be inserted after the word "person."

That the word "private," line 2, be struck out.

Clause 48, as amended, was passed.

Clauses 49, 50, and 51 as printed were passed.

Clause

Clause 52.

Line 9, that " private " be struck out.

That lines 28 and 29 down to "enacted" be struck out and the following inserted, "All information shall be laid and proceedings at law taken by the Board through its officers."

That " two Justices " in line 17, " Justices " in lines 19, 20, 23, and 33, be struck out and " Court of Petty Sessions " inserted in each instance.

Clause 52, as amended, was passed.

Clauses 53, 54, 55, and 56 as amended were passed.

Clause 57.

That in line 43, " registered " be inserted before " letter."

Clause 57, as amended, was passed.

Clauses 58 and 59 as printed were passed.

Clause 60.

That " private " be struck out in line 23.

Clause 60, as amended, was passed.

Clauses 61 and 62 as printed were passed.

Mr. A. Lakeman (Chairman), Mr. W. Alison, Mr. T. Brown, M.P., The Honorable Rupert Carington, and Mr. Bacon were appointed a committee to confer with Mr. A. Oliver, and present Draft Bill to the Minister.

Before the conclusion of the sittings, the members desired that the following be urged on the Minister:—" That the Government should continue to offer a substantial reward for a discovery that would tend to entirely destroy the rabbit pest, and ask the Governments of the other colonies to also contribute"; and also " that it is inadvisable that rabbits should be made an article of export."

ALLEN LAKEMAN,
Chairman.

17 March, 1897.

RABBIT CONFERENCE.

REPORT OF PROCEEDINGS.

FIRST DAY—9TH MARCH, 1897.

THE Conference met at 10 a.m., and the following gentlemen took part in the deliberations:—

John McAneney, Trundle.	A. L. P. Cameron, Ivanhoe.
A. T. Brooke, Boggabri.	J. Flanagan, Gunbar.
Alfred Brown, Narrabri.	F. A. Oatley, at the invitation of the Minister for Lands.
A. Cudmore, Wentworth.	E. Hayes, at the invitation of the Minister for Lands.
John Dill, Hay.	H. G. Freeman, at the invitation of the Minister for Lands.
F. W. Bacon, Brewarrina.	A. H. M'Collough, Deniliquin.
Philip Oakden, Cobar.	E. A. Stinson, Coolamon.
J. Wilkes, Broken Hill.	P. R. Brett, Urana.
J. W. Brougham, Menindie and Wilcannia.	J. J. Baylis, Narrandera.
A. Laurence, Balranald.	C. F. Bolton, Wagga Wagga.
T. S. Pearse, Orange.	G. C. Little, Bullock Creek North.
T. C. Worboys, Orange.	T. Brown, M.L.A., Budgerabong.
R. T. B. Gaden, Dubbo.	T. Dooney, Bullock Creek South.
T. Leslie, Forbes.	R. H. Maund, O'Connell.
A. Anderson, Corowa.	R. H. Kirkpatrick, Nyngan.
W. F. Lawry, at the invitation of the Minister for Lands.	John Ward, Nyngan.
J. Hayes, M.L.A., Deniliquin.	G. Davidson, Condobolin.
H. C. Taylor, Department of Lands.	E. Locke, Macquarie.
W. H. Armstrong, Canonbar.	J. R. Varcoe, Hillston.
J. R. Black, Warialda.	A. Cumming, Hillston.
C. Fetherstonhaugh, Cononabarabran.	S. Nixon, Gunbar.
J. H. Davies, Gunnedah.	P. J. Gorman, Berrigan.
John M. Atkinson, at the invitation of the Minister for Lands.	J. R. Cook, West Beringerry.
W. Alison, Canonbar.	W. R. Moore, Goodooga.
R. Gibson, Hay.	T. H. Hassall, M.L.A., Moree.
Hon. Rupert Carington, Jerilderie.	

The Honorable J. H. CARRUTHERS, Minister for Lands, in opening the proceedings, said:—

The object he had in calling this Conference together was in order that those who were most interested in rabbits might have some say in the legislation with respect to their destruction. He did not wish to interfere in any way with their deliberations; they could elect their own Chairman and deal with the business before them in the way which best suited themselves; but before leaving them he would like to say a few words with reference to this most important matter.

The Conference which was held in 1895, was representative of the interests of land-owners affected by the rabbit pest, and he had no doubt a great many were here to-day representing practically the same interests as they represented then. The result of the deliberations of that body was that the various recommendations which they had submitted to him were embodied in a Bill, which was introduced into Parliament in August last, and which was now before them. Great diversity of opinion existed among the different Stock and Pasture Boards on the provisions of this Bill. Some agreed with it, some thought it needed considerable amendment, whilst others condemned it altogether. What he complained of was that after having called a number of experts together and obtained their advice, when he put it into cold type many of them turned their backs on their own recommendations. He therefore wished that when the present Conference had made up their minds they would stick to their resolutions and not repudiate them three or four months afterwards. He did not want them to leave their business until they had drafted a Bill, for which purpose he would supply them with a draftsman; and when they had done that, let them submit it to him and he would sit down calmly and criticise it, as they had criticised his Bill. He did not want bald recommendations which would afterwards not be recognised.

The resolutions adopted at the last Conference were:—

“That the Rabbit Act of 1890 be repealed.”

This resolution has been acted upon, and it is proposed in this Bill that the Rabbit Act of 1890 should be repealed.

The next recommendation was “that the matter of dealing with the rabbits should be placed in the hands of the Pastures and Stock Protection Boards until they are superseded by more representative bodies.”

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He took it that "more representative bodies" meant more representative of the vital interests that were at stake—the interests of the large man, the interests of the small man, the interests of the general taxpayer, and the interests of the people who owned the Crown lands of the Colony. How had that recommendation been carried out? In this Bill it is proposed to place the matter in the hands of more representative bodies, namely, the Rabbit Boards which it is proposed to constitute under section 5 of this Bill. Complaints had been made against having two Government nominees on the Boards; but when it is considered that the State controls over 240,000,000 acres, and will have to provide a large sum for dealing with this pest, he had yet to learn that that great land owner should not have at least a minority representation; and it must be borne in mind that this representation will also be of value in this respect, that where the State is called upon to expend sums of money it will pay more heed to the request, knowing that two of its own nominees are on the Board.

The next resolution was, "That the Stock and Pastures Boards should be empowered to make special levies for the destruction of rabbits and the erection of rabbit-proof barrier fences where necessary."

Clause 12 deals with this recommendation; but there is one little divergence, namely, the provision with respect to half rates being levied on owners of holdings who in the opinion of the Boards are already rabbit-proof fenced. This he was sure would be appreciated. It meant that some consideration was to be shown to the man who had helped himself.

The next was, "That the local controlling authority should have the power to make destruction of rabbits compulsory in their respective districts."

In clause 29 of the Bill it will be seen that this recommendation has been carried out.

The next recommendation was, "That the Crown should take steps to secure the reoccupation of the abandoned areas of the Colony on any terms, provided that the destruction of rabbits was made compulsory."

This is a matter more for administration than for legislation, and it has been the chief aim of the Lands Department to secure this result. Some 164 improvement leases have already been let on this class of country, covering an area of 1,861,828 acres, on all of which the compulsory killing of rabbits is one of the conditions. Then, again, in addition to this, large tracts of country which have been merely breeding grounds for the rabbit have been dealt with on special terms. On the West Bogan one of the conditions is the destruction of rabbits, and the same applies to the Pilliga Scrub, which has been surveyed and thrown open for tender under improvement leases, and is slowly being taken up. So that so far as that recommendation goes it has been carried out. It is hoped that some 3,000,000 acres of these waste lands will be taken up in the next two years, on the whole of which the compulsory killing of rabbits will be a condition.

The next recommendation referred to "the free carriage of rabbits on the railways."

This is also a matter of administration, and the Railway Commissioners have endeavoured to meet exporters to a very large extent, as rabbits are now carried by passenger trains at half parcel rates, and on goods trains they are carried under Table A—the cheapest rates; so that, say, from Narrandera, a distance of 348 miles, a ton of rabbits could be brought to Sydney for £1. 6s. 10d., which was only about one-third of a penny per mile.

The next resolution, namely, "the abolition of the duty on netting," had also been complied with.

The next resolution was, "That netting should be carried free on the railways, where empty sheep or cattle trucks could be used."

Netting is now being carried at sheep and cattle rates, which is as cheap as can be expected from an undertaking conducted on commercial lines.

The next proposal was, "That the State should supply netting to landholders, charging interest at the rate of 4 per centum per annum."

Clause 26 of this Bill was framed to comply with this recommendation. He had gone as far as he could in this respect, but he might be able to go still further, so long as the repayment of advances was provided for. This matter would be in the hands of the local bodies, so that there would be no waste of public funds.

The next recommendation was, "That the compulsory fencing clauses of the Rabbit Act of 1890 should be enforced without inflicting hardship on individual owners."

From a perusal of the Bill, it will be seen that this has been done, provision being made in clause 26 which will obviate the infliction of undue hardship.

The next recommendation is to the effect "That where barrier fences are constituted under the Pastures and Stock Protection Boards, they shall remain the property of those Boards, and provision made to ensure their safety."

Legislation in this direction is proposed in clauses 20 and 22 so as to give effect to this proposal.

Then followed a request "That power should be given to the local authorities to proclaim that certain adjoining holdings should form a group, that such group be fenced, and that the destruction of rabbits be carried on simultaneously within such fence, and to apportion the cost amongst the owners affected."

This is your own proposal, and it is given effect to in clause 43.

The next was, "That the Conference having decided that the question of dealing with the rabbit pest should be placed in the hands of the Stock and Pasture Boards, the Government should contribute towards the destruction of the pest in the proportion to the area of Crown lands in any district. It was decided that the matter should be in the hands of the Pastures and Stock Boards only until superseded by more responsible bodies."

In clause 32 it is set down that the Crown is to contribute towards the destruction of rabbits on public lands in the same ratio to the rabbit rates as the Crown lands bear to the private lands in the district. This provision precludes the possibility of any complaint that the Crown is trying to evade its responsibilities. The Government will have to undertake the work on all the public reserves and waste lands of the Colony which are at present a harbour for the pest.

It would thus be seen that the resolutions of the 1895 Conference had been carried out as far as the proposals of this Bill were concerned; and it seemed rather hard on him that the persons who framed those recommendations should now condemn them. He did not profess to have a very great knowledge of rabbits, but he claimed to be able to put the recommendations which had been placed before him into a Bill.

In conclusion, he would say that their great aim should be to effectively cope with, or exterminate, the rabbit pest, and they could not do that without putting their hands into their pockets. The first thing they had to do was to get money, and money could only be raised by levying rates. There should be local control; each district fencing in its own rabbits, and dealing with the pest within its boundaries. The next question was the constitution of the Boards. He considered that the Pastures and Stock Boards were not thoroughly representative; these Boards did not represent the small man sufficiently.

With regard to the Government representation on the Boards, he would say they must trust the Government. They were not in the habit of appointing inferior men. The Local Land Boards were a good example of this. They tried to get fair and impartial men—men who enjoyed the confidence of the people—to fill these positions. It would never do for the control of the Rabbit Bill to be entirely in the hands of private individuals.

He hoped that the result of their mutual deliberations would be a Bill which would meet with the approval of all classes of the community, and which would be one of public benefit, dealing with this great calamity.

The Conference proceeded to elect a Chairman.

It was proposed by Mr. LESLIE and seconded by Mr. ALFRED BROWN, that Mr. F. W. Bacon be appointed Chairman.

Mr. Allen Lakeman was proposed by Mr. CUMMING and seconded by Mr. FLANAGAN.

On the nominations being put to the vote, Mr. Lakeman was elected by 22 votes to 17.

Mr. ALLEN LAKEMAN then took the chair, and proposed a vote of thanks to the Minister for the manner in which he had endeavoured to cope with the rabbit pest.

This was carried unanimously.

The CHAIRMAN thought that the Bill before them seemed to embody, perhaps with a few amendments, the resolutions drawn up by the last Conference.

Mr. ALISON (Canonbar) said there were a great many present who had not read the Rabbit Bill. He thought they should read the Bill before attempting to discuss it. He, therefore, moved,—“That the meeting be adjourned.”

Mr. LAURENCE (Balrauld) suggested that the delegates representing the different Divisions of the Colony should group themselves together and discuss the Bill.

Mr. GIBSON (Hay) thought that the Bill should be taken clause by clause. They were in a much better position than the previous Conference. They had in the Bill before them a foundation on which they could work. He came from a part of the Central Division whose interests were also those of the Western.

Mr. OAKDEN (Cobar) supported Mr. Alison's motion.

Mr. TAYLOR objected to Mr. Laurence's proposal, and claimed he had the right to discuss the Bill from start to finish.

Mr. T. BROWN, M.L.A. (Budgerabong) proposed,—“That the Bill be read clause by clause, and any clause that could not be agreed upon might be considered afterwards.” There were a good many clauses in this Bill which will require no alteration at all.

Mr. CAMERON (Ivanhoe) supported the motion that the Bill be read through.

Mr. FREEMAN thought the present Rabbit Act should be taken and compared with the Bill now before them.

The CHAIRMAN said he would like to make a suggestion. As this was the first day of the meeting, and many of the delegates had only arrived in town that morning,—how would it do for them to adjourn till to-morrow morning, so that the representatives of the Central and Western Divisions might be able to discuss the matter among themselves?

Mr. CAMERON (Ivanhoe) then moved, and Mr. GIBSON seconded,—“That the meeting be adjourned till 2 o'clock in the afternoon.”

This motion was carried, and the Conference accordingly adjourned.

When the Conference met at 2 o'clock, the CHAIRMAN said he would thank some gentleman to suggest some mode of procedure.

Mr. ALISON (Canonbar) said the representatives of the Central Division had been considering the provisions of the Bill, and as they had not yet finished their deliberations, he would move, “That they adjourn till 10 o'clock to-morrow morning.”

Mr. M'COLLOUGH (Deniliquin) seconded the motion.

Mr. CUMMING (Hillston) moved an amendment, “That they should deal with the Bill clause by clause at once.”

Mr. COOK (West Beringerry) seconded the amendment.

Mr. ALISON (Canonbar) thought it would facilitate matters if the Bill could be gone through privately. He said it would save time if the representatives of the different Divisions could consult together and then submit their conclusions to the Conference. Mr. Taylor could attach himself to any Division he wished.

Mr. M'COLLOUGH agreed with Mr. Alison.

Mr. GORMAN (Berrigan) said: If they went through the Bill amongst themselves they would then come back there and go through the whole matter all over again.

Mr. BOLTON (Wagga Wagga) thought that the idea was that the representatives should meet there in order that they might act in unison.

Mr. OATLEY said he took it from Mr. Alison's proposal that this Bill was to be accepted with variations and amendments; if not, what was the use of forming themselves into different parties to examine the Bill? He thought the best thing to do would be to take this Bill with amendments.

The CHAIRMAN said the motion before him was an amendment on Mr. Alison's motion, to the effect that the business be proceeded with.

The amendment was carried.

Mr. GIBSON (Hay) moved, “That the Bill be now taken clause by clause,” but he would like to know whether any amendments could be moved on matters which were not covered by the Bill.

The CHAIRMAN said any delegate had a right to move any amendment, even on a matter outside the Bill.

Mr. FLANAGAN (Gunbar) seconded the motion.

Mr. OAKDEN (Cobar) thought that before going on with the Bill it would be well to discuss some general principles in connection with the matter.

Mr. LAWRY moved, as an amendment, "That the Bill before the Conference should not be adopted." He said there were many proposals in the Bill which were not generally acceptable—for instance, the taxing of rabbit-proof holdings, even at half rates. He thought that it would be better to take the 1890 Act and incorporate with it such provisions from the present Bill as was thought desirable.

Mr. FREEMAN thought it would be the better plan to take the 1890 Act and formulate amendments so as to bring it up to date.

Mr. ALISON (Canonbar) said that the last Conference started to amend the 1890 Act; but it was finally decided that it should be repealed altogether and a new Act brought in. The experience of that Conference was that the old Act could not be repealed.

Mr. CAMERON (Ivanhoe) could not see the utility of amending the 1890 Act, as only one of its clauses had ever been put into force. He thought they should take the Bill before them clause by clause.

Mr. T. BROWN, M.P. (Narrabri), said that before they started with the Bill he thought it would be better to have some discussion on general principles. As far as he could judge from last year's Conference, the idea was to remove the control of the destruction of rabbits from the Department and place it in the hands of Local Boards. This was the idea submitted to the Minister, and he had carried it out in the present Bill. But there were other interests besides those represented through the Stock Boards. The smaller holders were as deeply affected as the larger holders in the settlement of this question, and they did not look on the question from the same standpoint. The Crown, in respect to the unoccupied land, should be put on the same footing as other holders. He did not think there was anything to be gained by barrier fences; they were not a complete preventative. Small holders felt that they could only effectually deal with the pest by having their individual holdings fenced in. Having secured their holding they would be in a position to deal with the block. They would only have to keep the fence in order and deal with the pest within the enclosure; but they were not in a position to bear the expense of enclosing their holding. Money should be raised, by loan or otherwise, in order that the amount of netting required could be purchased by the Government on liberal terms, provision being made for applicants receiving it on liberal terms. They could then enclose their holding, and make out of the land the money that was required to enclose them in the first instance. The Government could materially assist settlers in this respect. These settlers in the west have not only the rabbit plague to deal with, but also the wallabies; and the same measures would answer in both instances. Small holders should have something to say in legislation. By considering their interests the larger holders would be served also.

Mr. LESLIE (Forbes), said it was he who moved the resolution of the last Conference, "That the Rabbit Act of 1890 be repealed." It was then advanced that there was only one good clause in the old Act. That Bill could not be used as a basis to formulate fresh legislation. Mr. Brown had told them that the interests of the small and large holders were not identical. Their interests were the same whether they held large or small areas. With regard to the Stock Boards not being representative he thought the small holders controlled the voting power if they chose to exercise that power. They could displace the whole of the Board at the annual election. What they wanted was a Bill as free from Government control as possible. He thought that the men who had to pay should have representation. If the Crown was to be the highest contributor it should have the largest amount of representation.

Mr. LAWRY wished to amend his former motion as follows:—"That certain principles in the proposed Bill not being generally acceptable, this meeting should proceed to consider a suggested Bill to lay before the Minister on the lines of amendments in the 1890 Act, adopting any new legislation proposed in the Ministers Bill that may be considered applicable."

Mr. J. HAYES, M.P., said they wanted a Bill to give them control in their own Districts. In the District which he represented the compulsory use of fencing would be all that was required. The fencing conditions in the Murray District had been very successful, and there was no necessity to go in for barrier fences.

Mr. LAURENCE (Balranald) was of opinion that if the present Rabbit Act were amended it would be quite sufficient to cope with the pest.

Mr. BRETT (Urana), said that in his District fences were of no use as they were often covered up by moving sand-hills.

Mr. GIBSON (Hay) considered that everything that had been said could have been dealt with when the Bill was under discussion.

The CHAIRMAN put Mr. Lawry's amendment to the meeting, and declared it lost.

The original motion (Mr. Gibson's) was then put and carried.

Mr. ALISON (Canonbar) moved, "That any amendment should be handed to the Chairman, so that they might be printed and distributed before the discussion on the Bill in the morning."

Mr. M'COLLOUGH (Deniliquin) seconded the motion, which was carried on the voices.

Mr. BROOKE (Boggabri) moved, "That a time limit of ten minutes be allowed to the mover of an amendment, and five minutes for reply."

Mr. BACON (Brewarrina) seconded the motion.

Mr. ATKINSON moved as an amendment, "That fifteen minutes be allowed the mover of a motion, and ten minutes for any one speaking after the mover."

Mr. OATLEY seconded the amendment.

Mr. BROOKE (Boggabri) moved as a further amendment, "That there be no time limit."

Mr. LAURENCE (Balranald) seconded Mr. Brooke's amendment.

This amendment was lost.

Mr. Atkinson's amendment was then put to the meeting and carried.

The Conference then adjourned till 10 a.m. the following day.

SECOND DAY—10TH MARCH, 1897.

The Conference met at 10 a.m., Mr. Allen Takeman in the chair.

The minutes of the previous meeting were read and confirmed.

Mr. OAKDEN moved. "That the Preamble of the Bill should read as follows:—'A Bill to amend the Pastures and Stock Act; to make better provision for the destruction of rabbits.'"

The CHAIRMAN said that if this motion were carried a new Bill would be required.

Mr. OAKDEN (Cobar) said that the Pastures and Stock Act had done good work in the past, and he thought the destruction of rabbits should be under their supervision.

Mr. WILKES (Broken Hill) seconded Mr. Oakden's motion, and in doing so said: The last Conference was of opinion that the destruction of rabbits should be placed under the supervision of the Pastures and Stock Protection Boards until they were superseded by more responsible bodies. The meaning of that was any Board created under a consolidated Bill. He contended that the Pastures and Stock Protection Boards gave all the machinery that was necessary to deal with the pest; but he considered the matter had not been left in the hands of the Pastures and Stock Boards, but had been dealt with in Sydney. Some of the measures adopted, such as trapping, were ridiculous. He thought that if the Pastures and Stock Boards were given a fair trial we would not need any fresh legislation.

Mr. ALISON (Canonbar) said the work done by the Pastures and Stock Boards had been satisfactory, but there was a practical difficulty in the way of adopting Mr. Oakden's motion. The Pastures and Stock Boards did not deal with fencing. If they could amend the Bill at present before them, they would have the fencing clauses.

Mr. VARCOE (Hillston) was opposed to the principle of placing the destruction of rabbits in the hands of the Pastures and Stock Protection Boards. He said that the small holders had no voice on those Boards.

Mr. OAKDEN (Cobar) said that any owner of a small number of stock had a voice on the Pastures and Stock Protection Boards, and he thought the fencing clauses could be embodied in the Pastures and Stock Act.

Mr. BACON (Brewarrina) said the Minister for Lands had not made the intentions of the Government thoroughly clear with regard to the State paying its share of the cost of destroying rabbits on unoccupied Crown lands. Ministers for Lands in the past had shirked their duties in this respect, and he thought that the Conference should not separate until it had come to a clear understanding in this respect. He also thought that there should be a consolidation of Boards, and a consolidation of machinery, to administer the Pastures and Stock Act, the Diseases in Sheep Act, and the Rabbit Act.

Mr. FLANAGAN (Gunbar) said that although he had been paying taxes for over thirteen years he had never, during all that time, received the slightest benefit from the operations of the Pastures and Stock Board. The great complaint was that whilst the people destroyed the rabbits upon their holdings, and were taxed to do so, the unoccupied Crown lands which adjoined theirs were infested with rabbits, and the Government had never made any attempt to destroy them.

Mr. GIBSON (Hay) thought that it was the duty of the State to purchase wire-netting and to sell it to the landowners on easy terms. He said that this would enable the landholders to wire-net their holdings, and to put their land into profitable occupation at once.

Mr. ALISON (Canonbar) thought that there were very many objectionable provisions contained in the Bill, among them being the mode of assessing the value of the land, which he thought very objectionable indeed. They should adopt the mode provided in the Pastures and Stock Protection Act. He did not consider that it was equitable that the Government should in all cases be represented by two nominees on each Pastures and Stock Protection Board. It was necessary that they should have some guarantee that the Crown would bear its share of the expense of eradicating the pest. If no provisions were made in the Bill, and the Minister asked for a vote to be expended in the destruction of rabbits, it was quite possible that Parliament might refuse to vote the money, although it had previously been promised by the Government. He, too, was also of opinion that the Government should be urged to amalgamate all the Acts as much as possible, in the direction of having one Board appointed to represent the whole of the stockowners.

Mr. WILKES (Broken Hill) said that there was nothing in the Bill to show that the Government would bear a fair share of the expense of destroying rabbits on unoccupied land. He would fearlessly assert that the Crown would never clear the rabbits off the unoccupied Crown lands.

Mr. FETHERSTONHAUGH (Coonabarabran) said that he had read the Bill through, and thought it had its defects. The defects were very manifest, and one of his objects in speaking at this stage was to advise the delegates to provide themselves with a copy of the *Sydney Stock and Station Journal*, which contained the Canonbar circular. He then read from this circular the following extracts:—

It is evident the townspeople in a rabbit district must be the most numerous, and their powers of taxation are such that they can put $\frac{1}{4}$ d. per head on sheep on all country lands, and the 1000th part of a farthing on the annual value of town lands.

The definition of "owner" is very full, so that anyone who has half or quarter of an acre of land has one vote. An "occupier" is defined as the resident manager. It is evident that the tenant of an allotment of town land may either be constituted the manager of that allotment, or he may be considered the manager without appointment, and therefore entitled to vote.

Where an election is held the townspeople can evidently outvote the country people, both because they are more numerous, and because of the fact that they have no distance to travel to record their vote.

The rabbit district where elective is entitled to three members, which may be townspeople. The remaining members are appointed by the Minister: so that the curious result may occur that out of five members on the Rabbit Board not one may be a stockowner. The duties and powers of a newly constituted Board, on which no stockowner may be a director, are enormous and tyrannical.

According to clause 12, subsection (i) and (ii), they are appointed as a Board to appraise every holding, whether land leased from the Crown in any shape, any freehold land, any cultivated land, which is to be estimated as though laid down in grass. The Rabbit Board is, in fact, another Land Board, and a new department is thus created for valuation purposes. The Board can appoint any person to inspect holdings, who can examine or cross-examine the owner or manager in any manner he may think fit, on his own ground—may apparently choose his own time to put these questions—may ask any question he may think fit, and if the owner refuses to answer any question for any reason he is liable to a penalty not exceeding £10. He can ask what it had cost the owner to manage his run, to shear his sheep, what profit he made on the year's transaction; in fact, his power of asking questions is without limit, and need only be justified by the plea that the inspector considered the questions necessary. There is no doubt whatever that clause 12 creates a department of equal,

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not greater, powers to the Land Board. That an office will be kept, the chairman a permanent official, with all appurtenances of inspectors, appraisers, secretary, and others, such as boundary-riders of barrier fence; and the chairman may not be a stockowner—may in fact be a man elected by the majority of the townspeople, or appointed by the Minister or Governor.

The powers of the Board in regard to administration are enormous. It can borrow up to four years' revenue without specifying the purpose for which the money is borrowed. It can erect fences within or without the rabbit district, and compel everyone to pay, no matter how little anyone may be benefited. They can run a fence across any holding, and divide it so that it will divide the owner from his best water. There is in clause 23 an endeavour at fairness, by saying compensation can be paid for severance; but the betterment from the fence is to be taken into consideration in awarding compensation, and in the latter part of the clause the owner is threatened by a proviso, that the Land Board can award costs to or against any party appearing before it irrespective of the verdict. And it must always be borne in mind that the Rabbit Board may be composed of non-stockowners. Clause 29 gives the Board power to peremptorily order any owner to suppress and destroy all rabbits on his holding. This is giving them power to order an impossibility. And in Part III, clause 45, the mere existence of rabbits on a holding is *prima facie* evidence that the owner has failed to perform the duty of destruction, and the Board has then the power to enforce clause 30, Part I, and enter upon the holding and destroy all rabbits, and remain there destroying while one rabbit is to be seen.

The fencing clauses are tremendous in their power. Clause 20 gives the municipality power to fence in the municipal area, and although no person except the townspeople may benefit, yet every person in the rabbit district must contribute his quota. The words are clear—"a barrier fence" is a rabbit proof fence which shall protect any part of the district, whether within or without the district, and the decision of the Land Board that the fence protects any part of the district compels every owner to subscribe his full quota to the cost.

The Board can take possession, without compensation, of any fence now rabbit proof and convert it into a barrier fence, but where a barrier fence is put up the Board can compel the owner on whose boundary it is erected to pay half the cost.

His object was to draw the attention of the Conference to this very valuable circular, and he thought, before they went into this Bill in detail, it would be well worth their while to study the circular fully. He thought he might also mention having been a member of a good many Rabbit Conferences of which, unfortunately, nothing ever came. His experience was that those Conferences had always found that business was much facilitated by the appointment of a sub-committee of perhaps eight or ten to meet and deliberate, and draw up a report for the whole of the Conference to deal with afterwards. He thought it utterly impossible for a large number of men like this Conference to deal with this question properly without appointing a sub-committee, and he would ask them to put their heads together and to appoint a sub-committee, or two sub-committees if they like, who would probably not be above sitting at night to go into this very important matter.

Mr. CUMMING (Hillston) said that there had been a great deal said about the Stock Boards and their utility in the past. They had not been more useful because of the want of a proper constitution. He thought that they could be made very representative bodies, but it would have to be on the land basis. He thought that they must have a Rabbit Bill to protect themselves, and that was the main thing. He, however, was perfectly convinced, from his own experience, that the rabbits could be kept under by the judicious use of poisoning, and if they adopted this method it would very much lessen the use of wire-netting. He knew if everybody did as he did, there would be no rabbits to kill. They should use poison instead of wire-netting which was very expensive; but if they must have wire-netting, they should go on the lines of the Victorian Act, which had been found very beneficial to everybody, because it enabled farmers to get wire-netting from the municipalities on such easy terms that even farmers with small means could protect their property.

Mr. CAMERON (Ivanhoe) said he also would endorse what Mr. Cumming had said about the Stock and Pastures Board, and he could not understand the very strong objection among a great many who were there, with reference to the Stock and Pastures Board. As far as he could see, in most localities the Stock and Pastures Board could be made as representative as it was possible to make any Board, and the reason why the Stock and Pastures Protection Act had not perhaps been so effective was because a great many small holders had not made the slightest use of it. They had not come forward as candidates for election. He thought also, as they had the machinery already in existence in the Sheep and Stock Boards, the administration of the Rabbit Act should, at the beginning, be placed under them, and if at some future time it was seen that these particular Boards did not work particularly well, they could be amended so as to make them acceptable to all the community. The franchise could be reduced from 500 to 200 sheep if it were necessary. He must now refer to a good deal that had been said as to the constitution of the Board, as considered under the Act now before them. Many seemed to think that in districts where the Minister had no land, where all the land was under occupation, and there were no abandoned lands or resumed areas of any kind, that in such cases the Minister should not be entitled to representation. But he thought the Minister was entitled to representation upon those Boards, and that to a very considerable extent, because he was interested in the welfare of the land, as representing the State who owned the land; and he ought to feel a very strong interest in all the Crown lands of the Colony that were held under lease. It was quite as much to the benefit of the State generally that rabbit destruction should be carried on on those lands, and he thought it was only right that the Minister should have representation on the Board, as representing the State. He quite agreed with what Mr. Featherstonhaugh had just said, in that it looked like an impossibility for the Conference to arrive at any decision unless they formed Committees, and took time quietly at night to consider the Bill with its various clauses, and then present a report to the Conference, and he would be strongly in favour of that method being adopted.

The CHAIRMAN said he took it that the second reading and discussion was finished, and they would now go into Committee on the Bill. The first was the Preamble.

Mr. BACON (Brewarrina) asked the Chairman if he would now put the motion standing in his name for the postponement of the Preamble. He did not wish to take up the time of the meeting by replying to what had been said.

Mr. BAYLIS (Narrandera) seconded the motion.

The CHAIRMAN then put the question to the meeting, and it was carried unanimously that the Preamble be postponed.

The CHAIRMAN said the next was clause 1—the Short Title.

Mr. ALISON (Canonbar) said he would suggest that they should deal with Part I of the Bill, postponing the consideration of clauses 1, 2, and 3 until the vital principles of the Bill were laid down.

Mr. GIBSON (Hay) seconded the proposal.

Question put to the meeting, and carried.

The Hon. RUPERT CARINGTON (Jerilderie) said he should like to see clause 4 also postponed until the constitution of the Rabbit Board had been finally settled. It struck him that it was simply putting the cart before the horse to declare what the districts were to be, without declaring how they were to be administered. If this clause were carried, it would simply stultify all the other amendments which might be moved about the constitution of the Board. He would ask this in fair play, so that the amendments which they had got in clause 5 might be considered on their merits and not be hampered, perhaps unintentionally, by this clause having been put first.

Mr. BACON (Brewarrina) seconded the motion.

The Hon. R. Carington's motion was then put to the meeting, and carried unanimously.

Mr. ALISON (Canonbar) then withdrew an amendment standing in his name, on sub-section (b) of clause 4, as under,—

“But no sheep district shall be amalgamated with any other district without the consent of two-thirds of the voters.”

Clause 5.

Rabbit Boards.

5. For every Rabbit District there shall be a Rabbit Board, which shall consist of five members, who, subject to the provisions hereinafter contained, shall hold their respective seats for a period of three years from the date of their appointment or election thereto:

Provided always that—

- (a) the Governor may remove any member of the Board who appears to the Governor to have failed to do or be capable of doing his duty;
- (b) The Governor may fill any casual vacancy upon the Board, and may in such case appoint a member for a less period than three years.

A Rabbit Board shall, within such time as may be prescribed, appoint one of its members to be Chairman thereof, and if such Board shall fail to appoint a Chairman, the Governor may appoint one of such members to be the Chairman of such Board; and the Chairman and other members shall be entitled to receive, out of the revenues of the Board, such fees as may be prescribed.

Mr. T. BROWN, M.L.A. (Budgerabong), begged to move that “one year” be substituted in place of “three years” in line 3 of clause 5. He said that a number of these notices of motion stood in his name, but they were proposed by the Condobolin Stock Board, who unfortunately were not yet represented on the Conference; so he had placed them on the business paper for consideration on their behalf. He thought the amendment spoke for itself.

Mr. ALISON (Canonbar) said he would support Mr. Brown's motion. He thought that, as they were making a new departure in having a new Rabbit Board, it would be beneficial to elect them for only one year. It might be a time of excitement when the Board was elected, and there might possibly be men returned whose actions might not be approved of afterwards, and he thought it was rather dangerous, straight off, to give them three years. He thought it was better to keep them under control, as they would get enormous power. They would have the control of nearly a million of money, and under these circumstances they should be kept under control, and one year would be ample.

Mr. WILKES (Broken Hill) supported Mr. Alison for another reason. It would be a very hard matter if the Board that was in this year could go and nullify, as it were, the rights of what would be a future years' Board. The present Stock and Pastures Boards were elected annually, and he thought that they should stick to the principle in the election of the Rabbit Board. He therefore supported the motion.

Mr. GIBSON (Hay) moved as an amendment that “one” of the members appointed by the landowners should retire annually. He did not wish to see men put on the Rabbit Board who would make the Rabbit Act a dead letter. He thought that by one man retiring annually, the Board would get to know the opinion of the public, because on that member putting up for re-election, the landowners would have an opportunity of showing their opinions, and defeating him if they wished. He thought it would be better if a good man could be elected for three years, but that there should be an annual election for one man. He therefore moved that one of the members appointed by the landowners should retire annually.

Mr. OATLEY wished to know, before the motion was put, whether it would not be necessary to take a vote as to who should retire. He thought that the person who obtained the least number of votes at the first election should retire, as otherwise they would provide for three members, but not say which of them should retire.

Mr. ALISON (Canonbar) thought that if one man retired each year, it would still leave a majority retained for two years, and the stockowners would have no means of removing objectionable members from the Board for at least two years.

Mr. Flanagan (Gunbar) thought the farmer had been too apathetic in the past, but that this Board would rouse him up to his duty, and he would know what to do.

The CHAIRMAN then put Mr. Gibson's amendment, that the following be added to clause 5:—“But one of the members appointed by the landowners shall retire annually.”

The amendment was lost.

The original proposition made by Mr. Brown, that “three” be struck out and “one” put in, was put to the meeting and declared carried.

The CHAIRMAN said that the next amendment he had printed was one by the Honorable Rupert Carington, on clause 5, “That the Pastures and Stock Protection Boards be the Rabbit Boards for the district, *i.e.*, that the working of the Act be placed in the hands of the Pastures and Stock Protection Board.” He took it that that would be a substituted clause in place of the whole of clause 5.

The Honorable RUPERT CARINGTON (Jerilderie) said that he ventured to bring this forward for two reasons—firstly, on the grounds that it would save expense; and secondly, on the grounds of increased efficiency. They had in the Pastures and Stock Protection Board the machinery ready to their hand, and therefore, so far as administration, or rather, so far as legislation, if he might use the term, was concerned, it would not cost anything, because the rabbit meeting might be held at exactly the same time as the

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Pastures and Stock Board meeting for ordinary business, and consequently the Boards would receive one fee. Another thing would be that the Stock Inspector could act as the Rabbit Inspector without any further remuneration. With regard to this Government proposition, that there should be two members put on to this Board by the Crown, he might say, as far as his experience was concerned, that he most strongly objected to it. They were in a peculiar position. These Boards could make them kill the rabbits (under the new Bill), and if they did not, they were liable to be had up before the Magistrate, and in default of distress sent to gaol. There was not a single acre in his district of Jerilderie under control of the Crown. It was all alienated in some form or other—it had all been made into freehold, or had all been let; and therefore he thought it was a great injustice to say that the Minister could come in and appoint two people on a Board which would tax them and which would exercise these powers over them. He thought he could congratulate the Minister upon having given them the most complete example of taxation without representation that he had ever heard of. These gentlemen—who would they be? He was told that one would be the Chairman of the Land Board. Now really, although he was comparatively a new chum in this Colony, it was not to be thought that the Chairman of the Local Land Board could come and attend the Board. No; these Government nominees would be the friends either of a Member of Parliament, or the friends of a defeated candidate. They would come and say, "So and so did me a good turn last time; you put him on the Rabbit Board." They would be either the friends of a Member or else some local busybody, who would probably be very unpalatable to the rest of the Board. Now, apart from this proposition that the Minister should put these two men on, he did not give them any guarantee that he was going to kill the rabbits at all. The Minister proposed to tax them to kill their rabbits, but carefully prevented himself being taxed in any way. He would ask them to refer to one of the last clauses in the Bill, clause 32 reading, "It shall be the duty of the Minister to check, suppress, and destroy all rabbits which may from time to time be in or upon public lands, but such duty shall not commence until a reasonable period after moneys have been made available by Parliament for the purpose, &c., &c." In this Colony now, they were in a very critical state in regard to the finances. It was very important to the Government to have a surplus at the next budget; and could they tell him that the Government would go and put a large sum of money on the estimates, and risk that surplus, in order to kill the rabbits on the Crown lands? Of course he had no right to speak for any other Board than his own, but they thought very strongly indeed upon these two representatives being placed upon the Board. He reiterated that his amendment would be conducive to efficiency and economy in the administration of the Act.

Mr. BAYLIS (Narrandera) seconded the amendment submitted by the Honorable Rupert Carington most strongly. He held that the Pastures and Stock Boards were the proper Boards to deal with the rabbit question. They were elected by the stockowners, the people who were most affected by the rabbit pest. They had heard a lot of talk about the small owners not being properly represented, and the Minister even yesterday had alluded to it, and said that in his opinion the Pastures and Stock Boards were not the proper Boards to deal with this question. He held that in four-fifths of the districts of the Colony the small stock owners, if they only took it into their heads to do so, could actually swamp the Pastures and Stock Boards at the election. He himself was only a small member—he had only 640 acres of land; but he had been elected for the last nine years on the Stock Board. He knew of others who were in the same position, and he would again strongly urge that the Pastures and Stock Boards were the proper bodies to deal with the rabbit pest.

Mr. FLANAGAN (Gunbar), said that was not the question before the Conference; the question was the boundaries of the rabbit district.

The Chairman then explained to Mr. Flanagan the business before the Conference.

Mr. FLANAGAN (Gunbar), said he supported the Honorable Rupert Carington's motion.

Mr. LAURENCE (Balranald) also supported the motion. In his district the Stock Board consisted of four homestead lessees, and anybody was at liberty and welcome to come forward for the position.

Mr. OAKDEN (Cobar) said he had great pleasure in supporting the amendment. It was practically identical with one which he had intended to move. Without going over the arguments that had been already adduced by the previous speakers, he thought they should consider another point which had been referred to, at an earlier portion of the debate, and that was regarding the amalgamation of the Boards. Either the Rabbit Board should absorb the Pastures and Stock Protection Boards and Sheep Boards, or *vice versa*. This all pointed to the necessity that was felt for amalgamation, and it seemed to him that in the interim before the amalgamation of the Pastures and Stock Protection Act and the Rabbit Act, the Pastures and Stock Protection Board was the one which should administer the Rabbit Act temporarily, and he thought that this Conference should unite in asking the Minister that, pending the introduction of a Consolidation Act, which it would urge him to bring forward dealing with the various Acts affecting the stockowners, that the Pastures and Stock Boards should administer until this Consolidated Act was brought in, creating a Board to deal with the whole of the matters affecting stock in the Colony. He thought that if they took up that position, it would at once commend itself to the Minister and to Parliament. He ventured to support the Honorable Rupert Carington, and to bring forward these arguments in his favour outside the arguments already expressed.

Mr. DAVIDSON (Condobolin) mentioned that in his district the Stock Board consisted of one wool scourer and two selectors.

Mr. BRETT (Urana) said that since the Pastures and Stock Act had been in force, it had been carried out without a hitch. With reference to the small owners not being represented on the Board, he said that a small holder had been Chairman of the Board in his district for four years. He thought where the Act had been administered for so long, where they had the whole of the machinery in hand, and where there would be no outlay at all in getting machinery to work the Act, they should certainly place the administration of the Rabbit Act in the hands of the Pastures and Stock Protection Board. He supported the amendment.

Mr. MCCULLOUGH (Deniliquin) said he had been a member of a Board for over seventeen years, and had always got on without the slightest trouble with the sheep-owners. He thought the Stock and Pastures Protection Board deserved the confidence of the Conference.

Mr. LESLIE (Forbes) had very much pleasure in supporting the motion before the Chairman, and said that if anything were wanted to combat the arguments which had been used to the effect that the Stock and Pastures Board were not representative he would like to quote the Pastures and Stock Protection Act. It had been urged in the Conference that the Pastures and Stock Boards were not representative.

representative. Well, if they were not, all he could say was that it was the fault of the small men themselves. It was their own apathy—the apathy of those who had the power in their own hands—and therefore it was their own fault. In clause 3 of the Pastures and Stock Act of 1881, it showed that every small owner, if he took any interest in the election of the Stock Board, had the power in his hands to have a voice in the election of that Board. And he not only had the power of electing, but he also had the power of becoming a member of the Pastures and Stock Board if he were the owner of ten head or more of large stock. He thought that that at once did away with the arguments which had been brought forward that the Stock Boards were not representative. Then, again, it had been said that those Boards had done little or no work. From a return issued from the Stock Department, dated the 18th of August, 1896, he would quote, with the permission of the Chairman, and show what the Board had done. Between the years 1891 and 1895 the Stock and Pastures Protection Board had destroyed 10,046,399 kangaroos, 8,851,369 wallabies, 138,428 native dogs, 4,574,050 hares, and 173,178 wild pigs. The amounts collected during those years amounted to £560,265 6s. 7d., while the amount of the Government subsidy was £162,814 14s. 1d., making a total of £723,080 0s. 8d. He thought those figures spoke volumes in favour of the administration of any Act being placed under the Pastures and Stock Protection Boards. Not only had these Boards done good work, but, as had been pointed out, they had the machinery and could be administered at the minimum of cost. They wanted if possible to relieve themselves of some of the burdens which had been thrust upon them by different Acts of Parliament. He thought that if they could succeed in getting the destruction of rabbits put under the Pastures and Stock Protection Board they would have no reason to complain. If the Act did not work, there was always provision made if a Board did not do its duty that it should be taken over by the district. If people came to the Conference and said that these Boards were not representative, it was simply because they did not know and had not taken enough interest in the matter to find out whether they had got voting power, or what powers were conferred under these Acts. He would advise those gentlemen before they came to the Conference, before they made rash assertions, to go home and read the Pastures and Stock Act carefully.

Mr. BACON (Brewarrina) was in sympathy with the Honorable Rupert Carington's motion, but before making any remarks on it he would like to ask the Chairman what would be the effect of the motion on the Bill if it were carried.

The CHAIRMAN said he had himself been trying to find this out, and the conclusion that he had arrived at was that if the motion were carried, clauses 5, 6, and 7 would be unnecessary. He could say no more, as he had not read further to see what other effect it would have.

A MEMBER: Clause 8 would go out as well.

The CHAIRMAN said he did not think that clause 8 would be done away with. That might be discussed.

Mr. BACON (Brewarrina) wished to endorse the remarks that had fallen from the Honorable Rupert Carington and the other speakers, and he would suggest that the difficulty about the representation of the Government might be met by the appointment by the Minister of six members to act as a central Board with a Minister as Chairman, in the same way as had been done in Queensland. This Board would control the amount of money voted to the Minister by Parliament. This central Board would have a controlling effect over all the Local Boards. He thought this might be introduced as a compromise. If they passed this resolution moved by the Honorable Rupert Carington that the Rabbit Act be controlled by the Pastures and Stock Act, then this central Board under ministerial control might be afterwards adopted as a compromise.

Mr. GADEN (Dubbo) wished to make a few remarks with reference to this bogey-man, the small holder. He could not exactly say that he was a small holder himself, but he had been elected by the small holders ever since the present Act came into operation. That was many years ago, and there had always been an endeavour to get a small man nominated, but they had such confidence in the existing Board, and for those who had offered themselves, that they declined to come forward, and he was quite convinced that if all the small holders were polled to-morrow they would return the same men. There were many reasons why they could not come forward. In many instances they could not devote the time or afford the small expense to attend; but he felt quite convinced that this was merely a bogey, raised not by the small men themselves but by men with some ultimate object in view.

Mr. TAYLOR (Lands Department) wished to say a few words before the clause was put with a view of objecting to it. For his part he strongly objected to the administration of this Act being placed in the hands of the Pastures and Stock Protection Board, simply because, he contended, they were not representative. The Pastures and Stock Board consisted of eight members, five of whom were members of the Sheep Board; and every person who was the owner of 500 or more sheep was entitled to vote for the election of a sheep director, but those who did not own 500 sheep had no vote. In addition to this, he would like to point out that the Pastures and Stock Boards had had the administration of the destruction of rabbits before, and the Act of 1883 was simply to take it out of their power.

Mr. T. BROWN, M.L.A. (Budgerabong), very strongly objected to the motion to place the whole control of this legislation in the hands of the Pastures and Stock Protection Board. As Mr. Taylor had pointed out, the Pastures and Stock Protection Board had had the management of this pest in its initial stages, when, if effective measures had been taken, it might have been kept under control; but they failed to do anything of a substantial character in that direction, and he could not see any hope of anything effective being done in placing this measure solely under the control of the Pastures and Stock Boards. Anybody who knew the working of this Pastures and Stock Protection Board knew that when it came to legislation on the destruction of rabbits it was not a representative body. Possibly the small holders might have certain rights under it, but they had never exercised those rights to any large extent. Then there were Pastures and Stock Boards in the Colony at the present time for which the Government had to nominate the members, because even the large owners did not think it worth their while to exercise their rights. This occurred year after year. Then, again, the boundaries of the Pastures and Stock Board were very extensive; and he contended that if they wished to deal with the rabbit question they would have to get local machinery and confine it within as small an area as possible, and it would be necessary to sub-divide the Pastures and Stock Board Districts into two, and perhaps three, Rabbit Board Districts; and if they carried this amendment it would be impossible to do that. They would make the boundaries of the Pastures and Stock Board the boundaries of the Rabbit Board, and they would make the machinery that had been set up for the Pastures and Stock Boards the administrative machinery for coping

coping with the rabbit pest. He thought the members of the Pastures and Stock Boards present would agree with him that the machinery was not perfect, and that they were looking for legislation to improve that machinery, as their resolutions of last year indicated. He thought it would be to the detriment and not to the interest of rabbit legislation if they went back to the old system that had been discarded, of placing it wholly under the control of the Pastures and Stock Boards. He thought the Minister's proposal was a very reasonable one—that was, that where the Stock Boards dealt with the rabbit pest the working of the Rabbit Act should be placed under those Boards. Then there were municipalities and more settled districts; they should be formed into rabbit districts, irrespective of the Pastures and Stock Protection Boards. And then, again, the Minister proposed that if the machinery of the Pastures and Stock Protection Boards was found inefficient or inapplicable to this piece of legislation, the owners themselves, if they thought fit, could, by petition, have the machinery of election altered and placed on a different basis to suit their requirements. The effort of the Minister all through this Bill had been to make the administration of the Act as suitable to the conditions that it was to operate on as was possible; and this Conference, if they carried this resolution, would limit and place it wholly in the hands of the Pastures and Stock Protection Board, irrespective of the question whether the Stock Boards, on the area of country they have under control, were best suited to deal with it. He thought the Minister's proposal was far and away the best proposal, and he was prepared to support it, and he hoped that the good sense of the Conference would see that it was superior to the amendment. Take Molong Stock Board. Their area extended partly beyond and to the west of the Harvey Ranges. There was nothing in common between the owners on the east and the owners on the west of that Range, and there had been considerable friction between them. The western owners were pestered with wallabies and kangaroos, and the eastern with hares. The sole effort of the Board had been to keep down the hare pest. The Eastern Division controlled completely the moneys of the district, and no money had been available for the putting down of the pest in the west, although that district contributed to the funds. As a consequence, the western district were petitioning to be placed under another Stock Board. How, then, in a big district like this, would it be possible to work the Rabbit Act successfully, when by its very nature it required that the administration should be more local? The same thing applied to Condobolin. There had been friction among the stock-owners on the south side of the river and on the north side. The conditions were different. Those on the north side had a pest of wallaby, and those on the south had nothing. The south controlled the money and they had done little. He thought he was correct in saying that with very few exceptions the small owners took no interest in the constitution of the Board. In Condobolin, when the small owners tried to get representation, they had to travel 80 miles to record their vote. But that was only the initial stage, and he believed that this Rabbit Bill, if the amendment as proposed by the Honorable Rupert Carington was passed, would be practically a dead letter, and outside the Stock Boards it would not meet the views of the great body of land-owners who had to contribute the funds.

Mr. FREEMAN thought the whole crux of this question was simply that they had got to find the money; and why should they, who were in the midst of it and knew exactly what was going on from day to day, not be the people to spend the money? He certainly thought, therefore, that the administration of this Act should be placed in the hands of the Sheep Boards. If the local body could not successfully administer this Act, how could the Minister administer it from the head office in Sydney?

Mr. T. BROWN, M.L.A., said that if the gentleman would permit him to correct him, he would point out that the difference between Mr. Freeman's wishes and his own was, that he, Mr. Brown, wanted it to be under Local Boards, while Mr. Freeman wanted it to be under Stock Boards. He thought that local Rabbit Boards would deal with it more effectively than the Stock Boards could do.

Mr. FREEMAN read subsection (a) of clause 5: "The Governor may remove any member of a Board who appears to the Governor to have failed to do, or be incapable of doing, his duty." The Governor meant the Minister. Why should the Minister have this power? Why should a Minister remove a Board, perhaps on the recommendation of some quarrelling member of Parliament? Then let them look at subsection (b) again. "The Governor may fill in a casual vacancy upon the Board, and may in such case appoint a Board for a less period than three years." Why should the Minister have such power? Why should the Minister come in? He had the power to nominate two men already as the Bill stood, and why should he come and put a third man and take away the balance of the voting power? What he would draw their attention to was this: that if they were going to place this Bill under the Pastures and Stock Boards, then the Pastures and Stock Boards should administer it, and not the Minister for Lands.

Mr. WILKES (Broken Hill), in supporting this, said that he thought Mr. Brown had been the best arguer in its favour that they could have. Mr. Brown had mentioned the Molong Board, and they were so dissatisfied with this and that, that they would not take the trouble to elect a member. Mr. Brown had also mentioned the Condobolin Board as being dissatisfied; but what had happened in Condobolin? Why, they had carried it their own way, and this showed that the Pastures and Stock Boards were elective Boards and properly representative Boards. There were a number of gentlemen who had come to the Conference with certain ideas about the Pastures and Stock Boards, but they had altered them a lot. What was the use of singing out that they had no power when a man could fling an Act in their faces and say, "There you have all the power you ask for." He thought it was utterly ridiculous for a man to say this when he had an Act of Parliament like that before his eyes. Then he must tackle Mr. Taylor. Mr. Taylor had said that the creation of the Act of 1883 was because of the default of what had been done under the Pastures and Stock Act. It was fourteen years ago since that great error was committed, and now they had a representative body that knew something about rabbits. He would like a few of them to stand up and say what they knew about rabbits fourteen years ago. He would guarantee that they knew very little indeed then with reference to them. There had been a couple of generations since then. Fourteen years ago many men in the room had been in good positions then, but during those fourteen years the rabbits had brought them down a bit. That argument of Mr. Taylor's would not hold water. He would say that although, then, they had not had fourteen years' experience of rabbits, still, if the Act had been administered as it should, and if they had not been bound down to the central office, things would have been different. As it was, the money was thrown away by the Government of those days. He thought it was only right and just to those who had to pay the money that they should have the administration within their hands, and there would be no more representative way of dealing with the whole of the Colony except through the Pastures and Stock Boards.

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Mr. GORMAN (Berrigan) said there was one phase of the question that had not cropped up yet. Personally, he agreed with the Honorable Rupert Carington, as in his district there was very little Crown land in charge of the Lands Department. It was all alienated; but, as the Minister had pointed out to them yesterday, there were other parts of New South Wales in which he had very large interests, and he thought that if they were to say that the Minister should have no say at all in legislating for rabbits throughout New South Wales, they would do the Conference a lot of harm. They knew Mr. Carruthers carried a great deal of weight, and they would be courting opposition from him straight away. It would be against the interests of the Conference to take away the representation of the Minister.

The Honorable RUPERT CARINGTON (Jerilderie) said he was going to move an amendment to give the Minister representation in another way later on.

Mr. A. BROWN (Narrabri) would like to ask if Mr. T. Brown was there as a representative of the Stock Board, or whether he was there by invitation of the Minister; and the reason he asked was because he appeared to hold a brief for the Minister in regard to payments and patronage; and it appeared to him that Mr. T. Brown wanted to make ministerial patronage so strong, so as to give Members of Parliament, or others who might be interested, the power to get their friends or others appointed to act on the different Boards throughout the country, whether they were agreeable to the stock-owners or not. It seemed to him that his argument was from start to finish against the Stock Boards having anything to say in the expenditure of their own money, and all for ministerial patronage from end to end.

Mr. T. BROWN, M.L.A., for the information of the gentleman who had just sat down, said he was at the Conference on the same footing as that gentleman himself. He had been elected by a body of selectors known as the "Budgerabong Selectors' Association." He did not come there for the Minister, nor did he hold a brief for that gentleman.

Mr. ROSS (Hume) said, if he understood Mr. Brown aright, that gentleman would like to leave the payments in the hands of the Minister. He did not see why they should make a new Rabbit Board right alongside the Pasture Board. He thought the Boards as at present situated were a great success. He thought the Stock Boards of the country were more representative than any other body, and the Rabbit Boards must be elected by someone, and he thought it should be by the people who were to provide the money. That could not be better. In the district which he represented every member of the Board was a small holder; the large holders could not return a man at all. He did not think the large holders had too much power. He thought it was possible that fourteen years ago the owners did not use their power properly, and the events of the past had shown them the danger they were in. He thought it was simply a waste of money to erect any Board alongside the Pastures and Stock Board to control another set of officers with another set of machinery. So long as things were controlled from head-quarters there would be utter failure. Let it be in the hands of the Pastures and Stock Boards until they saw something better.

Mr. NIXON (Gungah) was opposed to this amendment, because there were a number of selectors put on the land under Mr. Carruthers' new Bill who would have no votes.

A MEMBER: Why? It would be on a land basis.

Mr. DILL (Hay) rose as one who had had a good deal to do with the working of Pastures and Stock Boards for sixteen years. He had been Chairman for about five years out of those sixteen years, including the last two years, and he thought the Pastures and Stock Board in Hay, which he represented, had done their duty during that time, and he failed to see any reason why, for the present, the Pastures and Stock Boards might not be trusted with this Bill if passed. With regard to the rabbit question, he thought he had had as much experience in dealing with the rabbits as most men during the past fourteen years, and he thought it was very necessary, indeed, that the administration should be compulsory. He could speak feelingly with regard to that, because he had had neighbours who would not kill, while he was doing his level best to keep the rabbits under, and he certainly would support strongly the placing of this under the Pastures and Stock Boards, for the present, at any rate.

Mr. HAYES said, that if they looked at the Act they would find that the Minister, in the first instance, gave the control, under the Bill, of the Rabbit districts to the Pastures and Stock Boards, and he made this provision wisely, he thought, though if a majority of the land-owners in the district desired to have an election on a land basis, they should do so. This Bill was very elastic, and these provisions were very necessary. Some people said it was far better that the Stock Board alone should regulate it, and others said that as every land-owner has to contribute he should have a voice in the matter. There was a good deal of reason why they should let this clause stand as it was, the Pastures and Stock Boards would have full control over it, and then the people in each district had the right either to remain as they were or to petition to have things altered.

Mr. ROSS (Hume): Why could not one Board do the lot?

Mr. HAYES said if they got a district which was very largely settled by farmers, would not they naturally want to have a voice in the matter themselves? This Act must be broad and liberal. It was wanted to apply to the whole Colony where conditions varied; and therefore, in districts where the owners predominated it would be under the Pastures and Stock Boards, and where the farmers predominated they naturally would want to have a voice.

Mr. CUMMING (Hillston) said that in speaking on this motion he would support the Pastures and Stock Boards, but he would endorse all that Mr. Hayes had said. There was another point: one man might have an equally good run with another, but the man who managed well might have 50,000 sheep, while the man who was careless might only had 20,000 sheep, and he would pay the same, and would do so on the land basis.

Mr. TREELE thought the amendment was rather too sweeping. There was no doubt that what Mr. Hayes had said had a great deal of force in it, and he thought that some of the gentlemen who spoke very strongly in favour of the Pastures and Stock Boards having control under this Bill, had not had much experience where it was all settled by small owners. He had had to put before the Minister a petition from 160 small owners, to have the district brought under the present Rabbit Act. Among these 160 were many men who had only two or three plough-horses—men on blocks whom the rabbits were eating out. They wanted the rabbits checked. If the tax-payers, under the new Rabbit Act, would each have a vote for the Stock Board, then he would be quite willing to support the resolution; but he did not think that, as at present constituted, the franchise of the Stock Board would cover all the men who would have to pay the taxes for the suppression of the rabbits. There was every probability that wherever the

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Pastures and Stock Boards were seen to be a more practical body than one elected, or appointed, they would be given the administration of the Act, and it was elastic enough to give rules to suit districts such as he had mentioned. No man who had the principle of a Briton in him would say that any man should pay a tax under the Rabbit Act and not have a vote, and certainly under this amendment men would be paying a tax who would not have a vote. Some gentleman had said that the minimum of stock allowed was ten head of large stock before a man could vote. He would point out that in the petition he had referred to there were at least forty or fifty men out of the whole 160 who did not own large stock at all. These men owned land and would come under the operation of the Act. They grew wheat and they simply had sufficient horses to do their ploughing. There were thousands of them, special-area holders. He represented a very large class of people in this country, and he thought that if they carried this resolution there would be men under the Rabbit Act paying taxes who had no vote. This amendment proposed to place in the Stock Boards the power to spend the moneys collected under the Rabbit Act. Any amendment they proposed to the Rabbit Act will not amend the Pastures and Stock Act; and consequently if a man had not a vote under the Pastures and Stock Act, they could not give him one under the Rabbit Act. He took it that they could not amend the Pastures and Stock Act by any proposed Bill dealing with the rabbits; but if it could be made clear to him that all men who would pay a tax under the Rabbit Act would have a vote for the Stock Boards, then he would be quite willing to support the resolution; but otherwise he did not see any reason why they should erect separate Boards if the Stock Boards could do the work.

Mr. ALISON (Canonbar) said this resolution should be carried now, and then they could amend this Act so that every person should have a vote who paid a tax.

The Honorable RUPERT CARINGTON said he hardly thought it necessary for him to make any reply. They had the statement made by his friend the Chief Inspector of Rabbits; but that was fourteen years ago. He would mention that the Queensland Rabbit and Sheep Boards were identical. He had been very much misrepresented in one respect. He had been made to say that the people should be taxed without proper representation. It had been his exact object to prevent that. All his arguments had been directed against the Crown, which was not taxed, appointing two men to the Board. Of course they could amend the Act, and make the representation on a land basis instead of a stock basis; but how any body in a democratic country would agree to the Minister appointing two men, whomsoever he liked, to tax them was what he failed entirely to understand. It was quite absurd and reactionary. With regard to the small men, he might say that he came from a district where there were more small men than in any other district in Australia. There was another gentleman from that district who was also ready to support his resolution. To be told that they would protect the small men by getting two men, outsiders, to tax them was incomprehensible to him.

Mr. FLANAGAN (Gunbar) would like to see a provision made in the amendment that all taxpayers should have a vote.

The CHAIRMAN observed that before putting the question to the Conference he felt it to be his duty to point out, as far as he could from a hasty glance through the Bill, the consequence of carrying the resolution. It had struck him first of all that clauses 5, 6, and 7, would be made utterly useless by the carrying of the resolution proposed by the Hon. Rupert Carington. There was also another matter consequent on the motion being carried, and that was with reference to the Government's proposal to pay a rate on their properties corresponding to the amount of unoccupied land there might be in any rabbit district. He did not know what decision the Conference would arrive at in obviating that difficulty if they intended to take away the representation of the Government on the Boards. Then, with regard to the argument that small men would have no vote, he anticipated that if this motion were carried, and if it were intended to give everyone who had to pay a tax a vote, it would be necessary to amend the Pastures and Stock Act.

The CHAIRMAN then took a vote on the Honorable Rupert Carington's amendment.

The amendment was declared carried.

The CHAIRMAN then adjourned the Conference until 2 o'clock.

On resuming in the afternoon,—

The CHAIRMAN said it would be necessary to discuss clauses 5, 6, and 7, in view of the resolution passed immediately preceding the adjournment.

Mr. T. BROWN, M.P., said he had a motion that he thought would go very well after the amendment which had been carried: "That taxation under the Rabbit Act shall not be levied on holders not having a right of representation under the franchise of the Pastures and Stock Protection Act."

Mr. NIXON seconded the proposition.

Mr. J. M. ATKINSON wanted to know whether that would include the municipalities.

Mr. T. BROWN, M.P., said it simply meant this, that a tax should not be levied on any landholder or any stockholder who was not in possession of the right to vote under the Pastures and Stock Protection Act. Now, the motion that had been passed before the luncheon adjournment placed the whole control of the rabbit question under the Pastures and Stock Protection Board, and this further resolution of his was simply to safeguard the rights of those whom it had been shown had not the right of representation under those heads. Of course, if it were found that there was any body of holders upon whom it would be desirable to levy a tax, then the way to get over that difficulty would be to broaden the franchise of the Pastures and Stock Protection Act so as to include them. His resolution simply safeguarded peoples rights until they were included. It was simply "no taxation without representation."

Mr. ROSS (Hume) said that instead of amending that clause they should simply amend the clause about the person who should have the right to vote. He thought it was very wrong to pass an amendment like that. It would be far better to withhold that and put it this way: "That every man who has to pay taxation shall have a right to vote." If it were left as it was, then very many small holders would escape taxation altogether.

Mr. ALISON (Canonbar) said that as far as he could gather Mr. Brown's proposition was simply "no representation no taxation," and he was perfectly in accord with that.

On the motion being put to the Conference by the Chairman it was carried unanimously.

Mr. GIBSON (Hay) moved that the following also be added: "That the Crown may be represented on the Rabbit Board in proportion to the revenue paid by them, but in no instance to have a majority representation."

The Honorable Rupert CARINGTON (Jerilderie) rose to a point of order. That had already been settled, and the question under discussion now had nothing to do with the constitution of the Rabbit Boards.

The CHAIRMAN suggested that instead of "Rabbit Boards" Mr. Gibson should put in "Pastures and Stock Boards."

Mr. GIBSON (Hay) had no objection. He moved that, with this alteration, the clause be added to clause 5. He took it that unless the Crown would assist the owners—unless they were prepared to accept their responsibility and pay in proportion to their acreage—that they might as well have no Rabbit Bill at all, but simply go back home and let things go as they please. If the Crown were to pay, it was only right that they should be represented. They would not think of leaving out any one section of themselves—they would not think of depriving that section of a vote if they were asked to contribute. In justice, the Crown were entitled to have representation; and, as the Minister had not asked for a majority representation, he thought it would meet the views of everybody to add those words: "the Crown to have no majority representation in any one district although they contribute more than one-half of that district's revenue."

Mr. FLANAGAN (Gunbar) seconded it.

Mr. LESLIE (Forbes) begged to move an amendment to the effect that the Crown should have representation in proportion to the amount of rates paid under the Rabbit Bill. He was quite in accord with a portion of Mr. Gibson's resolution; and he thought, if the Crown became contributors, they had a right to a voice in the expenditure of this money, but if they were the largest contributors to those funds they had the right to the largest representation.

The CHAIRMAN suggested that Mr. Leslie should move to leave out the following words from Mr. Gibson's resolution: "but in no instance to have a majority representation."

Mr. LESLIE (Forbes) agreed, and moved that the words, "but in no instance to have a majority representation," be struck out.

Mr. OAKDEN (Cobar) seconded Mr. Leslie.

Mr. LESLIE's amendment was put to the meeting and carried.

Mr. Gibson's motion as amended now stood: "that the Crown shall be represented on the Pastures and Stock Boards in proportion to the amount paid by them."

Question put and carried.

Mr. ATKINSON asked if the meaning of that would be "on the total amount paid by the Crown" or "on the amount paid by the Crown for rabbit destruction"?

Mr. LESLIE (Forbes) explained that it would apply to the sum they contributed as stock-owners, as it were, but not to amounts voted by Parliament to assist in the destruction of rabbits.

The CHAIRMAN then proposed, with the consent of the meeting, to make it more clear by altering the resolution in this way: "that the Crown may be represented on the Pastures and Stock Protection Boards in proportion to the revenue paid by them as assessments to the Rabbit Destruction Fund."

Passed unanimously.

Mr. FLANAGAN (Gunbar) said it would now be necessary to pass a resolution making the Crown the "occupier" of all unoccupied Crown lands in the Colony.

Mr. ATKINSON asked for an explanation. It had been decided that the Pastures and Stock Boards should have control of the destruction of rabbits; they consisted of eight members. He wanted to know if the Government representation was to be a part of those eight members, or over and above those eight members?

Mr. ALISON (Canonbar) explained that the idea was, that if the Crown paid so much money, it would have so many votes. The Board would still remain the same—the Crown would not appoint a man, but would have the votes increased instead.

Clauses 6 and 7.

Methods of selecting Members.

6. The members of a Rabbit Board shall be appointed by the Governor:

Provided that—

- (a) where the Rabbit District is identical with a Sheep District, as defined under the Diseases in Sheep Acts, or appears to the Governor to be substantially identical therewith, three members of the Rabbit Board shall be members appointed by the Governor out of candidates to be nominated as prescribed by the Board of Directors holding office under the Pastures and Stock Protection Act in and for such Sheep District; and
- (b) where the Rabbit District is identical with a Borough or Municipal District, or appears to the Governor to be substantially identical therewith, three members of the Rabbit Board shall be members appointed by the Governor out of candidates to be nominated as prescribed by the Municipal Council of the Borough or Municipal District; and
- (c) where an apparent majority of the owners or occupiers of private holdings within the Rabbit District present a petition to the Governor that three members of the Rabbit Board shall be elective members, the Governor may, by proclamation in the *Gazette*, declare that the provisions hereinafter contained as to the election of three members of a Rabbit Board shall apply in respect of the Board of the said District, and the same shall apply accordingly, unless and until the said proclamation is revoked.

But further provided that—

- (d) nothing contained in the foregoing proviso shall apply in respect of two out of five members of the Rabbit Board; and
- (e) the said two members shall be members recommended by the Minister, and appointed by the Governor;
- (f) where no members are nominated, or a sufficient number are not nominated, the Governor may appoint a sufficient number of members to constitute the Board.

Election of Members.

7. The election of members of a Rabbit Board shall be in accordance with the following provisions:—

- (a) Whenever an election is necessary, the time and place for holding the same shall be appointed by the Minister by notification in the *Gazette*.
- (b) Occupiers of private holdings within the Rabbit District shall be the persons qualified to vote, and the number of votes allowed to each such occupier shall be determined by the aggregate area of the private holdings within the Rabbit District occupied by him, according to the following scale:—
 - For an aggregate area not exceeding six hundred and forty acres in the Eastern and Central Divisions, or ten thousand two hundred and forty acres in the Western Division, one vote.
 - For an aggregate area exceeding six hundred and forty acres and not exceeding two thousand five hundred and sixty acres in the Eastern and Central Divisions, or exceeding ten thousand two hundred and forty acres and not exceeding twenty thousand four hundred and eighty acres in the Western Division, two votes.
 - For an aggregate area exceeding two thousand five hundred and sixty acres in the Eastern and Central Divisions, or twenty thousand four hundred and eighty acres in the Western Division, three votes.
- (c) When three members of a Rabbit Board have been elected, three members of the Board as previously constituted shall retire;
- (d) Where a member of a Rabbit Board is to be elected, and no valid election takes place, the Governor may appoint a member to fill the vacancy, and such member shall be deemed an elected member;
- (e) The cost of an election shall be paid out of the revenues of the Rabbit Board;
- (f) Subject to the foregoing provisions, all necessary matters in connection with elections shall be prescribed by Regulations to be made in that behalf.

Clauses 6 and 7 struck out.

Clause 8.

Incorporation of a Rabbit Board.

8. The members of a Rabbit Board, as from time to time constituted, shall be a corporate body under the style or title of the "Rabbit Board of District," the name of the District being such as the Minister may from time to time assign by notification in the *Gazette*; and under such style or title shall have perpetual succession and a common seal, and be capable in law of suing and being sued.

The validity of any acts of the Rabbit Board shall not be affected by any informality or irregularity in the appointment or election of any member of the Board, or by reason of the fact that there are not five members of the Board; and the fact that all the seats on the Board are vacant shall not of itself operate to dissolve the corporation.

The Governor may, by proclamation, dissolve a Rabbit Board, and the corporation shall thereupon cease to exist, and the then members of the Board shall cease to be members thereof.

When a Rabbit Board is dissolved, the Governor may, at any time thereafter, by proclamation, constitute and appoint another Board, and all the property and all the rights and liabilities of the corporation so dissolved shall vest in the new Board; and if no such Board be constituted and appointed, then in the Crown: Provided that the proclamation constituting and appointing a Rabbit Board in place of a dissolved Board may be subsequent to the proclamation dissolving the same, and the Crown shall thereupon be divested of all the property, rights, and liabilities, or such of them as still subsist, of the dissolved Board, and the same shall vest in the Board constituted and appointed in its place.

Mr. T. BROWN, M.L.A., said that clause 8 should be amended so as to read "that the Pastures and Stock Boards should be constituted corporate bodies." This would be necessary, not only under the Rabbit Bill, but also for matters pertaining to the administration of the Pastures and Stock Protection Act. He begged to move, "That 'Pastures and Stock Protection Boards' be inserted wherever 'Rabbit Board' occurred."

Mr. CUMMING (Hillston) seconded the motion.

Mr. GIBSON (Hay) opposed it. It should remain as it was; because, from what the Conference had passed, the Rabbit Board consisted of the Pastures and Stock Board, together with the nominees of the Government.

MEMBERS: No, no! The Government only have a right to vote, not to appoint nominees.

Mr. T. BROWN, M.L.A., said that, for the purpose of administering the Rabbit Act, he thought it necessary to constitute the Boards corporate bodies, so that their acts could pass on to their successors. As an instance, he mentioned that Mr. Leslie's Board undertook to expend a certain sum of money in constructing a wire-netting to keep the rabbits off their area, and the members of the Board who came afterwards could repudiate the actions taken by this Board if they thought fit, because it was not a corporate body. It was, therefore, in the interests of right administration.

Mr. ALISON (Canonbar) said he would move, "That wherever 'Rabbit Board' occurred in clause 8 the words 'Pastures and Stock Protection Boards' be substituted."

Mr. T. BROWN, M.L.A., consented.

Mr. ROSS (Hume) seconded the proposal.

The Chairman put the question, and it was carried unanimously.

Mr. ALISON (Canonbar) said he wished to move an amendment. In line 21, clause 8, it said five members. He moved, "That the word 'eight' be substituted for 'five'"; because now that they had substituted Pastures and Stock Boards for Rabbit Boards it would be necessary to alter this in this way, because the Pastures and Stock Boards consisted of eight members.

Mr. BAYLIS (Narrandera) seconded the amendment.

On being put, the amendment was carried.

Mr. FREEMAN moved, after the word "proclamation," to insert "at the request of the Board or on the requisition of two-thirds of the voting power." Mr.

Mr. J. M. ATKINSON seconded the motion.

Mr. FREEMAN said that, as the proposer of this amendment, he would like to explain its object. It appeared here "the Governor," which usually meant the "Minister for Lands," might, by proclamation, dissolve the Rabbit Board. It might be a very undesirable thing for the Minister to have this power, and it was so that the Minister for Lands should not have this power to dissolve the Board without a requisition that he moved this amendment. It might be that they might become insolvent, or for other reasons want to dissolve; or again, the Board might be unsatisfactory and the voting power of the district might wish to have them dissolved.

Mr. OAKDEN (Cobar) moved, as an amendment, "That that clause be omitted altogether." Power could not be given to the Minister to do away with the Pastures and Stock Boards, and therefore this was *ultra vires*. It would mean that the Governor might by proclamation dissolve the Pastures and Stock Boards.

Mr. A. BROWN (Narrabri) thought that this difficulty could be got over by amendment, that when the Pastures and Stock Board is sitting as a Rabbit Board they should be a corporate body. There was no doubt that if the Pastures and Stock Board were to administer the Rabbit Act they would administer the Pastures and Stock Act also, but not at the same time; and when there was a meeting of the Pastures and Stock Board called they would deal with stock matters only, and then afterwards sit as a Rabbit Board.

Mr. ALISON (Canonbar) thought Mr. Brown was beside the point. What was before them now was Mr. Freeman's motion. It was a very simple matter and he could see no objection to it. If two-thirds of the voters wanted to have a Board dissolved then they should be dissolved.

Mr. A. BROWN (Narrabri) said that they should not dissolve the Pastures and Stock Board also.

Mr. ALISON (Canonbar) thought that if two-thirds of the voters could be found to wish that the Rabbit Board should be dissolved it would mean that they were all unfit for public offices.

Mr. Freeman's motion was then put to the Conference and declared carried.

Mr. FREEMAN moved that, in line 28, clause 8, after the word "Board," to insert "elected in accordance with the provisions of the Act." His reason for moving this was so that no Board would be reappointed in the place of a dissolved Board, except a Board elected by all the taxpayers.

Mr. FLANAGAN (Gunbar) seconded the motion.

Question put and carried unanimously.

Mr. OAKDEN (Cobar) wished to ask members whether it was wise to allow this clause to stand, wiping out a Board under another Act, which was what naturally followed. Would it not be better to leave that out? It might be establishing all sorts of anomalies.

The CHAIRMAN said that that had been already decided, and there could be no more discussion about it.

Clause 8, as amended, was put to the meeting and carried.

Clause 9.

Conduct of its business by a Board.

9. A Rabbit Board—

- (a) may employ a Secretary and such other officers and servants as may be necessary, and pay them out of the revenue of the Board; and
- (b) shall cause proper minute books to be kept of all its proceedings; and
- (c) shall cause true and regular accounts to be kept of all moneys received or paid under the authority of this Act, and shall give the owner or occupier of any private holding within the Rabbit District access thereto at all reasonable hours; and
- (d) shall produce for inspection to any person authorised by the Minister or the Colonial Treasurer for the purposes all its books, accounts, agreements, vouchers, letters, or other documents which may relate to any matter under this Act; and
- (e) shall report to the Minister on any matter or question referred by him for that purpose; and
- (f) shall conform in its conduct of business and its administration of this Act to any Regulations to be made in that behalf.

Mr. OAKDEN (Cobar) moved, "That clause 9 be struck out, and the following clause substituted: That the provisions for the conduct of the business of the Board should accord with or be similar to those of the Pastures and Stock Protection Act."

Mr. BRETT (Urana) seconded the proposal.

Mr. GIBSON (Hay) would like the proposer to explain in what way the procedure under the other Act was different.

Mr. ALISON (Canonbar) pointed out that it would be the same Board under the same Secretary, but that they must needs keep different books. He would wish however to give notice that he would move the recomittal of this clause subsequently, because it might be affected by a later clause.

Mr. OAKDEN (Cobar) withdrew his amendment, and then proposed that "Pastures and Stock Board" be substituted for "Rabbit Board" wherever it was consequentially necessary throughout the Bill.

Mr. BRETT (Urana) seconded the proposal, which was carried unanimously.

The Honorable RUPERT CARINGTON proposed that the words "all officers appointed to be under the direct control of, and hold office during the pleasure of the said Boards" should be put in after subsection (a). As they had to "pay the piper" they might as well have the appointment of the officers.

Mr. GORMAN (Berrigan) pointed out that that was provided for by "the Rabbit Board may employ a Secretary and such other officers, &c."

Mr. TAYLOR wished to take the Chairman's ruling as to whether the adoption of the Honorable Rupert Carington's amendment would not mean a virtual amendment of the Public Service Act.

The CHAIRMAN did not think it would be out of place for the Conference to express an opinion on the matter.

Mr. CUMMING (Hillston) seconded the Honorable Rupert Carington's motion, which was carried unanimously.

Mr. ALISON (Canonbar) gave notice that later on he would move an amendment to the next subsection (e).

Clause

Clause 10.

Authentication and service of documents.

10. Any notice, information, complaint, agreement, or other document, by or from a Rabbit Board, shall be sufficiently authenticated if it is signed by the Chairman of the Board, or, under his direction, by the Secretary of the Board, and authority in the Secretary or Chairman to so sign shall be presumed unless and until the contrary is shown; and it shall not be necessary for the Rabbit Board to affix its common seal to any document not being a deed.

Any notice or other document given to or served upon a Rabbit Board may be given to or served upon the Secretary or Chairman thereof.

Clause 10 was put to the meeting and carried as printed.

Clause 11.

Revenues of Board.

11. All fines, penalties, rates, and other moneys received by a Rabbit Board under or by virtue of this Act shall form part of a fund to be called the Rabbit Fund of the District.

Moneys forming part of the Rabbit Fund of the District may be applied by the Rabbit Board to the payment of any expenses of, or incidental to, the Board's administration of this Act, or of any costs or expenses incurred in accordance with provisions of this Act, and not otherwise.

The Governor may cause the accounts in connection with the Rabbit Fund of the District to be audited, and the expenses of the audit shall, if the Governor so require, be paid out of the Rabbit Fund.

Clause 11 was put to the meeting and carried as printed.

Clause 12.

Rabbit Rates.

12. Every Rabbit Board shall in each year make, or cause to be made, an estimate of the probable sum which will be required (in addition to fines, penalties, and other revenues) to enable it to duly administer this Act throughout the Rabbit District; and the said sum shall be raised by a Rabbit Rate upon private holdings within the district.

The amounts levied under the rate shall be proportionate to the respective carrying capacities of holdings; and to that end—

- (i) the Rabbit Board shall, in the first instance, strike the rate as a rate of so much per sheep, but not so as to exceed one halfpenny per sheep in any one year; and shall forthwith cause notice of the amount of the rate struck to be published in the *Gazette*, and in one or more newspapers circulating in the district;
- (ii) the Rabbit Board shall estimate as exactly as practicable the number of sheep which every holding within the Rabbit District is capable of carrying with good management in an average season; and for the purpose of such estimate—
 - (a) cultivated lands shall be taken to be capable of carrying so many sheep as they would carry if laid down in grass; and
 - (b) lands capable of carrying large stock shall be taken to be capable of carrying seven sheep for every head of large stock:

Provided always that only half rates shall be levied upon any holding enclosed with a fence which in the opinion of the Board is rabbit-proof.

- (iii) the Rabbit Board shall have access as prescribed to—
 - (c) returns of sheep made to Clerks of Petty Sessions and Inspectors of Sheep under the Diseases in Sheep Acts or any other Acts; and
 - (d) returns collected by the police or others for statistical or other purposes; and
 - (e) papers connected with the appraisalment of the rent or license fee of any Crown lands; and
 - (f) any other public documents having relation to the carrying capacity or condition of any such holding;
- (iv) the Rabbit Board may authorise a person to inspect a holding, and he may put to any person in occupation or charge of the holding, or to the owner thereof, questions upon all such matters as shall be necessary for the purpose of ascertaining the carrying capacity thereof, having first informed the person to whom any such question is put of his purpose in putting questions, and of his authority under this Act to put the same; and if any such person in occupation or charge or such owner as aforesaid shall refuse or wilfully omit to answer any such question to the best of his knowledge and belief, or shall wilfully make any false answer or statement in reply to any such question, he shall on conviction forfeit and pay a penalty not exceeding ten pounds.
- (v) the Rabbit Board shall determine the amount payable under any such rate in respect of every private holding within the Rabbit District; and the determination by the Rabbit Board shall, except in case of appeal as hereinafter provided, be final and conclusive: Provided always that no Rabbit Rate shall be payable in respect of any holding estimated to carry less than ten sheep.

Mr. ALTON (Canonbar) said that this was a very important clause. It dealt entirely with the manner of raising revenue for the Pastures and Stock Boards or Rabbit Boards. He disagreed with it entirely. They had now arranged that the Pastures and Stock Boards were to manage the Rabbit Fund, and, therefore, he thought it would be most advisable that they should adopt some system of taxation similar to that in the Pastures and Stock Act, on per head of stock instead of on the land. That was a simple system which did not cause any expense whatever and would be easily understood. If the tax were on the land, it would mean that a considerable army of men would have to go round and value all the rents of the land. Every 40-acre selection in the whole place would have to be valued and estimates put on them. He submitted that it would cause an enormous expense to the district which, he held, would be perfectly unnecessary. Of course it was true that the Crown held considerable areas in various districts,

districts, and they now paid towards the Pastures and Stock Boards. They desired that the Crown should now pay towards the destruction of rabbits also. He thought that they could now bring in a resolution to the effect that any abandoned Crown land should be taxed on the basis of one sheep to 5, 6, or 7 acres—whichever they chose—or it might even be one sheep to 10 acres. This would do away with the necessity of having these Crown lands valued. It would be a rough and ready but a very simple way of assessing the taxation. Many of the gentlemen present had found it difficult to know how farmers and others would be brought in unless their lands were valued. He thought there again they might bring forward a simple way of getting over the difficulty by providing that any cultivated land be on the basis of 1 acre to one sheep. According to the Act, as he read it, any man who had cultivated his land would be required to pay as if he had laid it down in grass. He would like Mr. Taylor to tell them whether it was not the case that it was intended that those words should be “laid down in cultivated grasses.” They could not say laid down in ordinary grasses; that would not be “laid down.” He disagreed with the idea that cultivated lands should be taxed as if laid down in cultivated grasses. They should not be taxed any more than if the land were in its original condition. In order to prevent valuation and its attendant expense, it would be a fair and reasonable thing to say that any cultivated land should be equal to 1 acre to one sheep, or 1 acre to two sheep. He hated the idea of valuation. Men of fads were going round and valuing the land at £1, £2, £3, or £4 per acre. He thought his scheme would meet the views of the people who held cultivated lands, and would be cheaper and less cumbersome to work.

Mr. TAYLOR explained that the intention was that the assessment on cultivated land would be what it would carry if laid down in cultivated grasses.

Mr. ALISON (Canonbar) thought that if it were “laid down” it would mean something that was put there. They should omit this dangerous clause. He might have to pay at the rate of ten, fifteen, or twenty sheep to the acre. It would be better to be sure than to be sorry. He would move, “That in clause 12, line 31, the amounts levied under the rate shall be proportionate to the stock returns; and to that end, the Rabbit Board shall, in the first instance, strike the rate as a rate of so much per sheep, but not so as to exceed one penny per sheep in any one year; that any abandoned Crown lands shall be taxed on the basis of one sheep to 6 acres, and in cultivated land on the basis of 1 acre to one sheep.”

Mr. ATKINSON seconded the resolution.

Mr. ALISON (Canonbar) said that he would cut the resolution in two—First, “That line 32 be struck out with a view to the insertion of the words, ‘the amounts levied under the rate shall be proportionate to the stock returns.’”

Mr. ATKINSON seconded the proposal.

Mr. FLANAGHAN (Gunbar) said that the very best agricultural land in the Hay district was the worst grazing land, and the worst grazing lands were sometimes the best agricultural lands. He said it might cost a man £2 or £3 to the acre to clear land that would not carry a sheep to the acre, and by this he would be taxed for his industry.

Mr. GIBSON (Hay), speaking to the motion, said he would point out that they made their stock returns on the 31st December each year. The number of stock a man returned on the 31st December meant the number that this country could carry. There were some men who made a practice of having no stock on the 31st December. There were other men who carried in a few months—in summer only—all the stock they could carry in the year. That would be the difficulty. He thought, taking everything into consideration, although a person might be appointed who would have to make a sort of assessment, the owners should contribute to this rabbit fund in proportion to the number of stock their land would carry, independently of any returns, because the returns showed neither one thing nor the other. He proposed as an amendment, “That the tax should be based upon the number of sheep or stock the holding was estimated to be able to carry.”

Mr. GORMAN (Berrigan) had much pleasure in seconding Mr. Gibson. He agreed that in many districts many men would have no stock at all, and he had known some of their worst infested areas held by mortgagees, which had nothing but rabbits on them, and he presumed that they would make no returns. This clause as it read here would suit very well. He thought that subsection (r) should stand. If they elected men to the Board they should have confidence in them. These men would know the circumstances of the district.

Mr. OATLEY said he might state one fact here. Speaking from experience, there was some land they had had valued by different people as to the carrying capacity. The average was from 8 acres to a sheep down to 2. If this proposal went forth it would give a great deal of trouble.

Mr. CUMMING (Hillston) rose to support Mr. Gibson's motion. It would be very unfair taking sheep only. In his district there were abandoned runs as well as abandoned Crown lands. There were 66,000 acres in one lot, and they would escape taxation altogether.

Mr. BACON (Brewarrina) thought that the last speaker did not grasp the full extent of Mr. Alison's motion. He wished to provide for some assessment of Crown lands which were unoccupied. He would point out that in the most particular thing—the assessment of rent—the stock returns were the basis by which the Chairmen of the Land Boards were guided. They must know that when rents have to be assessed there is a great deal of trouble between the Crown Assessor and the owners. Were they going to have a Court to assess the carrying capacity of each holding? He thought that the only possible basis that it could be done on was that of the stock returns. They were the only safe guides to go by. It was really not worth while doing it in any other way.

Mr. ATKINSON would suggest that they could arrive at a good understanding on this point without going to the expense of having their land valued. Let the members of the Boards in the different districts assess the carrying capacity. Those men living in the district, would have a very good idea of the carrying capacity of any particular run, and therefore it might safely be left to them, with a right of appeal and the right to bring evidence in support of their appeal.

Mr. ALISON explained that his motion was simply to adopt the process that had been adopted, and was now in force, under the Pastures and Stock Protection Act.

Mr. DILL (Hay) rose to support Mr. Alison's motion, and in doing so would like to see certain words that had been made use of altered. He thought that rather too much was being asked from the Crown. He was thoroughly in accord with Mr. Alison's motion. Only recently he was on a run which had been abandoned. It was thoroughly fenced; there was a comfortable homestead and a woolshed on it, and yet it had been abandoned. He had seen millions of acres which would not carry one sheep to 20 acres.

Mr.

Mr. ATKINSON said that his amendment was that the assessment should be on the carrying capacity, and the carrying capacity be arrived at by the Boards themselves with the right of appeal by the lessee. No valuator should be sent round.

Mr. BROOKE (Boggabri) quite agreed with Mr. Alison in every respect, but did not think they could discuss this amendment without discussing the rest of his proposed amendment. Mr. Flanagan had said that he had land which was utterly useless for sheep, and which cost £3 an acre to clear, and he would be now taxed on what it cost him to clear it; but then he ought to, because he would be proportionately benefited. He would benefit to a greater extent than another man whose land was only worth £1 an acre.

Mr. FREEMAN rose to support Mr. Alison's amendment. He said they all knew that the returns of the stock on the 31st December, in the majority of cases, represented more than the carrying capacity of the country, and though perhaps one man might not have a sufficient number of stock, and might not be right up to the carrying capacity on the 31st December, his neighbour would probably be so much over; and so the thing would cut all round very evenly. Surely they had had quite sufficient for the last fifteen years of people running all over their runs cackling about them. The proper way to take the assessment was on the returns under the sheep Act. One might be a little more one year and another year less, but in a number of years the thing would average itself.

Mr. LAURENCE (Balranald) would support the resolution that the assessment be made on the stock returns. He considered it was the fairest way for the raising of funds. It would be most unfair to put in the hands of a Board a large district to assess. The amounts the Boards would assess at would be found fault with almost everywhere. It should be kept in the Stock Board's hands altogether, and by taking the returns sent in to the Government under the Sheep Act would be the fairest way.

Mr. TREFLE (Temora) rose to support Mr. Gibson. He thought Mr. Gibson's amendment should be carried in its entirety. A short time ago he spoke in the interests of the small men, but now he spoke in the interests of the large men. There was no other course open than to assess the land on the carrying capacity. The other way would be setting a premium on dishonesty. The suggestion by Mr. Atkinson that there should be a power of appeal was a good one. Experienced men who were elected to the Stock Board were not likely to make a mistake. There was no other way which would approach the fairness of this system of taxing by the carrying capacity.

Mr. ROSS (Hume) said he would support Mr. Alison.

Mr. BROOKE (Boggabri) said they had just had one valuation all over the freehold land in the Colony by Inspectors appointed by the Crown, and look at the result. He did not suppose there were two men who were satisfied.

Mr. ALISON was quite astonished to find any difference of opinion in this matter. He only proposed to adopt the mode that had been adopted under the Pastures and Stock Act and was now in force. He was proposing no innovation, no revolution at all. It had been found to work fairly, equitably, and correctly, and he did not see what they could do better than to adopt that principle. But according to the principle which was proposed this Stock Board was to be composed of stockowners, and they were to assess the carrying capacity of the lands in their district—that is to say, that the members of the Stock Protection Board were to be the judges of the value of their own properties. Now, he would say that no body of men were to be trusted with such a responsibility. It would be dangerous. It was most unusual to entrust eight men to value their own properties. When the judgments came out he thought they would see some very curious anomalies. It would be much better for them to say they would adopt the old simple plan under the Pastures and Stock Act, and they should adopt the same mode of taxation. It was simple, easy, and equitable.

Mr. GIBSON (Hay), in reply, pointed out that the right which Mr. Alison would deny to the Rabbit Board was already possessed by the municipal councils. In valuing the property they held a friendly Appeal Court, and in ninety-nine cases out of a hundred this friendly Appeal Court settled the cases, and in the one-hundredth case they went to the Appeal Magistrate. He would like to point out that the returns did not give a true statement of the holding of the run. In his district they had got freehold lands abandoned; they were in the hands of large monetary institutions, and these should pay their share of any rabbit taxation. How were they going to get at the owners of these properties? They would not kill the rabbits, and they would not put stock on them, and Mr. Alison's proposals made no provision to make them pay their share.

Mr. ATKINSON said the valuers who would go out in this case would not be the same class of men as those sent out by the Government to value the lands. These men would be appointed by the Board themselves, the same as the municipal valuer was appointed by his own council. The people would have the right to appeal, and the people would bring forth evidence and say what could be carried. That would be the fairest way of getting at the revenue which should be derived from these lands. Many people carried stock for certain periods of the year only; for instance, many people kept large tracts of country for carrying their stock during the winter season. They wanted to get at the acres which carried rabbits. He thought, therefore, that they should be taxed on the carrying capacity of the whole run. Mr. Alison had said that he could not see how anybody could follow any other course than his; well, he, for his part, could not see how anybody could go for any other course than his own (Mr. Atkinson's).

Mr. Gibson's amendment was put to the meeting, and lost by 28 to 15.

The original proposal by Mr. Alison was put, and carried by 25 to 13.

Mr. ALISON (Canonbar) said the resolution which had been passed necessitated an amendment in line 29 of Clause 12. He would move that the words "private holdings" be struck out and the word "stock" be inserted.

Question put to the meeting and carried.

Mr. ALISON (Canonbar) said in line 35 he would move, and he was not wedded to the figures in any way, that after the word "year" all the words in that subsection be struck out with a view to the insertion of the following, "that unoccupied lands shall be taxed on the basis of one sheep to 6 acres."

Mr. BACON (Brewarrina) seconded the proposal, but would like Mr. Alison to give a definition of what he meant by unoccupied lands.

Mr. ALISON (Canonbar): Lands in the hands of the Crown that were not held under any form of lease or license. He was quite willing to add that. It was advisable for them to deal with the different divisions as they came up; he wanted to deal with the lands in the hands of the Crown which were not under

under any form of private ownership whatever. He would like to deal with that alone just now, and afterwards go on to the cultivated lands, and then go to the unstocked lands. His intention was simply to deal with lands in the hands of the Crown, by which their voting representations would be regulated. This motion, so far as it went, was entirely for land held by the Crown under no form of lease.

Mr. DAVIES (Gunnedah) moved an amendment that it should be 20 acres to the sheep. There were thousands of acres of land that it would be impossible to stock because they were waterless.

Mr. A. BROWN (Narrabri) seconded the amendment.

Mr. CUDMORE (Wentworth) supported Mr. Davies's amendment. There were some public lands that would not carry a sheep to 50 acres. He thought it should be arrived at on the basis of the carrying capacity or sheep returns of the neighbouring lands. They could take the stock returns for each district and calculate the carrying capacity of the unoccupied lands on that basis.

Mr. BROOKE supported Mr. Davies's amendment. There were lots of gentlemen present who were working country which would carry a sheep to 10 acres. It stood to reason that if the adjoining lands were as good it would not be unoccupied.

Mr. WILKES (Broken Hill) would support a sheep to 20 acres.

Mr. BACON (Brewarrina) said if they took on the amendment, 500,000 acres divided by 20 came to 25,000, and 25,000 sheep at $\frac{1}{2}$ d. per sheep came to about £50—that is to say, the Minister would have to pay over £50 in a big district. He thought, therefore, that a good deal was to be said for not making the amount so big.

Mr. TREFLE (Temora) said that as there was such a wide diversity of opinion, from 6 to 50 acres, it seemed to him it would be better to have the land valued.

Mr. CAMERON (Ivanhoe) supported Mr. Davies's amendment because there was a large amount of land already in occupation by lessees which was valued on a basis of 20 acres to the sheep. Well, the State would say, "We have all the worst land; a great deal that is occupied is carrying a sheep to 20 acres, but this land is of such a nature that it is not worth occupying even if they get it at a rent based upon its carrying capacity at 20 acres to the sheep." He therefore thought that a basis of 6 acres to a sheep would throw out every acre of land that was not already under occupation, and he would most decidedly go even beyond the 20 acres and put it at 30.

Mr. HEBDEN (Wanaaring) proposed an amendment that it be 10 acres to a sheep. All the lands would carry a sheep to 20 acres if it were improved, but people would not improve it.

Mr. FLANAGAN (Gunbar) seconded Mr. Hebden's amendment. He did not mean to insinuate there was plenty of land in the Colony that would carry a sheep to 20 acres. Some men had pulled their coats off and set to work to make the country capable of carrying sheep, and they were to be taxed for having taken their coats off and set to work.

Mr. ALISON (Canonbar) said he was not bound to these figures; and as there was a feeling in favour of a sheep to 20 acres he would be willing to accept Mr. Hebden's amendment, going halfway, and making it a sheep to 10 acres. He was quite pleased to see what a number of advocates the Crown had in the Conference. The proposition was to let the Crown off most easily. He could not conceive that in any district they would have £20 to pay. He really thought a sheep to 10 acres was about the worst that he knew of in the Western Division, and the Crown lands could not be very much worse than that anywhere. There was some good land and some indifferent land, and he thought perhaps it would be better to accept Mr. Hebden's motion for a sheep to 10 acres; and he would amend his motion to that effect, namely, "That public lands shall be taxed on the basis of one sheep to 10 acres."

Mr. CUDMORE (Wentworth) said that Mr. Alison had remarked that there was very little country in the Western Division that had been assessed at 10 acres to the sheep. He begged to differ. There was a great deal that would only carry a sheep to $12\frac{1}{2}$ or 15 acres.

Mr. Davies's amendment was put to the meeting, and lost by 24 to 13.

Mr. Alison's motion, of one sheep to 10 acres, was put, and carried by 24 to 10.

The Conference adjourned until 10 o'clock the next day.

THIRD DAY—11TH MARCH, 1897.

The Conference met at 10 a.m.; Mr. Lakeman in the Chair.

The minutes of the previous sitting were read and confirmed.

The Minister for Lands entered amid acclamation, and delivered the following address:—

I think it better, Mr. Chairman, instead of waiting until you have concluded your business, when probably you would submit all your resolutions to me, to occasionally come in and confer with you on the progress that you have made. I think that is the better course to adopt, because you will finish your business at a certain time, and you will all have made your arrangements to go home, and probably there will only be half an hour left to come and talk the matters over with the Minister; and it might be found then that I could not accept your proposals, and then you could not stay back to reconsider them. I thought it better, therefore, to come and have a talk with you. There may be differences of opinion that we can get over by a little mutual consultation; so that I am sure you will not object to my coming here. I will first of all read a telegram which I have received from Mr. Alexander Oliver, of the Land Appeal Court. "Please offer my services to the Rabbit Conference to draft their Amended Rabbit Bill—of course gratuitously. I return to Sydney to-day." We could not have a better draftsman than Mr. Alexander Oliver, and I am sure you will agree with me it is extremely kind of him. You will understand of course that whatever I say to-day I do not want to dictate at all. I simply want to express some views to which you will pay that consideration to which they are entitled; and if you differ from those views, express your opinion upon them, and then we may after all be able to come to some decision which will mean harmony. Now I notice you have passed a resolution placing the administration of the Rabbit Bill in the hands of the Stock and Pastures Protection Board. The difficulty I had in drafting the Rabbit Bill of 1895 was to avoid having cumbersome and expensive machinery. I saw that if we had to put the country to the expense of having a separate Rabbit Board elected that it would perhaps entail expenditure that reasonably

reasonably we should endeavour to avoid. I am quite in sympathy with the views which have been so freely expressed in this country, that to a large extent we are over-governed and that we have too many Boards in existence; and if I can by any means, as the outcome of this Conference, take some existing body and make it do the work that has to be done under this Bill, I should consider it a very great step gained; and, therefore, if it is possible to have a separate Bill making use of existing bodies, I should be one to grasp the situation and make use of those bodies; but if they have defects in their constitutions you are not likely to have those defects overlooked in Parliament. I do not know a Pastures and Stock Board from Adam—I never met a Board, and I know very little of its operations; so that I can have no preconceived opposition to them—none whatever. I believe they are very good Boards, and if they can be made use of, so much the better. But you all want to pass a Rabbit Bill; you do not want to have a Bill drafted which will look very well here but will never get through all the obstacles of Parliament. You want to have that Bill, after it leaves here, drafted into the Statute Book of the Colony. It is only an act of kindness to point out to you objections that Parliament may take and which I cannot overcome. No matter how much I may wish to place the sole control of that measure under the Stock Protection Board, I tell you candidly I do not think I could pass the Bill. It is no use misleading you; it is no use my coming back in twelve months' time to tell you I have failed. The small men in the community have a very large say in the election of representatives to Parliament, and their members count more than the members of the large men at the ballot-box. These small men have representatives in Parliament who will take up the cudgels on their behalf, and you may be sure of very strong opposition in Parliament to handing over the control to the body in which the so-called small men have not adequate representation. The difficulty you have got to overcome is to make the Stock Protection Board of such a character that it will be thoroughly representative of the large and small interests involved; and it means this—that if the present constitution of those Stock Boards does not give adequate representation to the smaller holders in the country, you will have to propose such amendments in the constitution as will give them a fair voice in the election of Stock Protection Board members, and a fair voice in the management of the work. Then, in addition to that, I know there is a proposal to enlarge the franchise. You must go further than merely enlarging the franchise; you must do it on a different basis altogether. There are men who have no stock at all, who are not engaged in stock-raising—perhaps they may have a few draught horses or bullocks for ploughing—men engaged in agriculture, who are injured by the depredations of rabbits, and who necessarily have to make some protection for themselves against the inroads by the rabbits. It seems to me that these men are largely affected by rabbit legislation, and they are entitled—in a measure which will impose taxation upon them—to representation, because I cannot say that a measure will be a good one that allows any class to be taxed without representation. Therefore, if a man who has got 2,000 acres under wheat is taxed, you must be prepared to concede to him some voice in the representation. I do not think there ought to be any difficulty in this matter. I do not see that there should be any difficulty at all, but you ought to be prepared to enlarge the basis of election of the Stock Protection Board so as to take in all those whom you propose to tax and those whom you propose to benefit. Therefore, it seems to me that there ought to be some basis; and if the Conference can arrive at thorough unanimity on this point, you will be doing a distinct public service and you will be justifying your discussion and your deliberations, because we shall have no need then to create a new Board with all the expense of election, but we shall have one Board, already doing good work, made still more useful by enlarging its functions. I hope, therefore, that before you have concluded the consideration of this subject you will have gone into this very difficult question most thoroughly, and that you will have drafted some clauses in this Bill to amend the Stock Protection Board—the Diseases in Sheep Act—so as to enlarge the election, or mode of election, of the Stock Protection Boards. Now, the next point, and I can see that we are not at variance at all, is with regard to the obligation of the Crown to perform its work on the Crown lands. I regret, indeed, to see that some gentleman said yesterday that he could state, almost with authority, that the Government had no intention of dealing with the rabbits on its own land. I presume that my word must be taken for what it is worth. It is not lightly given in these matters. I have never broken a promise which I have made to the people of this country. I state that I am imbued with the knowledge that it is an unfair thing to tax the private holders or occupiers in the community to destroy the pest, and at the same time to allow that pest, without any hindrance at all, to increase and multiply on the Public Estate. Therefore it is incumbent upon the Government to do its fair share of the work, if the work is to be done thoroughly. If the Government is prepared to neglect what it ought to do, it has no right to impose an obligation on private owners to do what the Government will not do. I say we must accept one another's protestations in this matter. You impose an obligation on the Crown, but you cannot vote away a sum of money per annum for the purpose of doing the work; you must leave that to Parliament, which votes supplies year by year, to vote the amount, which will be at the disposal of the Minister for this work. Therefore I have provided that the Minister shall expend some sum of money for this purpose. So long as I am in the Ministry, you can always rely that there will be submitted to Parliament a sum of money to be expended on the Public Estate to destroy rabbits. If Parliament refuses to vote any money we must put up with it; but if the proposal is submitted by those who are in sympathy with you, then I think you will be satisfied with them. In the next place, a hard and fast rule is stated with regard to the rate that ought to be imposed on the Public Estate. I think it is reckoned as carrying a sheep to 10 acres. You must know yourselves that some of the valuable estates which are held by the Crown for commonage, &c., will carry a sheep to an acre, and it will be necessary in these cases for the Crown contribution to be much larger than one sheep to 10 acres, and then there are portions of the country in the far west where it will not carry a sheep to perhaps 40 or 50 acres; so that if you impose upon the Crown the duty of contributing by this hard and fast rule, you make the Government contribute too much in one district and too little in another. Take, for instance, the Pillaga Scrub. That country, I suppose, would carry a very poor percentage of sheep compared with the lands we have in reserve in Riverina; and the simplest way for the Crown to deal with country like that is to fence its own rabbits in, because there is only one holder in the whole of that Pillaga Scrub. I would like to have more. I would like to have twenty, but, unfortunately, we have got very few holders; but there the rating should be very much less than in the richer country. If you go farther west, to Wilcannia and Mount Poole, the rating must be in accordance with the requirements of the country; so that I think it is better not to have a fixed hard-and-fast rule, but to leave it to the various Stock Boards in the various districts. Let local experience decide this. There are only these two points; and I

thought it would be better at once to mention them in order to avoid any misunderstanding, because there is a misunderstanding growing up, and some think that the small man is to be shut out entirely. I think we can bring these divergent views into harmony, and draft something which will satisfy all parties concerned. And on the other point I have mentioned, I think a little reconsideration will show you that it would be, perhaps, better to leave it to the varying requirements of the localities. I have nothing more to say, gentlemen, and I would be very glad to hear, for a few minutes, if there are any other points on which there might be any need for mutual conferences.

The CHAIRMAN read the resolution regarding the basis of representation.

The MINISTER FOR LANDS continuing said: I do not think that resolution is a right one, because the effect of it would be that persons who have not got the franchise under the Stock Protection Board would be exempt from taxation. If you put it the other way round, that there will be representation to all who are taxed, I have no objection to it; but if you are going to exclude people from being taxed, simply because you are going to exclude them from having representation, you are wrong. That reads the wrong way. I say at once that agriculturists who have no franchise under the Stock Protection Act ought not to escape taxation—that they ought to have the franchise, and that they ought as well to have the burden of taxation.

The Honorable RUPERT CARINGTON said that he would like to say a few words, as he had been the mover of the resolution which placed the control of the rabbits under the Stock Protection Board. He opposed the proposal in the Bill of the Minister on the ground that we should have no taxation without representation, and he most carefully brought that in, as it was the keynote of his amendment that they should bring in an amendment so as to prevent any taxation without representation. They were dealing with agricultural lands, and how they were to be taxed. He agreed with the Minister that nothing would be worse than that a certain number of people in a district should be taxed and a certain number not taxed. He thought an amendment could be passed that would fairly meet the case. He thanked the Minister for the very conciliatory attitude he had taken, and for the consideration he had shown to the alterations which had been made in the Bill; and he sincerely hoped the Conference would be able to back the Minister up very considerably in his efforts to produce a Bill that would meet the case. There must be mutual concessions on both sides, and he, on his part, would be quite willing to withdraw the resolution about taxation of the Crown. He thoroughly understood the Minister's objection to it, and hoped the Conference would adopt the same attitude to the Minister, and by mutual concession strengthen his hands and enable a Bill to be passed acceptable to him and to ourselves.

Mr. WILKES (Broken Hill) thought the Minister did not clearly grasp his meaning. He stood there as a representative of 11,000,000 acres of land; therefore he felt it his duty to speak. There was a clause in the Act (clause 32) that only allowed a maximum to be laid out by the Minister, and he took it that that maximum sum was equal to the public lands as against the other lands. Take the public lands as 20,000,000 acres against 2,000,000 acres; the Minister can only lay out a maximum of one-tenth of what may be collected. He maintained that about £100,000 might be collected, and therefore the Minister will have to spend £10,000. £10,000 would not suffice. The public lands were the worst infested, and it would take a far larger sum annually than £10,000. The sum which the Government limited themselves to in this Bill would not be sufficient.

The MINISTER FOR LANDS: Do you mean to tell me there are 20,000,000 acres within your district.

Mr. WILKES (Broken Hill) said he estimated that as the amount of public lands in the Colony.

Mr. J. FLANAGAN (Gunbar) drew attention to the fact that the last speaker had yesterday supported a motion that the Minister should be taxed by a sheep to 20 acres.

Mr. WILKES (Broken Hill): No; a sheep to 30 acres.

Mr. FLANAGAN (Gunbar) said he stood there as a representative of the farming class. He had supported Mr. Gibson's motion in the direction that the Minister has now said it should be corrected. The farmers as a rule were apathetic. They did not take part in public meetings, but they would take their part on the voting day, and defeat what was done at the Conference if they did not treat them fairly; and he could assure the Minister he thought there were very few delegates who doubted his sincerity as regarded any proposals he might bring forth with regard to the Rabbit Bill. Here was the point—that they prayed that Parliament would enact a law that would compel land-owners to at once commence to operate against the rabbit pest; but Parliament would not enable the Minister to commence the work. He would be delayed until Parliament granted the money, which might mean a delay of two or three years; therefore, it would be unfair to land owners that they should be compelled to kill rabbits straight away when the Minister would not be enabled to do his share of the work.

Mr. ALISON (Canonbar) said he was very glad that the Minister for Lands had come there to confer with them, and he thought the Minister would find they were very much in accord with him. They were now dealing with the question of the voting and the franchise, and they intended to reduce that franchise to the lowest possible reasonable point. They did not want to bring in a man who has only a pet sheep or a man who has only a spring-cart horse. All land-owners and stock-holders who could reasonably be called land-owners and stock-holders should have a vote. The present law allowed any man who had ten head of large stock or 500 sheep to have a vote. If the small owners considered that 500 sheep was too high a limit, they could reduce that vote. It could hardly be conceived that anyone would want to reduce the number of large stock from ten head.

The MINISTER FOR LANDS: Supposing he had no stock at all, but about 300 acres of wheat land?

Mr. ALISON (Canonbar): They intended to deal with the wheat lands by assessing them on a basis which would allow them a sufficient vote. They did not desire them to pay a very large taxation. As far as possible, men who had cultivated their land should be very lightly dealt with in their contribution to the rabbit fund. They thought that any man who had brought the land up from a sheep to 10 acres to a sheep to 5 acres ought to escape taxation as much as possible, and they intended to make the taxation as light as possible and his representation would be according to his taxation. He was sure the farming members there would be entirely able to say what taxation they proposed to pay. Under this Bill the rate was not to exceed $\frac{1}{4}$ d. per sheep. In any case the taxation would not be very severe on the owners of cultivated land and they would have full representation in accordance with their taxation. He was the mover of the measure that the meeting passed yesterday in regard to Crown lands, and their idea was that the taxation should not be extreme on the Crown in any way. It was simple, and the Crown would pay just

just the same if every separate piece was valued. The taxation was $\frac{1}{2}$ d. per sheep and the Crown could estimate at once what the amount of their taxation would be on the number of acres which were public lands at $\frac{1}{2}$ d. per sheep on every 10 acres of land. The Crown would know how much they had to pay each year. He was firmly of opinion that it was the best proposition for the Crown and for the people.

Mr. BACON (Brewarrina) desired to refer to the second part in which the Minister said some gentlemen expressed a doubt as to his (the Minister's) sincerity in making money available on public lands. He wished to state, in explanation, that in following the Minister's own statement that he was perfectly sincere and would do his best to get the Bill passed in the shape they put it, he was subject to the vote of Parliament. He did not in any way intend to refer to the present Minister, but to the lack of administration on the part of past Ministers, who never put the compulsory clause in operation—in fact, never did anything. He referred to a place where the public lands simply swarmed with rabbits and the private owners could not put them down. The stock routes were infested, and he knew of places where the Minister had never made any payment. He would like to refer to another point where he had been misrepresented. One gentleman stated that in his district there were 500,000 acres of public lands, and when they were discussing the question of assessing these lands at one sheep to 10 or 20 acres, he made a hurried calculation and found that the Minister would contribute £50. Estimating the public land of the Colony at 20,000,000 acres, at $\frac{1}{2}$ d. per sheep the Minister would pay £2,083 at one sheep to 20 acres. He had stated that the contribution would be very small, and at 10 acres to the sheep on 20,000,000 acres it would be only about £4,000. That did not seem a very large contribution. He only wished to set himself right before the Minister with regard to what he stated about this matter of the money being available.

Mr. T. BROWN, M.L.A. (Budgerabong) said that as he was the author of the clause which the Minister had taken exception to, he would like to make some explanation. He thought it was a perfectly fair and just provision. In the Minister's Bill it was proposed to constitute separate Rabbit Boards, and the franchise was a very wide and liberal one, but the Honorable Rupert Carington brought in a motion which placed the whole control of this Act in the Stock Protection Board under which the maximum members of the Board are elected by sheep-owners with the minimum voting power of 500 head of sheep; and this would mean that a large number of contributors under the proposed legislation would be completely excluded from the administration of the funds they would have to contribute, and in order to safeguard their interests and to carry out the principle that there should be no taxation without representation, for the time being he moved that clause; but to alter that franchise and to enable those men to come under the operation of this Board, does not mean merely an alteration of this Act but an alteration of the Stock Protection Act in that direction. The small owners will very willingly welcome an alteration in that direction. All that they require is to have a voice in expending the money they are to contribute. This resolution was simply to conserve their rights until such time as an alteration was made.

The MINISTER FOR LANDS said that Mr. Bacon had been at some pains to point out that the path pursued by the Crown in the past would give some idea of its possible path in the future, and that the Bill did not propose a sufficient burden on the Crown. He was sure they would pardon him for reminding them that the history of the past twenty years proved that the Government of the Colony had not been behindhand in providing funds for rabbit destruction. In seven years there had been paid from the Consolidated Revenue no less than £503,000 towards rabbit destruction, but altogether £881,457 had been expended in the attempt to exterminate the pest. He thought the statement of those figures would disabuse the minds of anyone as to Parliament not being willing to vote supplies for that purpose; but there grew up a feeling in the minds of the public that money was being spent from the Consolidated Revenue without gaining any commensurate return in rabbit destruction, so that it behoves any Minister at this time to look before he leaps, and not pledge the Parliament of the country to an expenditure which on analysis will not be proved to be fruitful. That is why the Bill must be drawn in this way. Parliament has had such an experience of rabbit destruction that it will trust no Minister with the power to expend moneys until its consent has been obtained. Since that time they had constructed 956 miles of barrier fencing, at a cost of £48,800, and during the last twelve months he had caused 110 miles of fencing to be constructed in order to prevent the wave getting into the northern and western districts. It had been represented to him that the fence from Narrabri to Mungindi was essential for that purpose, and on that ground the State contributed one-half of the cost. These facts show that the Government are not inclined to stand still as long as they can see some return in value for the State expenditure. It may be that clause 32 does not provide anything that is necessary; but this Conference has met here in order to improve the Bill, not to condemn it entirely because some acute man could find a fault here and there. If they went into arithmetic, and the figures did not pan out as they would like, that is no reason why it should be condemned. If they put it at 10 acres to the sheep, they have provided for the Minister to expend £10,000—that is the sum he had put in—and if he had blundered, they also had blundered. First of all, with regard to the municipal districts. Rabbit destruction being under the control of municipal councils, he did not see any necessity for the Stock Protection Boards to intrude themselves into municipal districts. The borough of Broken Hill had at times had a rabbit plague of quite a different character from the plague as they get it. He had had to close the public schools in consequence of the rabbit plague. The plague had very often to be dealt with, having regard to the health of the inhabitants. The rabbits when poisoned came there to die, and it made it insanitary for the school operations to be carried on. There ought to be no interference with the municipal councils administering the Act. He did not think they should oppose the proposal for State representation on those Boards. The more the Government is required to find money, the more the Government will say they must have representation on the Boards. They could not expect the Minister to go and vote like a landowner for the members of the Board. There must be some dignity in the Government. They had had experience of the men the Government had appointed to the different Boards in the country. The Government were likely to insist upon having some representation on these Boards, so that the taxpayers of the community who had provided some portion of the money might be represented. He hoped they would excuse him coming there to-day, as he did not want in any way to interfere with them.

The Minister then withdrew amid acclamation.

The CHAIRMAN thought Mr. Carruthers was very earnest in his intentions to help the Colony to get rid of this rabbit pest. They must take his word for the public expenditure that would be incurred, and he did not think the Minister would be behindhand when the time arrived. He should have liked to see the Minister there after they had discussed the whole of the franchise.

Mr.

Mr. R. GIBSON (Hay) proposed that the matter for discussion should be the constitution of the Stock Protection Board, and on what basis they should be elected.

Mr. ALISON (Canonbar) on a point of order, contended that clause 12 must be finished first.

The CHAIRMAN thought that if they went on with clause 12 they would have to go back over the old ground.

Mr. S. NIXON (Gunbar) seconded the motion.

The question on being put was negatived.

Mr. ALISON (Canonbar) said they had to deal with the cultivated lands. As he pointed out yesterday, in clause 12, subsection (a), it said, "cultivated lands shall be taken to be capable of carrying as many sheep as they would carry if laid down in grass." He disagreed with the proposition in the Bill. He thought that cultivated lands, instead of being taxed as laid down in grass, should be taxed as if in their normal condition. He thought it would be found impossible to state the value of any cultivated land in its original state. They could not judge from the surrounding country. It might not be of the same nature. It would be best for them to arrive at some conclusion as to how many sheep an acre of cultivated land should be assessed at. He would like to see it agreed that all cultivated land should be put on a basis of 1, 2, 3, 4, or 5 sheep. He pointed out to the farmers that if they had an expert going round, the expert would go to the Board and give his opinion, and the farmer would then have to go to the Board and give his opinion, and would have to bring witnesses, and there might be an appeal to another Board, and by this means he would be put to great expense. If they could arrive at a rough and ready way of assessing him it would be much cheaper to the Board, and much cheaper to the farmer, and he would know exactly what he had to pay. The whole of the money would go to the Board without any subtraction for the expense of the expert who would go and value that land. He thought if they had to value the land the expense they would have to go to would be more than the amount contributed. Let it be put at a small lenient rate, so that no farmer should be put upon. He would sooner see a man get off than that he should pay too much. He moved that any cultivated lands should be assessed on the basis of 5 acres to one sheep.

Mr. J. H. VARCOE (Hillston) asked how would his cultivated lands be assessed at a sheep to the acre. He was already assessed at the stock that the land he had cultivated was carrying.

Mr. COOK (Beringerry) moved as an amendment, "That it would be 1 acre to two sheep." He was both a wheat-grower and a sheep-owner, and knew something about the matter. They wanted a reasonable thing, and did not want to get off too easily. A sheep to 2 acres was a fair thing.

Mr. GIBSON (Hay) seconded the amendment *pro forma*, although he was opposed both to the motion and to the amendment. The Minister had pointed out the folly of laying down a hard and fast rule. In his district it took 3 acres of good grazing land to carry a sheep; in the Berrigan district 1 or 2 acres will carry a sheep; in other districts two sheep might be carried to an acre. Why should we lay down a hard-and-fast rule that will give a concession to one class of owners in one district, and will not give a concession to another class of holders in another district. Some gentlemen kept harping on these experts. He did not know what part of the Colony they came from. He came from a part of the country where there were a large number of these experts. He thought it could safely be left to the Board. They were going to elect their own members, and they could safely leave it in their hands and to their practical knowledge, and there should be no necessity to bring men down from any other part of the Colony to give evidence.

Mr. J. R. BRETT (Urana) seconded Mr. Alison's motion.

Mr. FLANAGAN supported the motion. They had passed a clause that Crown lands should be rated at 10 acres to the sheep. He thought Mr. Alison's motion of 5 acres to the sheep would be more in accordance with the motion carried yesterday. Regarding a few words that had dropped from Mr. Cook, who said something to the effect that there were no cultivated lands that would not carry one sheep to 2 acres, he had himself brought into cultivation certain land of which 15 acres would not support one sheep. The Boards would have to raise the rate from $\frac{1}{2}$ d. to 3d. per sheep to deal with the rabbit pest if it were on that basis. They must all know of scrub lands that would not feed sheep, and that they were the most difficult lands in the Colony to eradicate rabbits from. These rabbits could live where there is timber and scrub that will not feed sheep, and will live there without any water. Rabbits could be eradicated much easier from the rich country than they could from the bad country. The day would come when every man in the community will have a voice in the election of Members of Parliament for their districts, and if they did not adequately take into consideration the interests of the small men all their work would be cast aside by their representatives in Parliament, for there they would not be represented on the basis of the stock they owned.

Mr. NIXON (Gunbar) thought it inexpedient to make any hard-and-fast rule. There were districts that would carry considerably over a sheep to the acre. He thought it should be left entirely to the Boards to decide without any expert evidence. He was quite sure it would give more satisfaction.

Mr. T. BROWN, M.L.A. (Budgerabong), proposed, as a further amendment, "That cultivated land not assessed under a Stock and Pastures Protection Act be assessed by the Board on the basis of the carrying capacity of the adjacent grazing grounds." He believed that the wish of the Conference was to assess on the stock-carrying capacity and not on their cultivation basis, and the best way to arrive at that was to determine it by the adjacent grazing lands, and to leave the assessment in the hands of the Local Stock Board.

Mr. LITTLE (Bullock Creek) seconded the amendment.

Mr. WILKES (Broken Hill) considered that Mr. Gibson and Mr. Brown were only on a bogey. They would allow that a man who had a thousand acres of cultivated land must have ten horses to work it. On Mr. Alison's 5 acres to a sheep, his rate would be 100d.—an assessment of a matter of 8s. 4d.; and would it not be better to do that great wrong rather than bring together this Board, the witnesses, and the Land Agent, on whom they would have to spend a good many eight-and-fourpences. This must be drawn on the lines that Mr. Alison laid down. He did not say, "Stick to 5 or 10 acres," but it must be on those lines.

Mr. A. L. B. CAMERON (Ivanhoe) while looking upon Mr. Alison's proposal as the best and most rough and ready method of dealing with this question, pointed out that it was a clause that was likely to meet with a considerable amount of opposition in Parliament. The Minister had already said that he was opposed to these hard-and-fast rules. He thought it would be best not to pass resolutions which were likely to meet with opposition in Parliament. He thought Mr. Brown's amendment the same as Mr. Gibson's.

Mr.

Mr. BACON (Brewarrina) supported Mr. Alison's resolution, because it was a simple and equitable way of meeting a difficulty. He would point out that in this colony a system of mixed farming did not prevail. Without a man cultivated wheat the land simply lay fallow with the straw lying on it in the summer until it was time to cultivate it again. The method proposed would be the simplest and the fairest and cheapest manner of settling this. On the plea of economy he would advocate Mr. Alison's resolutions.

Mr. TREFLE (Temora) supported Mr. Alison's resolutions. Although he did not agree with the principle on which the land was valued, he thought it was better to tax lightly and use all that money for the destruction of the rabbits than to have a greater tax and a heavy expenditure in getting it. He must admit that valuation would cause a lot of expense. They must not raise a cry throughout the country that the graziers were getting off too lightly. He thought it would be better to allow the farmers who were not stock-owners to be dealt with leniently, so as to avoid any friction which may destroy the Bill. There were farmers with a few stock, a few killing-sheep, a few dairy cows, and a few horses. Their returns under the Stock Protection Act would be very small, and they would get off taxation, but he thought they would have to put up with the difficulty in that instance. Some gentlemen had made remarks about the carrying capacity of the land, and one gentleman had remarked that 2 acres would carry a sheep. In some localities, perhaps, it would, but his experience showed that 2 acres would not carry a sheep. Thousands of acres of the back country land had been brought under cultivation, and he knew of land in many districts that had been brought under cultivation that would not carry a sheep to 2 acres. He thought that if they left the basis at 5 acres to a sheep it would show that they did not want to tax the small men too heavily.

The Honorable RUPERT CARINGTON (Jerilderie) would support Mr. Gibson's amendment. As to expense, there need be no expense whatever. It was never proposed there should be experts called in to value the land; the Stock Boards being experts could value it themselves. Some men would have to pay on their ten head of stock and then on their wheat land as well. They would be taxed twice.

Mr. T. BROWN, M.L.A. (Budgerabong), said that when he drew out the motion of which he gave notice just now he did not know there was anything proposed on the same lines.

The CHAIRMAN said he was just about to rule Mr. Brown's amendment out of order, because Mr. Gibson's proposal and his were the same.

Mr. BROWN (Budgerabong) withdrew his amendment and supported Mr. Gibson's.

Mr. ALISON (Canonbar) said his idea was to allow those who had cultivated land to pay as small a sum as possible to allow them representation. He did not want to see them taxed too heavily, because the men who cultivated land were men worthy of a great deal of consideration, and he thought they would be making the greatest mistake possible if they overtaxed them. He would sooner see them get off lightly than that they should be taxed heavily. His proposition could not possibly injure anybody. His idea was to let them off easier, because they were people who were not interested to the same extent as the pastoralists. They were not affected so much as those who had stock. He was quite willing to have it amended in any way, if he could be shown how it injured any farmer or any owner of cultivated land, but he did not think it would.

The CHAIRMAN here explained to the Conference that the original motion meant that if a man had 5 acres under cultivation he should pay on that at 5 acres to the sheep, and if he had 2,000 acres additional he would pay on that according to the stock returns.

Mr. GIBSON'S (Hay) amendment was put to the meeting and lost by 21 votes to 20.

Mr. COOK'S (Beringerry) amendment was put to the meeting and lost.

The original motion (one sheep to 5 acres) was put and carried by 22 to 17.

Mr. ALISON (Canonbar) begged to move that all the words from the word "the" in line 39 down to the word "stock" in line 48 be eliminated, that is to say the whole of subsection 2.

The CHAIRMAN pointed out that that would follow on the last resolution.

Mr. OATLEY seconded Mr. Alison's proposal, which was carried.

Mr. BACON (Brewarrina) begged to move that no rates be levied on any holding that had been already rabbit proof fenced.

Mr. FLANAGAN (Gunbar) said that that was on the business paper in his name.

Mr. BACON (Brewarrina) withdrew the proposal.

Mr. FLANAGAN (Gunbar) moved "that any owner or occupier of land within a rabbit district shall not be called upon to pay any tax under the Rabbit Act, in respect of any land of his already made rabbit proof, or hereafter to be made rabbit proof at his own expense." He proposed this as an amendment of clause 12.

Mr. WILKES (Broken Hill) rose to a point of order. Mr. Flanagan was going too fast, he had got from clause 13 to clause 22.

The CHAIRMAN ruled that Mr. Flanagan was in order.

Mr. FLANAGAN (Gunbar) said he was a believer in this Act. He was a believer in rabbit fencing in some districts, and a believer in destruction of rabbits in other districts. He came from Gunbar where they had gone into cultivation to a very large extent. They found they could not by any means cultivate their lands without a fence round them. He held land close to Burruga. It was all bush country. It would not be just to compel people in that country to pay for fencing. If the people of that locality sent to the Board to say they did not want compulsory fencing, then they would kill the rabbits. Fencing was a necessity in some cases. Where nine farmers out of ten would vote for fencing then the tenth farmer should be compelled to pay for half that fencing. He thought it would be wise to provide for fencing clauses where the majority of farmers wished to have fences erected, and to compel their neighbours to pay for half the boundary fences. He thought that, although now they might provide in some cases for a boundary fence being placed round the holding, if six or seven farmers who chose to form a group wished to be separated entirely from the jurisdiction of a Stock Board, in respect of that land they should be allowed to do so. These holders should have the power within themselves of rating one-another's land to kill rabbits within the boundary of that "special district," so to speak, and if one man out of the seven did not do his duty in killing the rabbits, the same machinery that applied with the Rabbit Board to compel people under this Act to deal with the rabbits should operate within the holding if the majority of the holders within this "sub-district" wished. The holders within this sub-district should have the power to compel the negligent farmer to do his duty in respect of his lands, and if one of them elected to separate his holding from the other six, then the other six should be compelled

to pay as one man for half of the boundary fence. It would simplify matters very much if groups were allowed to form their holdings into sub-districts. They could have their own little meeting, and each would know what his neighbour was doing, and it would not be necessary to send a Stock Inspector 50 miles to inspect the holdings.

Mr. J. M. ATKINSON said he would second the motion. He asked the Chairman if Mr. Flanagan was right in saying that the Minister had the power to create rabbit districts without reference to the boundaries of the sheep districts.

The CHAIRMAN said that that was not come to yet.

Mr. BACON (Brewarrina) could not agree with the resolution proposed by Mr. Flanagan for this reason, that he proposed that all owners or occupiers who fenced in should be exempted. He would move an amendment that one single owner who fenced in his individual holding should be exempted.

Mr. FLANAGAN (Gunbar) said it was the same thing.

Mr. BACON (Brewarrina) said it was a very different thing. Perhaps Mr. Flanagan would accept this amendment, "Provided also that no rates shall be levied on any holding which in the opinion of the Board is surrounded by a rabbit-proof fence."

Mr. FLANAGAN (Gunbar): Surely that would remain with the Board. They would decide what would be a rabbit-proof fence.

Mr. BACON (Brewarrina) begged to move, "Provided always that no rates shall be levied on any holding enclosed in a fence which in the opinion of the Board is rabbit-proof." That was substantially the same thing as obtained in Queensland. He thought that an owner who fenced in his holding, whether it was 640 acres or 2,560, or 10,000, or 100,000, if he went to the very large expense of putting a fence round and keeping it in order he should not be called upon to go to any further expense in taxation. It should be distinctly understood that he proposed this for individual owners. If it went in groups, these groups would be more or less large, and there would be no taxation at all.

Mr. T. BROWN, M.P. (Budgerabong), said there were some difficulties in the way of Mr. Flanagan's motion. He had contended that, in order to deal effectively with the rabbit pest by means of wire-netting, they must have the holdings of as small an area as possible, and it seemed to him that, unless under this resolution they made the country of a limited area, it would be no effective means of preventing the spread of the pest. In the meanwhile he should move an amendment the following:—"That the word 'quarter' be substituted for 'half,' in line 49, clause 12, of the Bill. He thought the owners who were enclosed would derive a certain amount of benefit from the operations of the Pasture and Stock Boards, and that they should contribute something for the benefit derived, and while he thought the half rates were too high he thought the quarter would be sufficient to cover the benefits received.

Mr. FREEMAN rose to second the resolution which had been proposed by Mr. Bacon, but in doing so followed Mr. Flanagan in all that he said, but he would point out to Mr. Flanagan that where he differed from his resolutions was in the words "rabbit-proof," and he would, like Mr. Bacon, wish to substitute the words "reasonably sufficient." There had been a great deal of conflict of opinion as to what constituted a rabbit-proof fence. It was laid down under certain sections of the Rabbit Act, and it was found to work unjustly against people who had fences which were reasonably sufficient for the exclusion of rabbits. If Mr. Flanagan would add that, probably Mr. Bacon would support him. He would like to show gentlemen, that in many cases there would be no necessity at all to levy any tax, because in some districts they were bounded by wire-netting, and subdivided like a piece of wire-netting itself. There was no necessity that those who had borne the burden of the whole thing for the last fourteen years should come in and pay contributions for the protection of the man outside, who had never paid a penny and never borne any of the expense of this work. They were doing all that, and why should they now be called upon to pay a tax for the protection of their neighbours.

Mr. FLANAGAN (Gunbar) could not do what Mr. Freeman asked. The result would be this—that they would have several Boards giving separate decisions on several rabbit-proof fences. In one district there would be one standard rabbit fence and in another district another standard. He preferred to let Parliament decide what would be a rabbit-proof fence.

Mr. BACON (Brewarrina) withdrew his amendment.

Mr. GORMAN (Berrigan) would oppose Mr. Flanagan's amendment. In the first place, if they carried this resolution, in his opinion there would be very few voters in the Riverina to take part in this Act. Nearly every large property there was netted, and some of them had been netted for two or three years. The fact of having netted the properties did not do away with the rabbit pest. Personally he had fenced in his property with wire-netting, but the difficulty still continued, and if they were not going to have these people brought under the provisions of the Act, they could not compel them to kill the rabbits; and, if the resolution was passed, it would nullify all the work they had done for the past few days.

Mr. LITTLE (Bullock Creek) had much pleasure in seconding Mr. Flanagan's proposal. If a man went to the expense of netting individually it was nothing to the outside owners whether they had rabbits or not. If every owner would wire-net individually, and destruction was made compulsory, the difficulty would be at an end.

Mr. CAMERON (Ivanhoe) was thoroughly opposed to any change being made in the clause as laid down, and the reason he opposed it was that the districts where the rabbits were thickest were the districts where every holding or almost every holding was netted in. In his own part of the district, he might say, every large holding was netted, and the only lessees to fall under taxation would be the homestead lessees, and the small men would bear the whole cost of administering the Act in this district. More than that, he thought that a very great concession was made by the Minister here in order to promote the erection of wire-netting fences, and he thought that if they only paid half rates those who were enclosed were accorded a concession that ought to satisfy any man.

Mr. BROOKE (Boggabri) said that the motion seemed to propose that if a man were fenced in he was not to be compelled to kill his rabbits. Now the intention was to make him kill, and therefore if he fenced in he should not have to pay any taxation.

Mr. ALISON (Canonbar) said that everybody was interested in getting the rabbits down. Whether a man was fenced in or not he would be interested in the barrier fences which were proposed. The Minister said (by the Bill) that he was interested to half the extent of a man who was not fenced in. He defied any man who was entirely fenced in, but had rabbits all round his run, to keep the rabbits out.

Mr.

Mr. ATKINSON said Mr. Alison was more or less right. Any man in his district who was wire-netted in must have the rabbits for his neighbours. But there was all the more reason why a man who had been netted in for some time, and had had to kill, not only his own rabbits but also his neighbours as well, should be let off without any tax, at all events until the other runs were netted in and had gone through the fire.

Mr. WILKES (Broken Hill) thought that Mr. Atkinson had given them one of the best arguments, and he was of that opinion too. Rabbit proof fencing, except in very small, very limited, and well looked after districts, was a farce. There was no such thing as a rabbit proof fence in a big area. They all spoke about small men of 640 acres and so on, but were they thinking about the large holdings? There was no such thing as a run that was rabbit proof. Let them go round the country and look at them. Then, again, they kept harping on the destruction of rabbits. This fund was not for the destruction of rabbits, it was merely for the supervision, and although a run was netted in it would require the same amount of supervision from the Board. This was not for netting, but for supervision of the land. If a man paid this money he was paying to see that the rabbits were killed. It would be a great injury to him if the rabbits outside were not killed, and therefore he should pay for supervision to see that they were killed. Mr. Flanagan's part of the Colony was the most heavily stocked part of the country. They found that although this was a heavily netted country the rabbits were equally bad there. A gentleman next to him had had to turn sheep into his paddocks, because he could not keep them for his horses. It was only a year ago, as Mr. Taylor could tell them, that they had had to spend a lot of money to clear away the sand that had overtopped the fence in one run on the border of South Australia.

Mr. OATLEY said he represented the estate of the late E. Flood. They had a district of about 60 or 70 acres of land enclosed by wire netting, and he might mention to them that this day if they went round they would see that outside the boundaries the grass was pretty well eaten off. On their own run very few rabbits were found; in fact not longer than a fortnight ago some gentlemen had asked his permission to go down and shoot rabbits, and they told him they had the greatest difficulty in finding any of them. Outside there were not one but thousands of them.

Mr. CUMMING (Hillston) said that as they were commencing a new Act altogether let them commence from scratch. If they exempted so many of these people where was the money to come from. He himself was netted, but unfortunately he had a bad class of netting. He thought it would be dangerous to allow the clause to pass. The Boards had no power to see that the fences were in proper repair, and they could not go on the land to kill the rabbits, because they were exempt from taxation.

Mr. HEDDEN (Wanaaring) was opposed to Mr. Flanagan's amendment because he thought everybody should contribute something. He also thought that the clause about a man who was going to fence should not be left in.

Mr. FLANAGAN (Gunbar), in reply said he had already explained that fences were not necessary in many localities. His motion was intended mostly for people who were going largely into cultivation. He had already explained that in localities where the majority of owners were occupiers of land, they should petition the Rabbit Board and the Stock Board to make fencing compulsory, or they could petition to have the rabbits dealt with by compulsory destruction. Therefore a lot of the arguments used in opposition to him were futile. He was a believer to a certain extent in co-operation, but he preferred that where an individual could manage his own affairs it was far better management than they would get in the co-operative style. Of course, if an Inspector noticed that a man who was fenced was neglecting to kill, he could report and have him brought under the operation of the Act.

The CHAIRMAN then put Mr. Flanagan's amendment to the meeting and it was lost by a large majority.

Mr. BROWN'S (Budgerabong) amendment was put to the meeting and lost, 19 voting for the amendment and 22 against.

As there was some doubt regarding the voting it was taken again and declared lost, the voting being 21 for and 23 against.

The CHAIRMAN then adjourned the meeting until 2 o'clock.

On resuming after lunch the Chairman took the Chair at 2 p.m.

Mr. ALISON (Canonbar) moved that after the word "enclose" the words "or which may be in future enclosed" should be inserted in line 50.

Mr. CUMMING (Hillston) seconded Mr. Alison's proposition.

Question put and carried.

Mr. FREEMAN moved, "That subsections D, E, and F, of section 3, clause 12, and the whole of section 4 should be struck out."

Mr. ALISON (Canonbar), said that if Mr. Freeman would omit subsection D from his resolution he would be glad to second it. He thought the Rabbit Board should have access to the returns.

Mr. FREEMAN said he knew at the present moment that the Department of Agriculture and other Departments who had no legal status called for returns from the different sheep owners of the Colony, and numbers of people refused to give these returns, and altogether they were very careless about making the returns anything like correct. These were not reliable, and seeing that they had a safe return on which the tax was to be levied, he thought these subsections should be struck out.

Mr. FREEMAN'S motion lapsed for want of a seconder.

Mr. ALISON (Canonbar) proposed, "That subsections E and F of section 3, and the whole of the sections 4 and 5 be eliminated."

Mr. McCOLLIGHER (Deniliquin) seconded Mr. Alison's proposition.

Mr. FLANAGAN (Gunbar), held that they would be doing wrong if they struck out section 4. He moved as an amendment "That section 4 be retained."

Mr. NIXON (Gunbar) seconded the amendment by Mr. Flanagan.

Mr. BROOKE (Boggabri) thought they were going too far in preventing the Board from inspecting the holdings. There was no reason why a man should not be allowed to inspect them, because they would not know whether a man with an enclosed holding was doing anything at all. They should be simply inspected and a report made to the Board.

Mr. ALISON (Canonbar) said Mr. Brooke could not be aware of the provisions in the Act. Further on the powers of inspection were given. This power to inspect was merely with regard to the appraisal of the holding, and they had struck that out, so that there was no necessity to retain this power of inspection. In clauses 31 and 32 the Board had the fullest powers of inspecting, entering, and ordering the destruction.

Mr.

Mr. T. BROWN (Budgerabong) said it would be wise to let it stand as it was. It was often necessary in order to enable it to be found out whether correct returns had been furnished. If the Board did not think it necessary to use the power they would not call it into requisition. It would be wise to leave it to the Board, and let them exercise the powers when they might and how they might.

The CHAIRMAN explained that section 4 was unnecessary, as the Conference had decided the carrying capacity, and this was only in connection with the ascertaining of the carrying capacity.

Mr. FLANAGAN's amendment was put to the Conference, the voting being—Ayes, 18; Noes, 15.

The vote was taken again, as some of the members said they did not understand the vote they gave. The result was—Ayes, 17; Noes, 18; and Mr. Flanagan's amendment was declared lost.

Mr. ALISON's original proposition was then put and carried by 18 votes to 16.

Mr. ALISON (Canonbar) moved, "All private owners or lessees who may make no returns, or who shall make what in the opinion of the Board are misleading or inadequate returns, may be summoned before the Board, and the Board shall have the power to rate or increase their returns at a rate not exceeding one sheep to three acres." This should be inserted after subsection D of section 3 of clause 12. He said this was designed to prevent extensive defalcations. There were properties on which there were no stock, and none of the land was cultivated. In that case they would have nothing to pay. He proposed that they should have to pay something. He would move that the Boards should have the power to bring the owners of unstocked runs before them and assess them on a fair and reasonable basis.

Mr. FLANAGAN (Gunbar) said he would second Mr. Alison's proposal.

Mr. WILKES (Broken Hill) explained that under the Diseases in Sheep Act power was given for that.

Mr. ATKINSON asked leave to add to the resolution, "that the Board may authorise any person to inspect such holding."

Mr. ALISON (Canonbar) accepted the addition.

Mr. LITTLE (Bullock Creek) said that under this motion any person who was carrying a sheep to the acre could misrepresent the return purposely, and then on coming before the Board would be rated at one sheep to three acres.

Mr. ALISON (Canonbar) pointed out that a man could be punished for that.

Mr. MCCOLLOUGH (Deniliquin) said the Inspector of Stock had the power to inspect the receipts from any run that he thought had furnished false returns.

Mr. LAURENCE (Balranald) asked Mr. Alison to alter his resolution so that the lands would be assessed at the same rate as the adjacent lands.

Mr. T. BROWN, M.P. (Budgerabong), said that Mr. Alison's motion would mean that the Board was constituted a Court with legal jurisdiction. He would not go to that length, for the Court would be constituted the prosecutor and the judge. He thought the best way would be to apply the penalties that obtained under the other Acts to this Rabbit Act, and if it were proposed to make the Stock Board a Court, and put them in the position of being the prosecutors in any legal action taken, and making them the Court to determine the differences between them and the stock owners, he would not support it.

Mr. TREFLE (Temora) agreed with what Mr. Brown had said. He thought Mr. Alison had made a mistake. It was common in all Acts that returns were wanted, and penalties were fixed for false returns. They could not get away from that.

Mr. CAMERON (Ivanhoe) said he would support Mr. Alison, except in defining the powers of the Board in assessing the carrying capacity. He thought the resolution would be better if he left the Board to decide what was really the carrying capacity of the country. With that exception he would then be inclined to support the resolution.

Mr. ATKINSON said he thought that the difficulty that Mr. Brown had suggested might be got over if the Government nominee were the Chairman, and these cases were heard by the Chairman alone.

Mr. BOLTON (Wagga) said with respect to the powers being under the Stock Act, if such a case arose where a wrong return had been made, they had to make an appeal from that and to get a redress from the Police Court.

Mr. FREEMAN suggested that Mr. Alison should alter his motion to read, "Adequate returns shall be put before the Board in a prescribed manner";—then the mode of procedure could be fixed by the regulations.

Mr. OAKDEN (Cobar) was not aware of any case of hardship having arisen under the other Act. It has been in force for many years. In clause 6 in the Act of 1881, a provision regarding the power of the Board for levying assessment said, "On stock runs on each district they shall make assessment not exceeding in the aggregate twice the rents payable to the Crown." He would point out to the Conference what he thought had perhaps escaped their notice. This power had been in the hands of the Pastures and Stock Board for many years. It did not apply to public land, but applied to unstocked countries under lease.

Mr. ALISON (Canonbar) said he would add "with the rights of appeal to the Court of Petty Sessions."

Mr. ATKINSON wished to move that the Board might authorise any person to inspect a holding.

Mr. ALISON (Canonbar) said he would accept that as his motion. He did not wish to have two amendments.

Mr. ROSS (Hume) said he could not see his way clear to support Mr. Alison in the resolution. For instance, a person might give a false return. His property might be able to carry 40,000 sheep, and the return would be for 20,000, and he would be rated at one sheep for three acres in accordance with these resolutions. In his district there was a lot of land that would carry a sheep and a half to an acre. The thing would therefore be absurd.

Mr. ALISON (Canonbar) was quite willing to meet Mr. Ross' views, and to say a sheep to the acre. He wanted to prevent any chance of the Board's being able to act harshly, and that was the reason he had said one sheep to 3 acres. He would sooner see a man get off than allow a Board to act harshly.

Mr. WILKES (Broken Hill) supported Mr. Alison's resolution. He was fully aware that what Mr. Alison had said was correct. It would be a very necessary provision. There had been some objection taken to the Pastures and Stock Boards dealing with appeals. If it were left to the Land Board they might not get a Land Board meeting within twelve months. Many men in his district would have to go 120 miles to get to the Land Board meeting. If they had it at the Petty Sessions this delay would be done away with. Undoubtedly they did want some check. Powers had been given in the Diseases in

Sheep

Sheep Act which had never miscarried. The inspector under that Act could make an estimated return if he considered a run under-estimated, and there could be an appeal to the Sheep Board, but very little of this was done because it was unnecessary. He did not think that they could pass a better resolution on this subject than that proposed by Mr. Alison.

Mr. BACON (Brewarrina) considered that there had been some misapprehension as to the meaning of Mr. Alison's motion. They had decided yesterday how public lands and agricultural lands should be rated. The unstocked lands were the only lands they had not dealt with. There were a number of runs that had been abandoned, because they were overrun with rabbits, and these unstocked lands they wanted to assess. He took it that was the meaning of Mr. Alison's motion, and in making his provision so very elastic, he had shown a desire to meet the wishes of the people.

The CHAIRMAN said that the motion would come after subsection (d), page 7: "That all owners and lessees who may make no returns, or who shall make what in the opinion of the Board are misleading or inadequate returns, may be summoned before the Board, and the Board shall have the power to rate or increase their returns at a rate not exceeding one sheep to 1 acre, with a right of appeal to the Court of Petty Sessions"

Question put and carried.

Clause 4.

Rabbit Districts.

4. For the purposes of this Act, New South Wales shall be divided into Districts, hereinafter referred to as Rabbit Districts.

The Districts into which New South Wales may from time to time be divided for the purposes of the Diseases in Sheep Acts shall be Districts for the purposes of this Act, but the operation of this provision shall be subject always to the powers next hereinafter conferred on the Minister.

The Minister may, by notification in the *Gazette*—

- (a) declare that any Borough or Municipal District shall form a Rabbit District; or
- (b) combine two or more Sheep Districts wholly or in part into one Rabbit District; or
- (c) create Rabbit Districts without reference to the boundaries of any Sheep District; or
- (d) alter or modify the boundaries of any Rabbit District.

Any such notification shall operate and take effect as from the date thereof, but may by notification be corrected, modified, or revoked.

The Hon R. CARINGTON (Jerilderie) said he wished to go back to clause 4, which had been postponed, because it dealt with the defining of the Rabbit District.

Mr. A. BROWN (Narrabri) moved that "all municipalities and towns where infested by rabbits shall be declared separate districts, and shall not be attached to any Sheep Districts, even if adjoining or within the boundaries of Sheep Districts." There were some towns in Rabbit Districts that would almost out-vote the Districts, and not being Municipalities they would not come within the clause which referred to the Municipalities, therefore, he moved the resolution which would include the towns.

Mr. BROOKES (Boggabri) seconded the resolution.

Mr. OAKDEN (Cobar) begged first to move that the clause as far as the word "Minister" should be passed.

Mr. FLANAGAN (Gunbar) seconded the motion, which was passed.

Mr. ALISON (Canonbar) thought Mr. Brown's motion would destroy clause 13. He thought the words should be added at the end of subsection A.

Mr. FLANAGAN (Gunbar) wished to know what Mr. Brown meant by a town.

Mr. BROWN (Narrabri): Where there was a small town where the people paid no rates or very little, he wanted these towns taken out of the district, or otherwise they would outvote the rest of the holders of land in the vicinity in the rabbit district.

Mr. C. BOLTON (Wagga Wagga) wished Mr. Brown to put in the words "town or village."

Mr. BROWN (Narrabri) accepted this, and altered his amendment so as to read, "municipalities, towns, or villages."

Mr. GIBSON (Hay) hoped Mr. Brown would accept a further amendment, and put in at the end the words, "with the consent of the Pastures and Stock Boards." He took it that many landowners adjoining some of these small villages would be content to kill the rabbits within the village reserves if they had the power, because they were a standing menace to the whole district.

Mr. BROWN (Narrabri) agreed to accept Mr. Gibson's amendment.

Mr. TAYLOR (Lands Department) said it seemed to him the discussion was rather superfluous. The clause provided that the Minister might create rabbit districts without reference to the boundaries of any sheep district. Surely they might take that as an argument that the Minister would take care to proclaim districts in the interests of the landowners.

Mr. FREEMAN thought it was far safer to have the whole thing defined. They knew how the word "may" had acted against them in the past in different Acts of Parliament. They wanted the word "shall" put in, so that it shall be fixed without Ministerial power—that all the districts should be proclaimed, and in addition he proposed a further amendment to Mr. Brown's motion, and that was to insert after the word "villages" the words "population areas."

Mr. BROWN (Narrabri) said he would also accept that amendment.

The Honorable RUPERT CARINGTON (Jerilderie) wished to know if they included a town which had no power of rating its inhabitants how were they going to make them destroy the rabbits?

Mr. OAKDEN (Cobar) said it had been proposed that population areas might also be handed over to the Pastures and Stock Boards. Within those areas a great proportion of the people would pay no rates while others would. How were they going to arrive at the voting power which was to give these people representation? This was a very important clause, and should receive a great deal of consideration before they went to a vote.

Mr. TREFFLE (Temora) thought Mr. Brown's proposal, without the last addition to it, suited the Conference splendidly. If they introduced population areas it would lead to enormous mistakes. They should

should stick to the words, "municipalities, towns, and villages." That was intended to define the centres of population practically, and large farms, which were within the population areas, would not be included.

Mr. FREEMAN said he was quite willing to withdraw his suggestion, because he saw that the interpretation clause said that population areas came within the term "public lands."

Mr. ALISON (Canonbar) suggested that the words, "infested by rabbits," should be left out.

Mr. OAKDEN (Cobar) thought the word "included" should be put in, for towns were often within the sheep districts.

Mr. VARCOE (Hillston) said he would like to point out that the Rabbit Act was to be administered by the Stock and Pastures Board. How would the Rabbit Act be administered in the municipalities if there were no Pastures and Stock Boards in those municipalities?

The Honorable RUPERT CARINGTON (Jerilderie) said clause B did not give the power to towns, but it gave power to municipalities and boroughs. It was not proposed to constitute authorities that were not representative, and therefore had no power to tax.

Mr. BROWN (Narrabri) thought that could be provided for when they came to clause 13.

The CHAIRMAN then put the motion, that the following be an addition to subsection "a," "That all municipalities, towns, and villages shall be declared separate districts, and shall not be attached to sheep districts, even if adjoining or within the boundaries of sheep districts, unless with the consent of the Pastures and Stock Protection Boards."

The motion was carried by 31 to 6.

Mr. ATKINSON wished to know whether that included the lands within the control of those towns or villages—the reserves and town commons, &c.

Mr. BROWN (Narrabri) pointed out that the commons were vested in the municipalities.

Mr. ALISON (Canonbar) proposed to add to the end of subsection "b" the words, "that no sheep district shall be amalgamated with any other district or sub-divided without the consent of two-thirds of the voters." He thought some of those present desired that the sheep districts might sub-divide.

Mr. McCOLLOUGH (Deniliquin) supported Mr. Alison.

Mr. FLANAGAN (Gunbar) moved as an amendment, "That there should be no combination of two districts into one district." It would be two unwieldy. He considered one rabbit district sufficiently large as it stood.

Mr. WILKES (Broken Hill) wished to know where the Board would be if they put two districts together. If the sheep districts were altered, they would have to be altered under the Sheep Act. If they put two Sheep Boards to one district, which Pastures and Stock Board was to administer that district?

Mr. BROWN (Narrabri) considered that if two Boards were amalgamated there would only be one Board.

Mr. WILKES (Broken Hill) did not think the Sheep Boards would stand that for one moment. They would be in constant trouble. It was all very well to say the Minister would put two Sheep Boards together under this Act; would he do so under the Sheep Act?

Mr. GIBSON (Hay) said the greater powers they gave the Minister to administer this Rabbit Act the better. If two districts liked to minimise expense under this Act by amalgamation, he did not see why they should not.

Mr. CUMMING (Hillston) wished to move that Stock Boards should have the power, if agreeable, of mutually altering the boundaries. He knew of a case where two stations were too far from one district and had asked to be shifted into another, and everything had worked well since.

Mr. ROSS (Hume) said he would support Mr. Alison. It would be a public benefit if some of these districts were amalgamated. He thought the power should be vested in the Minister.

Mr. LOONEY (Bullock Creek S.) moved that it should be a plain majority and not a two-thirds majority.

Mr. LITTLE (Bullock Creek N.) seconded it.

Mr. OAKDEN (Cobar) said the difficulty seemed to arise as to this clause being left exactly as it stood, because it spoke of the combination of two sheep districts into one rabbit district. He thought their resolutions should harmonise as well as they could with the constitution of the Pastures and Stock Boards. Their decisions, so far, had been that the districts should be identical. They could not have two districts combined as one rabbit district unless these districts were combined under the Sheep Act as one sheep district. He did not think the resolution was clear. They should bear in mind that this Act was drafted, not with the view which the Conference had adopted, that the Pastures and Stock Boards should administer the Act. It was in accordance with this Act that there should be two sheep districts adjoining and separate under the Sheep Act but joined under the Rabbit Act. During their experience they all knew that boundaries had been altered, and no doubt it was advisable it should be done. The resolution should be made clear so that there shall be no doubt about it.

Mr. ALISON (Canonbar) thought Mr. Oakden was under a misapprehension. According to the proposed Bill, the Minister could combine two districts as sheep districts and also as one rabbit district. His proposition was that this should happen only when there was a two-thirds majority of the voters in the district.

Mr. LOONEY's (Bullock Creek S.) amendment, to omit "two-thirds," was put to the meeting, and carried by 21 to 20.

Mr. LESLIE (Forbes) asked for a second count, not that he thought the counting was incorrect, but he understood there were some gentlemen there on sufferance, and he thought they voted on the question.

The question on being put a second time was carried by 22 to 21.

Mr. ALISON's (Canonbar) motion, as amended, was put to the meeting and carried.

Mr. ALISON moved, "That subsection C be omitted." He thought it was placing a very large power in the hands of the Minister without knowing how it was to be used.

Mr. BRETT seconded the motion.

Mr. FLANAGAN (Gunbar) disagreed with Mr. Alison. There might be a rabbit-proof fence running parallel with the boundary of a rabbit district, and if the Minister had not the power to shift the boundary of a rabbit district he would not be able to include this rabbit fence. He thought the subsection should be retained.

The

The CHAIRMAN thought they ought to make the Act as elastic as they possibly could; and he thought the Minister should have the right to alter the boundaries if it was in the interests of everybody. He did not think the Minister would attempt to alter a boundary without the consent of the Stock Protection Board.

The motion on being put was lost.

Mr. ALISON (Canonbar) wished to move that the following words be added to subsection "C"—"On the recommendation of the Stock Protection Board." He did not quite follow what was the power of the Minister in creating rabbit districts without reference to the boundaries of sheep districts.

Mr. A. BROWN seconded the motion.

Mr. LESLIE (Forbes) did not think there was any necessity for that. In every instance the Minister had referred the matter to the Board for advice. He did not think the Minister should be tied down by hard and fast rules.

Mr. GIBSON (Hay) thought the subsection should be left as it stood. It might be advisable to use a rabbit fence as a boundary, and although a certain member might desire it another might not agree, and the Minister could not then alter the boundaries.

Mr. TREFLE (Temora) thought the whole power should be left in the hands of the Minister.

Mr. WILKES (Broken Hill) thought the subsection should be left out; it was giving the Minister for Lands powers that now belonged to his colleague, the Minister for Mines.

The motion on being put was lost.

Subsections "C" and "D" were then passed as printed.

The CHAIRMAN read a telegram from Mr. Alexander Oliver, the President of the Land Court, offering his services as draftsman. He suggested a vote of thanks should be accorded Mr. Oliver, and, if necessary, his services should be made use of.

Mr. A. BROWN (Narrabri) said he had much pleasure in proposing that the thanks of the Conference be conveyed to Mr. Oliver, and that the Conference would gladly avail themselves of his offer if required.

Mr. NIXON seconded the proposal, which was carried unanimously.

Mr. CAMERON (Ivanhoe) proposed that they should continue the sittings up to 5 o'clock.

The CHAIRMAN pointed out that the two gentlemen who were taking notes had very heavy work to do, and he did not think they could possibly get through any more.

The Conference then adjourned until 10 o'clock the following day.

FOURTH DAY—12TH MARCH, 1897.

The Conference met at 10 a.m., Mr. A. Lakeman in the Chair.

The minutes of the previous meeting were read and confirmed.

The CHAIRMAN reported that he had sent a letter to the Minister, thanking Mr. A. Oliver through him for his kind offer to draft the Bill for the Conference.

Mr. LITTLE (Bullock Creek) moved that the Conference should sit on until 5 o'clock. He said they seemed to be doing nothing but wasting time. He did this so as to give those who wished to do so a chance of making arrangements to leave town.

Mr. FLANAGAN (Gunbar) seconded.

The CHAIRMAN pointed out that the reason they usually adjourned at 4 o'clock was that certain printing had to be done for the Conference, and the gentleman who was taking the notes had to do his work after they left. He would put the motion without discussion.

Mr. LITTLE'S (Bullock Creek) motion was then put and lost by a large majority.

Mr. ALISON (Canonbar) suggested that the next thing they should do was to go on with the question of the voting power.

Mr. WILKES (Broken Hill) thought they must next proceed to amend the Pastures and Stock Act.

The CHAIRMAN said that his view was that they should pass what they considered to be an equitable franchise, and then the proper course, in his opinion, would be to ask Mr. Oliver to draft a clause on the franchise showing how the Pastures and Stock Act could be brought into line in this matter. He thought that before they dealt with anything else they should decide as to what the constitution of the Pastures and Stock Boards should be. It had eight members now, they should decide whether that was sufficient or too many. He would ask some gentleman to make a proposition as to what should be the constitution of the Board.

Mr. ALISON (Canonbar), in order to bring something before the meeting would move that notwithstanding anything in the Stock and Pastures Act to the contrary, the voting power for Directors shall be estimated on the basis of payment equal to 300 sheep.

The Hon. RUPERT CARINGTON (Jerilderie) considered this to be the most important part of their business. They had all of them determined that there should be proper representation of those who were taxed. He proposed, in the motion on the business paper in his name, that two members be added to the present Stock and Pastures Board for the purpose of representing those who were taxed, either in stock or on their lands. He considered that that would fully safeguard the rights of the so-called "smaller men." They would have a vote for the Stock and Pastures Protection Board, and they would have a vote for these two new members that he proposed to add. He also wished to point out that for these two new members the franchise should be practically on the principle of one man one vote, or rather, one tax-payer one vote. He thought it would have advantages, because it would constitute another tribunal to deal with the rabbits. Of course he had carefully put it in his amendment that these two gentlemen should only sit while the Stock and Pastures Protection Board were sitting as the Rabbit Board. They would be elected for the special purpose of guarding those who were taxed. He hoped they would not import any feeling into the matter because it was absolutely necessary, if this Bill were to pass, that this question should be settled practically unanimously. It would strengthen the Minister's position very much, and he thought the proposal was fair to everybody, and would, he supposed, from what the Minister had said yesterday, be accepted by him. Of course with regard to the Government being represented on the Board, that

must

must be settled afterwards, but the regular Board should be constituted in the manner proposed in his amendment. In his opinion that was the fairest and best solution of the difficulty, and he hoped that the Conference would give it fair consideration at all events. He moved, therefore, the following to be an addition to clause 5, as amended, "for the purpose of administering this Act only two members be added to the existing Sheep and Stock and Pastures Boards, such members to be elected by the stock-owners and other persons taxed under this Bill; each stock-owner or taxpayer to have only one vote."

Mr. LITTLE (Bullock Creek) seconded the motion.

Mr. BROOKE (Boggabri) thought that under those circumstances the Board would be too heavy and too expensive, and if they did this they would have to reduce the Pastures and Stock Board.

Mr. CUMMING (Hillston) thought they could get over the difficulty by merging the two Boards into one. It would simplify matters and make things less expensive. The Board would then be more in touch with both classes. He would move an amendment that the voting power be joined and that all vote for the one Board.

Mr. LESLIE (Forbes) would like to ask the mover whether he intended later on to extend the franchise in the direction of making it more liberal than at present it was, under the Pastures and Stock Protection Act.

The Hon. RUPERT CARINGTON (Jerilderie) said they had nothing to do with that. They were considering the Rabbit Act, not the Pastures and Stock Protection Act, or the Diseases in Sheep Act. This was quite another question altogether.

Mr. LESLIE (Forbes) said that they had not up to the present heard of a franchise which would give the taxpayers a vote, the smaller men were not being considered. There was no franchise laid down by which the electors were to return representatives to the present Board. The Hon. Rupert Carington had proposed to increase the number of the Board from eight to ten, and he wanted to know before that went to the vote whether it was proposed to make the franchise very low, or whether it was intended to increase the franchise.

Mr. ALISON (Canonbar) had not heard this before, and must confess that it was a new idea altogether to him to have two extra members on the Board. He could hardly see from the movers explanation how they were going to fix it. He wanted to have it discussed. He was not sure that he did not like the idea, but had not had time to consider it. It was a total innovation altogether. He would like the mover to explain to him first, were the eight old members still to be elected under the Stock and Pastures Protection Act; second, was the franchise under the Stock and Pastures Protection Act still to remain the same; third, were these two new men to be elected under a very much extended franchise; and fourth, who was going to vote for them. There seemed to him to be forty or fifty questions arising out of this proposal. He would like the mover to explain who was going to vote for these two new men.

The Hon. RUPERT CARINGTON (Jerilderie): Everybody.

Mr. ALISON (Canonbar): And who were going to vote for the eight old men?

The Honorable RUPERT CARINGTON (Jerilderie): Everybody.

Mr. OAKDEN (Cobar) wished to know, in view of the resolutions already passed to substitute the Stock and Pastures Boards for the Rabbit Boards, if they were in order in discussing this question.

The CHAIRMAN said he did not see any difficulty in the matter. It had been decided that the Stock and Pastures Boards were to administer this Act under an extended franchise. He now anticipated that the Conference would pass a franchise for the whole of the members of the Pastures and Stock Boards irrespective of what was contained in the Pastures and Stock Protection Act. They need not run their heads against that Act, because if the Minister agreed with them he would make a new franchise and amend the Pastures and Stock Act. There would be no trouble about that if the Conference agreed as to what was to be done. With regard to Mr. Cumming's amendment, that was practically the same as the resolution of the Honorable Rupert Carington, passed the previous day, and was out of order.

Mr. GIBSON (Hay), speaking on behalf of the small owners, of whom he was one, pointed out that the difficulty they were under was this, that they had appointed two different sets of men under different franchises to constitute this Rabbit Board. Five were to be elected under the Diseases in Sheep Act and a stockowner must be possessed of 500 sheep in order to be empowered to vote for one of those five men. Now that matter had been kept quiet, it had not been ventilated. It had been continually pointed out that the small holder if he were of any consequence at all would have ten head of large stock, and would thus have power to vote for the three large stock directors. Under this, however, the small holder would only have voting power for three men out of eight. Now the small men would lay down this principle, that they must be entitled to vote for every member of the Board. Of course they saw the right for the large holders to have extra voting power; they agreed that a man with 20,000 sheep should have greater voting power than a man with 100 sheep. He would propose as an amendment, "That all holders of ten head of large stock, or 100 sheep, or owning a sufficient area of land to carry either, shall be entitled to vote for all the members of the proposed Rabbit Board."

The CHAIRMAN explained that they had constituted the Pastures and Stock Protection Board, the Board for the administration of the Rabbit Act, but that an extended franchise was to be given to every rate-payer under the Rabbit Act and Pastures and Stock Act to vote for the whole of those gentleman. Before making any amendment probably it would be better to settle that question as to whether the Pastures and Stock Board was to remain as it was, with eight members, with the right of every taxpayer to vote for the eight.

Mr. NIXON (Gunbar), said he would second Mr. Gibson's motion.

The CHAIRMAN said, that that was not before the meeting.

Mr. OAKDEN (Cobar) said he thought it would meet the case if a franchise under the Diseases in Sheep Act were reduced from 500 to 100 sheep. He said it seemed to be impossible that they should carry out their intentions without amending the Pastures and Stock Act. It would be a simple matter to reduce the minimum from 500 to 100 sheep.

The CHAIRMAN said that he was out of order. The question before the meeting was the amendment by the Honorable R. Carington.

Mr. T. BROWN, M.L.A. (Budgerabong), proposed an amendment, "that for the purposes of this Bill the constitution of the Stock Boards be altered so as to provide for (1) the appointment of a Chairman by the Governor; (2) that one additional member be elected on an equal franchise by all contributors under the Rabbit Act assessments; (3) that three members be elected under the Stock and Pastures Act

as at present provided, with a minimum voting power of five head of large stock; and (4) that five members be elected under the Diseases in Sheep Act as at present provided, with a minimum voting power of 100 head of sheep."

Mr. WILKES (Broken Hill) said the Honorable Rupert Carington had given them a nut to crack. He had heard of democrats, but the Honorable Rupert Carington had beaten the democrats. He could not understand the Honorable Rupert Carington's proposal to have one man one vote on this important question. He maintained that the amendment of the Honorable Rupert Carington if passed would necessitate the alteration of the Pastures and Stock Act and the Diseases in Sheep Act. The resolution might be passed, but no Minister of the Crown would dare alter those Acts without consulting the Boards affected; and they would unanimously vote against the alteration. If the Honorable Rupert Carington was going on with this radical proposal of one man one vote, he should not uphold him at all.

The Honorable RUPERT CARINGTON said he would like to reply. He did not intend to try to convince his friend Mr. Wilkes, because he could not. He had tried to explain that he had not stultified himself in the least. He had been perfectly ready that everybody who paid taxes should be represented. He considered that this was a very fair way of settling the question without stultifying themselves in any way at all. There was no chance of the Assembly passing the Bill, in his opinion, in its present form. He thought this was by far the best way of voting. This Board, with the addition of these men, would only sit as the Rabbit Board; they would not sit as a Sheep Board or as a Stock and Pastures Board. He thought his plan gave a fairer representation than any other; and as for it being too extreme he could not say that he agreed with that. It gave a representation of five to the sheep-owners and five to the people who were not sheep-owners. There would be five sheep-owners—three people on the Stock and Pastures Board, and two people on the Rabbit Board.

Mr. ALISON (Canonbar) moved that this amendment be adjourned to give them time to consider it. It was very important, and he could not see its bearings right through. As Mr. Wilkes had pointed out, they had to consider the Stock and Pastures Act as well as the Rabbit Act.

The Honorable RUPERT CARINGTON (Jerilderie) consented to the adjournment until 2 o'clock.

Mr. VANSTON (Goodooga) seconded Mr. Alison's proposal.

The question of the adjournment of the Honorable Rupert Carington's motion until 2 o'clock was put and carried.

Clause 13.

Rabbit Rates in Municipal Areas.

13. In any case where a Rabbit District is the same as a Borough or Municipal District, the Governor may direct that the rabbit rate shall be struck on the basis of the annual value of the holdings as shown in the Rate Book of such Borough or Municipal District; and in any such case—

- (a) the Rabbit Board shall, notwithstanding anything hereinbefore contained, strike the rabbit rate, and determine the amount payable in respect of any holding on the basis of such value; and for that purpose shall have access to the aforesaid Rate Book at all reasonable times; and
- (b) the rate shall not in any one year exceed one shilling in the pound on the annual value; and
- (c) there shall be no appeal from the determination by the Rabbit Board of the amount payable in respect of any holding.

Mr. BACON (Brewarrina) moved, and Mr. Gibson seconded, "That clause 13 as printed be adopted." Carried.

Clause 14.

Notice and payment of Rabbit Rate.

14. When the amount payable under the rate upon any holding has been determined, notice of such amount shall be given, and the same may be given in accordance with the general provisions as to the giving of notices hereinafter contained.

The amount determined by the Rabbit Board as being the amount payable under the Rabbit Rate shall, except in case of appeal, be paid to such person or bank, and on or before such date as may be respectively specified for the purpose in the aforesaid notice: Provided that the amount may be payable in instalments if the Board so permits.

The person liable to pay the amount shall be the occupier of the holding if the same be occupied, but if not, then the owner thereof; but nothing herein contained shall affect any private arrangement between a landlord and his tenant in respect of the said liability.

Mr. FREEMAN moved that the words after the word "the," starting at "occupier" in line 54 down to the end be omitted, and that the words "the owner of the holding taxed" be inserted. It seemed to him that there was no necessity to make private arrangements. If a man liked to make an arrangement under the common law, that need have nothing to do under the Rabbit Act. It would be simple to allow claims to be made against some person and that person ought to be the owner.

Mr. ALISON (Canonbar) seconded the motion.

Mr. GIBSON (Hay) said he would speak against it. There was one point that struck him, and that was: they had decided that the stock should be rated on the stock returns; and as it was the occupier that made out the returns this resolution if passed would put the owner in a predicament.

Mr. FREEMAN then said he would add the word "occupier."

The Chairman pointed out that that would leave the resolution practically as it was before Mr. Freeman proposed to amend it.

Mr. FREEMAN withdrew his motion.

Mr. FLANAGAN (Gunbar) moved "That the clause as printed be adopted."

Mr. VANSTON (Goodooga) seconded Mr. Flanagan.

The CHAIRMAN then put the question, and it was carried.

Clause 15.

Rate Book.

15. Every rate and every determination of the amount payable upon any holding under such rate shall be entered in a book—to be called the Rabbit Rate Book—which shall be kept in such form and manner as may be prescribed; and all persons shall have access thereto at all reasonable times. The said book shall, on the production thereof, be evidence of the rate and of the amount determined as being payable under such rate upon any holding. The Rabbit Board may from time to time make such amendments and supply such omissions in the entries in such book as may be necessary, and no such amendment or omission shall be held to avoid the rate or any determination of amount: Provided that—

- (a) every person aggrieved or affected by any such alteration shall have the same right of appeal therefrom as he would have had if his name had been originally inserted therein or no such alteration had been made; and
- (b) except in the case of an amendment rendered necessary by the result of an appeal, the determination of the amount payable shall be taken to have been made at the date of the amendment.

Mr. NIXON (Gunbar) proposed and Mr. CUMMING seconded, "That clause 15 as printed be adopted." The CHAIRMAN put the question, and it was carried.

Clause 16.

Rate not to be invalidated.

16. The production of a copy of the *Gazette* containing the hereinbefore required notice of the striking of a rate by the Rabbit Board shall be conclusive evidence that the rate has been duly struck.

No determination of the amount payable in any case shall be held to be invalid by reason of any failure to give notice of such amount in accordance with the provisions hereinbefore contained: Provided always that except in cases of appeal proceedings shall not be taken to recover the amount payable in respect of any holding unless and until due notice thereof has been given.

Mr. CAMERON (Ivanhoe) proposed, and Mr. LESLIE seconded, "That clause 16 be adopted as printed."

The CHAIRMAN put the question, and it was carried.

Clause 17.

Appeal against the amount determined by the Rabbit Board.

17. If any person, liable to pay the rabbit rate on any holding, shall think himself aggrieved by the amount determined by the Rabbit Board as the amount payable under the rate in respect of the holding, he may, unless debarred by the provisions of section thirteen of this Act, within twenty-one days after the aforesaid notice has been given, appeal to the Local Land Board by a notice in the prescribed form, accompanied by the prescribed deposit; and the Local Land Board shall determine the amount payable under the rate, and may order interest to be paid thereon at the rate of five per centum per annum, calculated from the date specified in the notice by the Rabbit Board as the date for payment; and payment of the amount finally determined, with or without interest as the case may be, shall be made to the person or bank specified for the purpose in the aforesaid notice within one month from the date of the final determination thereof.

Mr. BROOKE (Boggabri) proposed that the words "Local Land Board" be omitted and the words "Court of Petty Sessions" be inserted.

Mr. CUMMING (Hillston) seconded Mr. Brooke's proposal.

Mr. FLANAGAN (Gunbar) would oppose this. He held that the Land Boards of the Colony had been constituted for the purpose of saving land-owners from extraordinary and extravagant expenses, and he thought they would act very unwisely if they passed this. There could be no better men—no men better seized with the land laws of the Colony—than the Land Boards. If they took it to the Petty Sessions they would have to fee barristers, and decisions would be given against them on technical points, and they would not get justice.

Mr. SIDES (Hay) quite agreed with Mr. Flanagan. These men knew nothing about the rabbits, and it would not be wise to take it out of the hands of the Land Boards and put it under the Courts of Petty Sessions.

The amendment was put and carried.

Clause 18.

Unpaid Rates.

18. Any amount due as Rabbit rate may be recovered by summary proceedings before two Justices, in accordance with the general provisions hereinafter contained.

Any sums due as rabbit rates in respect of any private holding or lands shall be, and until the payment thereof remain, a charge upon the said holding or lands.

Mr. CUDMORE (Wentworth) proposed that "two Justices" be struck out and "Police Magistrates" put in.

Mr. ATKINSON seconded.

Mr. LAURENCE (Balranald) moved an amendment, "That no person be fined more than once in twelve months."

Mr. STINSON (Coolamon) seconded.

Mr. LAURENCE (Balranald) withdrew his amendment.

The original motion was put and carried.

Mr. WILKES (Broken Hill) said, if he was in order, he would move an amendment, "That any amount due as rabbit rate may be recovered with summary proceedings before a Police Magistrate or two or more Justices of the Peace, in accordance with the general provisions as hereinafter contained."

The

The CHAIRMAN said he could not take that as an amendment. He did not mind taking the vote again as there were places where there were no Police Magistrates.

Mr. ALISON (Canonbar) said the idea was to secure impartiality, and they were rather apt to forget convenience in trying to secure this. In some of the far districts they had not got Police Magistrates. Owners or occupiers or producers might have to travel enormous distances to have a very simple case heard. He would submit that they ought not to put out of the reach of these men the chance of having justice administered close to their homesteads. He would advise Mr. Cudmore to amend his resolution to say, "wherever there is a Police Magistrate it should be heard before him, and where there is no Police Magistrate it be heard before two Justices."

The CHAIRMAN said that would be superfluous, as the Police Magistrate was always there at the Court of Petty Sessions.

Mr. FLANAGAN (Gunbar) said he would support Mr. Alison.

Mr. ALISON (Canonbar) said that sometimes the Police Magistrate could not be there. He might be away in some other part of the district. In such a case I think it should wait until he returned.

Mr. FLANAGAN (Gunbar) thoroughly agreed with Mr. Alison.

Mr. BOLTON (Wagga Wagga) would point out that the Police Magistrate in his town had several other towns to visit, and his absence was so frequent that they had had to form a roster. He was a Justice of the Peace himself. They had the power to take away a man's liberty; surely they could settle these small disputes.

Mr. CUDMORE (Wentworth) said he was willing to accept Mr. Alison's amendment that where a Police Magistrate was not available two Justices should hear the case.

Mr. HEBDEN (Wanaaring) said that was too vague. It was not workable, and in many cases would make it very inconvenient. He would move an amendment that the "two Justices" be struck out and the "Court of Petty Sessions" put in.

Mr. MOORE (Goodooga) seconded Mr. Hebden.

Mr. FREEMAN proposed an amendment, "That any amount due as rabbit rates may be recovered by summary proceeding before a local Police Magistrate, or if there is no Police Magistrate in the district then before two Justices."

Mr. WILKES (Broken Hill) rose to a point of order. He had tried to move this, and had been ruled out of order. He did not believe in his brains being used by others.

The CHAIRMAN said he thought if they adopted Mr. Hebden's amendment "a Court of Petty Sessions" would meet the case. He then put Mr. Hebden's amendment to the meeting, and it was declared carried.

Clause 18, as amended, was put to the meeting and carried.

Clause 19.

Apportionment of Rates in certain cases.

19. In any case where—

- (a) any rabbit rates have been paid in respect of any lands held under lease or license from the Crown; and
- (b) such lands or any portion thereof are, during the currency of the year to which such rates relate, withdrawn from the lease or license by becoming the subject of any conditional or other purchase or homestead selection or conditional or other lease;—

the person who has paid the said rates shall be entitled to recover from the incomer so much of the amount paid as may be proportionate to the area withdrawn and the unexpired period of the year.

Mr. ALISON (Canonbar) begged to move that this clause be eliminated. He considered it unnecessary in view of the resolutions passed.

Mr. DAVIES (Gunnedah) seconded the motion.

The CHAIRMAN then put the question, and it was carried.

Clause 20.

Powers of Rabbit Board as to Barrier Fences.

20. A Rabbit Board shall have power to—

- (a) erect a barrier fence on any land, whether public or private, within or without the Rabbit District, and repair and maintain the said fence; and
- (b) utilise and convert into a barrier fence any private fence, whether rabbit-proof or not, on any land within or without such district, and repair and maintain the said fence; and
- (c) erect and maintain a barrier fence across any road or travelling stock route, making gates in such fence for the passage of members of the public and their stock; and
- (d) place a rabbit-proof gate in any barrier fence wheresoever the same may be required, and repair and maintain such gate; and
- (e) co-operate with the Rabbit Board of any neighbouring Rabbit District in the construction and maintenance of any such work as hereinbefore mentioned.

A barrier fence may be taken to mean a rabbit-proof fence which protects, or will protect from the incursions of rabbits, the Rabbit District, or any part thereof, whether erected without or within the boundaries of the Rabbit District; and the decision of the Local Land Board that a barrier fence protects, or will so protect, the Rabbit District or any part thereof shall be conclusive of the fact, as against the owner or occupier of any private holding or lands within the Rabbit District.

Mr. WILKES (Broken Hill) proposed that it be taken in detail.

Mr. FLANAGAN (Gunbar) said the clause empowered the Boards to go outside their own districts; therefore he thought it would be improper to pass the clause as it stood, because he held that the power was given to the Board to erect barrier fences around their own boundary and not outside, but
around

around and within their boundary. He proposed an amendment: "A Rabbit Board shall have power to tax all owners and occupiers of land within their district, for the purposes of erection of rabbit-proof fences around half the boundary of their Rabbit District, the destruction of rabbits within said district, and the proper maintenance of rabbit-proof fences." They should not give them power to go outside, because they would be infringing on the rights of some other Stock Board.

Mr. NIXON (Gunbar) seconded Mr. Flanagan's amendment.

Mr. FLANAGAN (Gunbar) said he wished to substitute the word "around" for the word "without," and then to add his resolution.

Mr. ALISON (Canonbar) wished to know whether Mr. Flanagan meant that no Rabbit Board was to have the power to go outside its own district to contribute to or erect a fence?

Mr. FLANAGAN (Gunbar): No power to go outside its own district.

Mr. ALISON (Canonbar) said that would cause a great deal of trouble if they did not allow them to go outside. There were fences which were now up, and which might be adopted, and he thought it was a most judicious power to leave in the hands of the Board. Why should they be compelled to go to the exact boundary when zigzagging in most extraordinary ways over ranges and across creeks. It would be only reasonable to a Board to go a little outside its own district.

Mr. BOLTON (Wagga Wagga) said, as a surveyor of many years experience, he thought it was very desirable that it should be left to the Boards to adjust boundaries. They knew very well that a lot of their main boundaries were the dividing ranges, and sometimes it would be almost impossible to carry a fence along a dividing range, whereas a little lower down it could be done very well.

Mr. LESLIE (Forbes) suggested that Mr. Flanagan should consent to move that the word "without" be struck out of line 19, and let the rest of his motion stand and be dealt with later on.

Mr. FLANAGAN (Gunbar) said he was quite willing.

Mr. OAKDEN (Cobar) endorsed Mr. Alison's remarks, and was sure that anybody who was acquainted with the western country would know he was right.

Mr. BAYLIS (Narrandera) also endorsed Mr. Alison's remarks.

Mr. CUDMORE supported Mr. Alison. In the western district the boundary crossed high ranges of sand-hills, and if the fences were placed on these sand-hills they would be covered with sand; whereas if the Board were allowed to deviate from the boundary they could be put it in a good position.

Mr. LESLIE (Forbes) said that on the barrier line of fence in which he was interested, it had been very desirable that they should go a long way outside the district, so as to make the fence answer the purposes for which it was erected, and they had done so.

Mr. DILL (Hay) begged to support Mr. Alison, and in doing so he might mention that in November last year they cleared half a mile of sand on his boundary. This year that had all filled up again, so that the rabbits could walk over the fence, and it was his intention to apply to be allowed to shift that fence.

Mr. WILKES (Broken Hill), in support of Mr. Alison, pointed out that the Lands Department could endorse what Mr. Dill had just said, for on the South Australian border a large amount of money had been spent in clearing sand from the boundary fence, whereas if the fence had been deviated a good boundary could have been made.

Mr. FLANAGAN (Gunbar) said the gentleman did not seem to understand him. They had tried yesterday to confine the Rabbit Districts to the present lines, and he fought against that, and they obtained the right for the Minister to modify and remove and shift the Rabbit Districts. The Minister now had the power to shift the fence and shift the boundary of a district; and he still maintained that the rabbit fence should be on the Rabbit District boundary. If there was a rocky place on the boundary, all they would have to do was to tell the Minister and he would shift the boundary.

The CHAIRMAN then put the question of striking out the word "without" from the clause, and it was lost.

Mr. LESLIE (Forbes) begged to move that subsections (a), (b), (c), (d), and (e) be passed as printed.

Mr. GIBSON (Hay) seconded.

Mr. ALISON (Canonbar) opposed the motion.

The CHAIRMAN put the question, and it was carried.

Mr. FREEMAN proposed that the words "decision of the Local Land Board that" in line 34, and the words "a barrier fence" and "or will so protect," in line 35, and "of the fact," in line 36, be struck out, and in substitution of them the following be put in, "the fact that the barrier fence." The clause, as amended, would read,—“A barrier fence shall be taken to mean a rabbit-proof fence which protects, or will protect, from the incursions of rabbits the Rabbit District, or any part thereof, whether erected without or within the boundaries of the Rabbit District; and the fact that the barrier fence protects the Rabbit District, or any part thereof, shall be conclusive as against the owner or occupier of any private holding or lands within the Rabbit District.”

Mr. ALISON (Canonbar) seconded the alteration.

Mr. GIBSON (Hay) said that it would materially help them to come to a decision if there was some procedure by which it would not be necessary to prove that the fence was a barrier fence. They should put in "Pastures and Stock Protection Board" instead of Local Land Board. He would move that as an amendment.

Mr. FREEMAN said he was quite willing to accept that;—it came to the same thing. He therefore withdrew his motion.

The CHAIRMAN put Mr. Gibson's motion, and it was carried.

Mr. ALISON (Canonbar) said that there should be an appeal provided in that clause from the Pastures and Stock Protection Board.

The CHAIRMAN said he thought that could be done by one clause at the end, stating that any decision of the Pastures and Stock Protection Board could be appealed from.

Mr. LESLIE (Forbes) said that he proposed to strike out the word "private" from line 36 of clause 20.

Mr. DILL (Hay) seconded.

The question was put, and carried unanimously.

Clause 20, as amended, was put and carried.

Clause 21.

21. If any barrier fence shall be erected by any Rabbit Board on the boundary of any Rabbit District, the Board of the adjoining District shall be liable to pay to such Board as aforesaid half the cost of erection and maintenance of such fence, or such fence may be erected and maintained at their joint expense in accordance with such arrangements as they may mutually or jointly agree to.

Mr. LESLIE (Forbes) proposed that clause 21, as printed, be passed.

Mr. STINSON (Coolamon) seconded.

The question was put and carried.

Clause 22.

22. In respect of any rabbit-proof fence which the Board has erected, or has paid contributions under section forty-two of this Act, the Board may by notice in writing served on him require the owner of any holding along the boundary of which the fence is situated (in addition to any rabbit rates payable by him) to pay, and the said owner shall pay to the Board one-half of the cost of making the fence rabbit-proof.

Mr. LESLIE (Forbes) said he wished to strike out the words "along the" and put in "on the protected side of such" in line 47 of this clause. There was no need to explain the necessity of this.

Mr. BRETT (Urana) seconded.

Mr. ALISON (Canonbar) said he would strike out the whole of the clause. He could not see why a private owner should be called upon to pay anything for a barrier fence. Many owners would sooner that the fence was put further away from them, because the land which was next to the fence was more liable to damage from the rabbits coming over the fence than the land 10 miles away. He did not see how a man alongside the fence got any benefit. He moved that this clause be struck out.

Mr. OAKDEN (Cobar) seconded Mr. Alison's motion.

Mr. LESLIE (Forbes) withdrew his motion.

Mr. FLANAGAN (Gunbar) said he would now move an amendment. There was not a word in this clause about barrier fences, it was all about rabbit fences. He thought the clause should stay as it was. The farmers found it very convenient to shut out the rabbits. Mr. Leslie had been talking about "the protected side." He would like to know what the protected side was. The rabbits were like an invading enemy, they came in from all sides. He held that it would be a great injustice, for the rabbit-proof fences were the most effective means of fighting the plague in many portions of this country. If they eliminated this clause, and one man put up a fence, his neighbour would not be compelled to pay for half of that fence.

Mr. GIBSON (Hay) thought the Conference would make a very great mistake if they struck out the clause. He thought it should be amended. If a barrier fence was erected it was at somebody's expense; he thought the individual holder got an advantage from it over and above its value as a barrier fence. It was a fence along one of his boundaries, and he should pay something for it. He proposed that instead of paying one half of the cost of making a fence rabbit proof, they should make the clause read "and the said owner shall pay to the Board a contribution assessed according to the benefit derived and to be derived from the rabbit-proof fence, which in no case shall be more than the value of half the fence."

Mr. FREEMAN would like to point out to the meeting that those who were assessed in the district had to pay a contribution. If the Board erected a fence they all got a benefit from it, and they were all paying for it by contributing to the fund.

Mr. ALISON's (Canonbar) motion was put and carried by a large majority.

Clause 23.

Compensation by Rabbit Board.

23. A Rabbit Board shall not be required to give compensation for anything lawfully done in exercise of the foregoing powers, except where a barrier fence is erected upon any private holding or land so as to cause damage by severance.

The amount of compensation due to any person shall, upon application by him as prescribed, be determined by the Local Land Board; and in fixing such compensation the Local Land Board may take into consideration and set off any betterment accruing to such person's property by the construction of such fence, and shall have power to award costs to or against any party appearing before it.

Mr. LESLIE (Forbes) proposed that the clause as printed be adopted.

Mr. DILL (Hay) seconded it.

Mr. OAKDEN (Cobar) moved an amendment. He wanted "Local Land Board" struck out and "Court of Petty Sessions" put in.

Mr. BAYLIS (Narrandera) seconded.

Mr. ALISON (Canonbar) said he hardly thought the meeting appreciated the importance of this clause. It introduced a new system, which he believed was known as the betterment system. He did not think that, as a rule, land owners or stock owners were in favour of the betterment system. Mr. Oakden proposed to strike out the "Local Land Board," and put in "the Court of Petty Sessions," and in that case the Court of Petty Sessions would be called upon to decide upon the betterment to any holding through which a fence might go. He thought that this was rather a large order for the Court of Petty Sessions to decide what advantage a holder might gain from a barrier fence. He thought it was hardly possible to imagine a case where a fence could be put through a holding, subdividing the holding, so as to be an advantage to the owner. It was a decided disadvantage in nearly every case. It might cut the owner off from water. It might cause him in many ways a great deal of inconvenience. He thought the term betterment was so vague and so difficult to arrive at, that instead of any persons through whose holding a fence was put receiving any benefit or receiving any money for damage, in all probability

he would receive nothing at all, because the betterment would be put against it. It was a principle which he at any rate did not believe in. He did not think the Court of Petty Sessions was competent to assess it.

Mr. OAKDEN (Cobar) withdrew his proposition.

Mr. ALISON (Canongbar) said he would like to see the latter part of the clause struck out altogether.

Mr. OAKDEN (Cobar) said he agreed with Mr. Alison. He proposed that the whole of the words after "Land Board" be struck out, and that the "Court of Petty Sessions" be inserted in place of "Local Land Boards"

Mr. GIBSON (Hay) moved that the whole of the clause be struck out.

Mr. LESLIE (Forbes) withdrew the original motion that the clause be passed as printed, and supported Mr. Oakden.

Mr. FREEMAN seconded Mr. Oakden. He thought it was a very wise provision indeed, although he might have a rabbit-proof fence running right against, or perhaps absolutely on his boundary, it would not be put there by the Board for his convenience, and, although it might be a benefit to some extent, they could be sure that the Board would do its best for the whole district.

Mr. NIXON (Gunbar) seconded Mr. Gibson's motion.

Mr. ALISON (Canongbar) supported Mr. Oakden's amendment.

The question of striking out the clause was put and lost.

The CHAIRMAN then put Mr. Oakden's motion to the meeting, and it was carried.

Clause 23 as amended put to the meeting and carried.

Clause 24.

Maintenance of barrier-fences.

24. It shall be the duty of the Rabbit Board to keep in good repair and efficiently maintain—

- (a) every barrier-fence erected by it and every fence converted by it into a barrier-fence; and
- (b) every barrier-fence erected or to be erected at the expense of the Crown within the boundaries of the Rabbit District:

Provided always that—

- (c) where any such fence as last aforesaid is along the common boundary of two Rabbit Districts the Minister shall determine which of the two Rabbit Boards shall be charged with the aforesaid duty, and the Rabbit Board charged therewith shall be entitled to receive from the other of such Boards half of the annual cost incurred in discharging such duty; and
- (d) the Railway Commissioners shall be charged with the duty of keeping in good repair and efficiently maintaining any barrier-fence erected or to be erected at the expense of the Crown along the boundaries of any lands vested in them, but the costs incurred in the repair and maintenance of such fences shall be a charge upon the Consolidated Revenue Fund.

Mr. BACON (Brewarrina) moved that the clause as printed be adopted.

Mr. HERBEN seconded it.

Mr. ATKINSON proposed that after the word "shall" in line 16 the words "if the two Rabbit Boards fail to agree" should be inserted.

Mr. DAVIES (Gunnedah) seconded it.

Mr. BACON (Brewarrina) accepted the amendment.

The CHAIRMAN thought that it was superfluous. If they agreed they would pay, and if they did not agree they would not pay.

Mr. ATKINSON said there were many cases where the Boards might fail to agree.

Mr. T. BROWN, M.P. (Budgerabong), pointed out that clause 23 determined that point.

Mr. ATKINSON then said that he did not give the Minister the right, it only gave him the power to be arbitrator. He wanted to give the Boards the opportunity of determining on their own account. It said "the Minister shall." He wanted the Boards to do it.

Mr. FLANAGAN (Gunbar) said he would support the motion.

The question was put and carried.

Clause 24 as amended was put and carried.

Clause 25.

Power of Boards to borrow money.

25. (1) Any Rabbit Board may borrow on the security of a mortgage, or otherwise on the credit of any land, personal estate, or annual revenues, actual or prospective, belonging to the Board for carrying out the provisions of this Act in its district any moneys not exceeding in the whole the estimated revenues of the Board for four years:

Provided that no money shall be so borrowed except with the sanction of the Governor in writing under his hand:

Provided further that before any money is so borrowed the Board shall, by advertisement in some newspaper circulating within the rabbit district, give fourteen days' notice of its intention to borrow, and shall at the same time state in such notice the amount of the proposed loan, the rate of interest to be paid in respect thereof, the time, place, and manner of payment of the principal and interest due thereon, and the nature and estimated amount of the proposed security for such loan; and until the said loan is repaid the Board shall levy and collect a rabbit rate of not less than two-thirds of the maximum rate authorised by this Act.

No loan shall be for a longer period than eight years.

The Colonial Treasurer may, on behalf of the Crown, guarantee the repayment within the period for which it was granted, of a loan to a Rabbit Board, and in case of default by the Board in repayment within the period aforesaid, the loan or the unpaid balance thereof may, in the discretion of the Colonial Treasurer, be paid out of the Consolidated Revenue Fund or the General Loan Account, but may be recovered from the Board as hereinafter mentioned, and shall thereupon be returned to the Consolidated Revenue Fund or General Loan Account, as the case may require.

(II) After default for the period of three calendar months made by any Board in the payment of the principal sum and interest secured by any mortgage, deed, or bond made hereunder or purporting to be so made upon the rates and other revenues of the said Board, it shall be lawful for the mortgagee to make application to the Supreme Court that a receiver of the said rates and other revenues of such Board may be appointed. And when appointed under the direction of the said Court such receiver shall pay over to the said mortgagee from and out of the produce of such rates and revenues at such times and in such proportions as may be ordered by such Court the sum which such Court has found to be due to the said mortgagee under the said mortgage deed, and the said receiver shall in all respects have the same powers and be subject to the same obligations and liabilities as a receiver appointed under the equitable jurisdiction of the said Court, and shall continue to receive the rates and other revenues of such Board so mortgaged as aforesaid, and to pay them under such direction until such time as the mortgage debt has been fully paid off.

If under the guarantee hereinbefore provided the said debt, or any part thereof, has been paid out of the Consolidated Revenue Fund or General Loan Account, the Minister shall thereupon have the same rights as are given by this subsection to the mortgagee.

Mr. GIBSON (Hay) proposed that the clause be accepted as printed.

Mr. FREEMAN, looking at the second line, said he could not see what security was to be offered. It seemed to him that the only security they had to offer were the barrier-fences which they might erect and the rates.

Mr. FLANAGAN (Gunbar) would second Mr. Gibson's motion.

Mr. ALISON (Canonbar) said that personally he had hardly expected that they would make the progress they had made that morning, and he had not gone into this clause as closely as he desired, and they should adjourn now to give them time to think over it.

Mr. GIBSON (Hay) had not been certain about coming forward, and then he had moved it *en bloc*. This dealt with perhaps a million of money, and they should consider it carefully.

The CHAIRMAN said he hoped that every delegate to the Conference had carefully considered and read through the Bill before this.

Mr. ALISON (Canonbar) thought they could hardly have worked it out and be ready for it suddenly; as it had come on he thought they ought to adjourn this until 2 o'clock.

Mr. LAURENCE (Balranald) would like to know if the Board would become responsible personally for any money borrowed outside the rates.

The CHAIRMAN said that if they borrowed it legally they would not be responsible, but if they borrowed it illegally they would be responsible.

Mr. OAKDEN said he was against giving the Boards the power to overload them with increased taxation. He moved that the clause be struck out.

Mr. ROSS seconded Mr. Oakden. He thought the Board should not have the power to borrow so much money as four years' revenue. They could see by the experience of other Boards that it was a very dangerous way to get money. The Government should provide it in some other way than this. They should not elect men on this Board with power to anticipate the revenue of four years.

Mr. ALISON (Canonbar) rose to support the view taken by Mr. Ross and Mr. Oakden. He never liked this clause. It allowed a Board, appointed for one year, to mortgage the revenues of a Board for four years. He thought that they should not be allowed to anticipate their revenue for one year. Let them pay as they go; it was a good old system. The clause did not prevent them borrowing for wire-netting. Of course he would not support it if it had that effect. He thought it advisable to have some way of raising money to allow private owners to fence in their holdings, and he did not regard it as possible if this clause was struck out. He thought we should have some clause, and he favoured Mr. Brown's proposition in regard to wire-netting in place of this clause. He thought Mr. Brown's proposition much more likely to meet this case.

Mr. GIBSON (Hay) said that he would point out that all works in their initiatory stage generally involved a considerable amount of expenditure. The power to borrow money was given to Municipal Councils. He thought it was necessary, if they were going to carry out a system of local control, that the body who was appointed should have power to go to this extent of four years. It was not very much, four years' money, and to a large extent it would be for the barrier fences, not for individual holders interests, but for the interests of the people in the whole district.

Mr. ATKINSON said they should take up the position of the Government and spend the money when it was voted.

The CHAIRMAN did not see how the Minister was to advance the money without getting borrowing powers, without any security whatever. He did not see how they were going to ask the Minister to lend them money for wire-netting without security, and the only way they could give security was by giving the Board power to borrow. The difficulty always had been in advancing money for wire-netting. There had been no local body to advance the money, and to look after their interests. He thought they could trust these men, who were administering the Stock and Pastures Act, with the power of borrowing, for carrying on, according to law, the actual administration, and the advancing of money to settlers within their district for wire-netting.

Mr. ALISON (Canonbar) said that if the annually-elected men spent all the four years' revenue at once, the new settlers would have no power to get any money at all.

The CHAIRMAN said he was only putting his own view of the matter. They might have different views. It would be damaging the usefulness of the Pastures and Stock Board if they struck it out.

Mr. OAKDEN'S amendment, "That the clause be struck out," was put to the meeting and lost.

Mr. BACON (Brewarrina) asked if it was competent to move a fresh clause to take its place. It seemed to him that it was too drastic. He thought they had gone ahead too fast.

The Honorable B. CARINGTON (Jerilderie) said they had emasculated the Bill.

Mr. BACON (Brewarrina) said that instead of the Board being able to borrow four years' revenue, they would borrow two years' revenue.

The CHAIRMAN said that he could not take that now. Mr. Bacon must prepare a new clause and propose it later.

Clause

Clause 26.

Rabbit Board may supply netting, &c.

26. The Rabbit Board may purchase wire-netting and other materials required in the construction of a rabbit-proof fence, and also any machinery, plant, or substances for the destruction of rabbits; and may enter into contracts for the sale or letting out thereof to the owner of any private holding or lands for use within the Rabbit District upon such terms as may be agreed upon in writing: Provided that where any sale or loan as aforesaid is made upon terms one-fourth at least of the price shall be paid on delivery of the articles sold or lent, and any money owing to the Board in respect of the sale or loan shall be a charge upon all the lands within the district owned by the person to whom the sale or loan has been made, in priority to any estate, right, title, or interest other than the estate, right, title, and interest of the Crown.

Mr. T. BROWN, M.L.A. (Budgerabong), proposed that clause 26 be struck out, and that in place of it the following clause be inserted,—“That the Minister be empowered to purchase wire-netting and other materials necessary for the construction of rabbit-proof fences; also any machinery, plant, or substance required in the destruction of rabbits; and may contract to sell or let same to Rabbit Boards or private holders upon the following terms:—

- (a) One-tenth of total cost, in the case of a sale, on application, and 5 per cent. on total cost, thereafter to be apportioned as follows:—4 per cent. interest, and remainder to be placed to a sinking fund for the purpose of discharging indebtedness to State by a system of deferred payments.
- (b) The value of the netting thus provided be secured to the Minister by a first mortgage on the land so protected.
- (c) The netting to be erected within twelve months after delivery has been taken.
- (d) The Minister to have discretionary powers as to how such advances are to be made.
- (e) The letting of any machinery, &c., to be a matter of agreement between the Minister and parties interested.”

He thought the Minister should have the power to raise money for letting out wire-netting. He did not hold very strong views on the terms on which it should be let out. He simply desired that those terms should be as liberal as possible, so that those interested might take advantage of it. He was only desirous of having the principle affirmed and was quite prepared to accept an amendment. The stand he took was, that to cope with the rabbit pest, particularly in the more scattered districts, and where the pest was now growing and becoming a menace to the settled districts, wire-netting should be used, and while barrier-fences afforded a certain amount of protection it was by no means sufficient, and the smaller the areas the greater the protection and the nearer they came to getting rid of this plague. In the western part of the Central Division, where the rabbits were the most prevalent at the present time, there were numbers of small holders holding from 10,000 acres to 2,500 acres, and these men were settled down in the midst of vast areas of abandoned Crown lands, and their only hope under any legislation was to fence in their holdings and to kill the rabbits within those holdings. At the present time they were trying to keep the rabbits down by killing, but they were not killing the rabbits that were bred within their own holdings, but the rabbits that came upon their lands from the abandoned areas around. Now, if they could assist those men to fight the rabbits on the small areas, and gradually work on by extending the fences they would gradually get the rabbits under. Some men fence in the holding with netting, and they were in a very different position to those who were not able to do it. There was an instance in the Melrose district. There were a number of 2,560 acre block men in a vast area of abandoned country, some of it practically abandoned to the rabbit and wallaby pest. The men ought to have been enabled to enclose their holdings. There was a selector out there who held second rate land, but, by enclosing, he has been able to carry ninety per cent. of fat sheep to send to market, and the surrounding men on the same area were only able to carry five to seven hundred sheep instead of two thousand, and their holdings were becoming worse and worse, as their feeding grounds were depleted by the millions of rabbits that crowded in from the surrounding lands. These men were not able to get this netting on easy terms, and if they passed this measure they would go a long way towards solving the rabbit problem.

Mr. LITTLE (Bullock Creek, N.) seconded the motion. He would like to point out that they also expected to be able to cope with the wallabies, as their country was infested from the Parkes district, and was completely eaten out by them. From a small portion of 160 acres they had taken over 1,000 wallabies. The whole country was taken possession of, and they had increased in such numbers that it was impossible to get rid of them. Their only hope of contending with them was by getting wire-netting on easy terms from the Government.

Mr. GIBSON (Hay) said that this matter was one he was asked to bring before the conference, if it had not been brought forward by anybody else. There were a large number of men in his district in the neighbourhood of abandoned country, badly infested, and it was all very well for them as a Conference to propose Rabbit Boards, and to propose modes of assessment, but the best thing to do was to try to keep the people on the land. They should assist the people who took up these lands prior to rabbit legislation, who were receiving no benefits from any re-appraisements which were now taking place, in which the devastations caused by the rabbits were a factor, and the men were paying higher rates than the lands were now worth. These men have sunk their all on their property, and they were just struggling on from day to day in the hope of some concession being granted, such as the mover of the resolution had shadowed forth. If they gave these men wire-netting they would ask nothing more. They would be quite satisfied that it should be made a charge on the land, they did not ask for a free gift of the netting. They would be able to pay it back by instalments, and as the Crown was the landlord, he certainly thought it would be an advantage to the Crown that their lands should remain in a good tenants hands. If the men who had sunk all their money on these properties had to go under, who was going to take their place except under very great concessions. The best concession, and he thought the only concession that could be given to a lot of holders, to large as well as small holders, was that the Government should find the netting, and let them have it on easy terms.

Mr.

Mr. ALISON (Canonbar) supported Mr. Brown's proposition. He would knock out that part where it said "payment for interest, &c." He said they were all tenants of the Crown. The general body of the people were as interested as the landlord in keeping this pest down, and he thought the people would voluntarily spend their money in endeavouring to improve the public estate. The State ought to pay its portion and contribute the netting, as long as the borrower paid back the principal. He thought it would be as well to eliminate the interest altogether, for the Crown was interested in preventing the spread of the pest.

Mr. FLANAGAN (Gunbar) supported the motion. Of course they knew circumstances altered cases all over the Colony. Some delegates thought that wire-netting was not requisite. Perhaps not in some parts of the country; but he could say this, that in his locality they commenced to grow wheat a few years ago, and they thought they could do it without wire-netting, but he had seen the rabbits eat as much at night as a reaper and binder took off in a day. They found it impossible to grow wheat without wire-netting. By borrowing money from their bankers some of them succeeded in wire netting 500 acres, and some up to 2,000 acres. There was a delegate there who cultivated 2,000 acres. He was more beneficial to the country than any wool-grower present. Mr. Harpur, of the Railway Department, had told them that 500 acres of wheat were more beneficial to the railways than 5,000 acres of wool. He himself was a wheat and wool grower, and he would say this, that he could produce as much from 500 acres by wheat as from 5,000 acres by wool, and his returns from 500 acres of wheat were more than from 5,000 acres by wool. If the small men had no wire-netting it would simply be a loss of time and money to put them on the soil, for they could not remain there.

Mr. SIDES (Hay) said he knew of an instance where a man had abandoned a run, or, rather, the rabbits had simply put him out of it. It was a property of 12,000 or 15,000 acres, and he was quite within bounds in saying that there were £3,000 spent on improvements on that land. The man had had to leave it. About two months ago that land was offered to him for £1,600, and he would not have it, for the simple reason that to fence it in would be a big expense to him. He had land adjoining it on which he had no stock, because it was overrun with rabbits. There was a necessity for the State to assist the landowners, large and small. There were not many of the large owners in a much better position than many of the small ones. He thought there were very few who would say "no" to the State assistance. They knew very well they had to put their own hands in their pockets and find the wherewithal there when they wanted assistance. That 4 per cent. should be done away with. Let them have actual cost. If the State did not assist, it would simply shut up the means of progress of a coming and a great country. The rabbits had come as a great flood, not as a wave. A $1\frac{1}{2}$ inch mesh was not a rabbit-proof fence. Rabbits, when they were not fed, got small; they got small themselves when they did not get enough to eat. $1\frac{1}{2}$ inch was quite small enough. Unless Parliament did something like this they might as well shut up the Parliament House, or not build the new one they were talking about.

Mr. VARCOE (Hillston) had great pleasure in corroborating the remarks of the previous speakers. He considered that this was the most important feature they had come there for—in fact, it was all they wanted. If they could only get this, it would not matter if they had no Rabbit Bill at all. It would not only be the salvation of many who were now struggling under a forlorn hope, but it would also be a stimulus towards encouraging people to settle down on the present abandoned Crown lands, turning them from a wilderness into smiling farms. He supported the motion.

Mr. GORMAN (Berrigan) had much pleasure in supporting Mr. Brown's amendment. He merely differed from him on a point of detail. He certainly did not agree with some of the speakers that the whole of the burden should fall on the State. He understood, from Mr. Alison's remarks, that he would not charge the settler any interest. He considered interest should be borne also. He certainly felt that if the State got rid of the rabbits on their own runs, and assisted the settlers by lending money for netting, and charging a reasonable rate of interest—say, 3 per cent., with a sinking fund of 5 per cent.—that was all they could expect. In Victoria the Shire Councils procured the wire-netting, and the settlers had to pay a higher percentage than that. It had been found to work well there.

Mr. STINSON (Coolamon) said that this was a very important matter. It was a very vital point with the Government. If all the different Boards applied for money it would mean an enormous expenditure. The Minister had told them that he would be only too pleased to come and join them in their deliberations. He thought it would be a very wise thing to avail themselves of that offer, and ask his advice upon this point. He would be able to help them materially. He would be able to offer suggestions to them, which would be of great value. Without his advice, they might pass resolutions which the Government would not accept, interested, as they were, to a great extent.

Mr. DAVIDSON (Condoblin) rose to support Mr. Brown's motion. He represented a district which was badly infested with rabbits and wallabies. On the Crown land adjoining the holdings there was a perfect wilderness of scrub. It would be almost impossible to destroy the rabbits and wallabies on this land, and, unless wire-netting was supplied to the farmers and settlers in that district, they would very soon have to abandon their holdings altogether. Within a radius of 20 miles from their Post Office there were eighty settlers struggling against this terrible pest. They had wallabies by hundreds and thousands. In one day they had burnt 6,000 scalps that had been collected in a very short time. Something must be done, and he was sure, from what the Minister had said, that he was anxious to settle people on the land.

Mr. BACON (Brewarrina) was in thorough accord with Mr. Brown. He thought it would be better to pass the clause, and then leave the matter to the Minister. They might leave the interest open. This was a matter upon which the Minister's views should be taken. He would point out that this resolution affected a lot of waste land in the Eastern Division, which was not generally taken into account, and which was infested with wallabies and native-dogs, and the latter were a very serious pest in some districts. He had great sympathy with the men who had pushed out into the wilderness, and had endeavoured to make two blades of grass grow where there had been but one. He wished them every success, and that they might go on and prosper. They had not only tried to grow two blades of grass, but also wheat, and they deserved success.

Mr. LAURENCE (Balranald) said there was one thing he would like to mention, and that was, from the experience they had had in the past of the Minister buying wire-netting to enable the holdings to be fenced in, they had found that he had paid far more than the private individuals themselves would have paid. They, themselves, knew best where to buy it, and how to get it on to their land. The Minister had bought the netting in Sydney, and in different places, and the enormous cost of carriage was added to the expense

expense of the netting, and the people therefore could not take advantage of this. The people should be allowed to buy netting of the best description as recommended by the Conference, and the Minister should be asked to contribute one half of the cost of erecting the fence.

Mr. NIXON (Gunbar) had much pleasure in supporting the resolution proposed by Mr. Brown. There was no doubt that where the areas were not too large this would be very beneficial.

Mr. BRETT (Urana) wished to know if he was in order in proposing an amendment. He begged to move, "That, as the Minister very kindly offered to assist them, and as this was a very important matter, he should be asked to attend before they decided the matter." The Minister was the largest land-owner amongst them, and it was only fair that he should be present.

Mr. FREEMAN thought the best way out of the difficulty would be to pass the clause as it stood, and then to allow any amendment in the rate of interest to come in afterwards.

Mr. BRETT (Urana) said he did not think it was fair for them to pass an important amendment like that when the principal man who was interested was absent.

Mr. TAYLOR (Lands Department) proposed to put in after the word "Minister" the following, "with the consent of the Stock and Pastures Board."

The question of striking out clause 26 was put to the meeting and carried.

The question of substituting Mr. Brown's amendment as clause 26 was put to the meeting and carried.

When the vote on Mr. Brown's amendment was being taken, Mr. Alison asked the Chairman if he would be in order in submitting an amendment in the afternoon with regard to the interest, and the Chairman replied that he would.

The CHAIRMAN then reported that he would not be able to be present in the afternoon, and would be glad if they would elect some other gentleman to take the chair.

On the motion of Mr. ALISON, Mr. Oakden was elected Chairman unanimously.

The Conference then adjourned until 2 p.m.

On resuming after lunch, Mr. Oakden took the Chair at 2 p.m.

Mr. T. BROWN, M.L.A. (Budgerabong), wished to know whether they had yet determined the amount of the levies under the Rabbit Act, because he thought that was an important matter, to enable them to decide with regard to the constitution of the Board.

The CHAIRMAN pointed out that in the Bill it was provided that the maximum levy was to be $\frac{3}{4}$ d. per sheep, according to the stock returns. The levy might be less, but it could not be more. The next business before them was the adjourned consideration of the Honorable Rupert Carington's motion.

Mr. LESLIE (Forbes) said he had intended to ask the ruling of the Chair again with reference to whether they should proceed with that resolution, unless the clause which had already been passed, providing for eight members to constitute the Board, was recommitted; but he did not desire to place Mr. Oakden in the invidious position of giving a decision contrary to Mr. Lakeman's ruling. He would therefore move, "That this resolution stand over until Mr. Lakeman's return to the Chair."

The CHAIRMAN said he would ask the Conference not to put him in the position of, perhaps, giving a different ruling to Mr. Lakeman's on this matter. Either the discussion should be adjourned until the return of the Chairman, or he should not be asked to give another ruling.

Mr. WILKES (Broken Hill) moved a further adjournment until the return of the Chairman to the Chair.

Mr. FLANAGAN (Gunbar) seconded it.

The Honorable RUPERT CARINGTON (Jerilderie) begged to move, "That this motion be considered now."

Mr. BROOKE (Boggabri) seconded.

The Honorable Rupert Carington's amendment was put and carried by 20 votes to 14.

The adjourned discussion of the Honorable Rupert Carington's motion, "That the following words be an addition to clause 5, as amended," was then taken: "For the purpose of administering this Act, only two members be added to the existing Sheep and Stock and Pastures Boards, such members to be elected by the stock-owners and other persons taxed under this Bill; each stock-owner or tax-payer to have only one vote."

Mr. ALISON (Canonbar) said he now understood this motion, and he wanted the other members to clearly understand what it implied. The Stock and Pastures Board now consisted of five men elected by the sheep-owners, and three men elected by the large stock-owners. He understood that the Honorable Rupert Carington's proposal was that they should remain as at present, and that there should be two additional men who should only act on the Rabbit Board, and who should be voted for by every person who paid towards the Rabbit Fund, and that each person who voted for the Stock and Pastures Board should have only one vote for these two men. It would save a lot of trouble if this motion were carried. It would leave the Pastures and Stock Act as it was, it would leave the Sheep Diseases Act as it was, and for the purposes of the Rabbit Act, which they were now considering, it would enable them all to act together, with the addition of two men who would be elected by everybody who paid taxes toward the Rabbit Fund. It would not confuse the other Acts in any way. He was inclined to think that on the whole, it would facilitate the working of the Rabbit Act. The only difficulty he saw about it was this: they had a distinct assurance about it yesterday from the Minister that the Crown must not expect to come in as an ordinary ratepayer, but they must have some arbitrary representation on the Board. He could hardly understand how the Crown was to be represented under this motion. If the Crown nominated one or two representatives, the Board would be swelled to eleven or twelve. If the Honorable Rupert Carington could explain some way out of that difficulty, his decision would be much facilitated. If they had two extra members under this motion, and two representing the Minister, it would be twelve. That was a considerable number to pay for. Regarding the franchise, every one who was a taxpayer under this Bill, even if he only paid taxes up to 2s. 6d., would have a vote on those two extra men, and the franchise for the other members would remain as before.

Mr. WILKES (Broken Hill) wished to move an amendment: "That, for the purposes of this Act, the meaning of the Pastures and Stock Boards shall be the Pastures and Stock Board under the Pastures and Stock Act, with the addition of two members appointed under this Act by the Governor-in-Council on the recommendation of the Minister." His reason for moving this was that the Minister must be represented. He was as much for the small owner as any of them; but he could not stand there and see them go by at
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the expense of the big owner, who was most interested. He could produce figures to show that the small owners at the present time outvoted the big owners on the Stock and Pastures Board, and the big owners had no say. They had been told by the Minister that the Crown must have representation, and it was only right that he should have representation. He had spoken against the ways and means of carrying out the Act, but he was never against the Minister having representation. The Minister, however, should not be over-represented. The Pastures and Stock Act gave the power to tax unstocked runs, and a run within the meaning of the Sheep Act was 40 acres. They had got the franchise low enough when it was brought down to ten head of large stock, and if the small owners of under 40 acres could not trust the Minister to look after their interests, then they could not get a Bill at all. This amendment of his would make things as plain as could be. It would save trouble, and yet give representation to every class; and if a man had less than ten head of stock in the country he would have very little interest in the rabbit question.

Mr. WILKES' amendment lapsed for the want of a seconder.

Mr. T. BROWN, M.L.A. (Budgerabong), said it had been decided to place the whole of the control of this Bill under the Stock and Pastures Board; and, from a statement which had been made in reply to his question, he understood that this Rabbit Bill gave additional powers of taxation equal to those exercised under the Diseases in Sheep and Pastures and Stock Acts. The powers of taxation under this proposed Bill, by the resolutions of the Conference already carried, were equal to what obtained under those two Acts in their present operation. Now, that would add very considerably to the powers of this Board, and it brought in a large number of other holders, who had not so far been called upon to pay any form of taxation under the existing Acts, because under this Bill they brought in unoccupied lands, and assessed them as carrying so many sheep to the acre; and they also assessed cultivated land, not carrying stock, as carrying so much stock to the acre. And though these lands are not taxed under the Acts which constitute the present Board they will be taxed under this proposed Bill, and it has been generally conceded that in order to give fair representation all round, the basis of the franchise should be enlarged; and what they had to consider now was how to enlarge it. Now, he wished to invite their attention to the franchise as it stood at present. The Stock and Pastures Board consisted of eight members, three of whom were elected by the holders of large stock—horses and cattle—and five elected by the owners of sheep. These members, elected by the holders of different stock, constituted that Board, and had different powers on it, and it was now proposed to add the administration of this Act to those powers. It was now desirable to broaden the franchise so as to bring in others who had not the right to vote under these Acts. Now the Honorable Rupert Carington proposed to add two members to this Board, and so far as those two members were concerned, to have them elected on the one man one vote principle, without any reference to stock. Under the present franchise the holder of 5,000 head of large stock had the right to four votes, and the holder of 30,000 sheep had the right to four votes also, and now under the Honorable Rupert Carington's proposition they would have two further votes. How would the small holders stand? They would have the two votes under the one man one vote principle, and then if they had a less number than 500 sheep or ten head of large stock they would have only one vote. The most that any small holder would have would be four votes, while some of the large holders would have ten. Under the conditions of this Act they should broaden the basis of representation, considering the fact that they would double the amount of taxation. Let them broaden the basis under the Pastures and Stock Act and under the Sheep Act, particularly under the Sheep Act, so as to bring in a large number of taxpayers under this Bill who would be excluded from participating in the franchise if something like this were not done. Then there was the representation, which they must be prepared to give to the Minister on those Boards. They required the Government to come in and bear an important share of the expense which was necessary to bring the rabbit plague under, and to enable the Rabbit Boards to carry on their work effectively. There was not a bit of use in the Boards trying to cope with this question so long as the stock routes, &c., were left as No-man's Land, and the plague allowed to flourish there. They must bring the Department in and make a provision that the Department should bear a fair share of the expense of clearing those lands. The Minister had distinctly told this Conference that certain powers of representation on the Board charged with the administration of the Act must be given to the Department. He could not go to the general taxpayer and ask for a contribution towards funds which would be expended in this way unless he had a voice in that expenditure, and the only way out of the difficulty that he could see was to allow the Minister to nominate the Chairman. They could take it for granted that the Minister would only nominate the best man for the position of Chairman, and he would be of considerable service in helping the other members in dealing with this question. It would maintain the dignity of the Department, and he contended that it would in every way strengthen the position of the Board, and he thought they should make provision in this constitution for the Minister to have the right to nominate the Chairman on those Boards. It need not be elaborated, but there would be extended powers given to those Boards which would necessitate something in the nature of a permanent Chairman, and he thought—judging from the manner in which the Land Board Chairmen had been appointed—they had a guarantee that the Minister, to whom those powers were given, would appoint proper and good men to those positions, and would be in a position to help the Boards to deal with this important question. It might be said that one member of this Board should be elected on the rabbit basis of taxation. He was not particularly strong on that, because he did not want to see the expenses of the Board eaten up by too many representatives, but the notice of motion he gave during the morning would meet the situation as far as it was in his power to solve it. He wished to move, now, "That, for the purposes of this Bill, the constitution of the Stock Boards be altered so as to provide for—(1) The appointment of a Chairman by the Governor; (2) That one additional member be elected on an equal franchise by all contributors under the Rabbit Act assessments; (3) That three members be elected under the Stock and Pastures Act as at present provided, with a minimum voting power of five head of large stock; and (4) That five members be elected under the Diseases in Sheep Act as at present provided, with a minimum voting power of 100 head of sheep." This reduced the voting power from 500 sheep to 100 sheep so as to bring in the small men, and it was the best way out of the difficulty.

Mr. ALISON (Canonbar) said that this was an original motion, and he did not think it could be dealt with until the Honorable Rupert Carington's motion had been dealt with. If it came in as an amendment they should have to take it and debate it from beginning to end as an original motion. He thought the best way to arrive at a decision on this matter would be to have all these different propositions printed, when

when they might see what they meant; it was very difficult for them suddenly to gather what they meant. He would like to have it in front of him, so that he could tell what it was. If they accepted it as an amendment, it would be advisable to have both motions printed and put before them in the morning, or else they must discuss the motion from beginning to end.

Mr. T. BROWN, M.L.A. (Budgerabong), submitted that if the Chairman ruled that his motion was an original motion, and not an amendment on the Honorable Rupert Carington's motion, in the event of the Honorable Rupert Carington's motion being carried, it to a certain extent fixed the basis of the constitution of this Stock Board, and so disposed of his amendment as a motion altogether. He, therefore, submitted that it must be taken as an amendment to the Honorable Rupert Carington's motion.

Mr. GIBSON (Hay) seconded Mr. Brown's motion.

Mr. T. BROWN, M.L.A. (Budgerabong), said it was a very important proposition, but it would be better if they could now have these separate motions postponed and printed, and have them to consider in the morning.

The CHAIRMAN said that he did not wish to rule these amendments out, for he did not wish to stifle discussion on such an important matter.

Mr. BROOKE (Boggabri) wished also to move an amendment on this resolution. He quite agreed that it should be postponed until the morning, so that they could have the whole of the day before them. As it was now, Mr. Brown was proposing really to destroy the franchise of the Pastures and Stock Act and the Sheep Diseases Act. He thought the original Bill itself would be better. Under the original Bill they proposed to have three members elected by the Pastures and Stock Board. He proposed now, "That they should have four members selected by the Pastures and Stock Board, and the Minister should elect one, which would make five." This would do away with the enormous expense of having twelve members.

Mr. BACON (Brewarrina) moved that the debate on this matter be adjourned until the next morning.

Mr. FLANAGAN (Gunbar) seconded it.

Mr. BACON (Brewarrina) said that Mr. Brown's amendment raised fresh grounds, and it dealt with matters which were not included in the Honorable Rupert Carington's motion.

Mr. WILKES (Broken Hill) supported the amendment. He claimed to have as much intelligence as a few of them, and his memory could not carry all of it. He would like to see it in black and white.

Mr. GORMAN (Berrigan) did not know whether it was necessary for him to propose an amendment on Mr. Bacon's motion. He thought they should go on with the business. He opposed the amendment. He thought it was a most important question, and, as many of them would probably be leaving on the next evening, and the Conference would probably adjourn at 12 o'clock, they would not be able to give their vote. There was no necessity to arrive at a definite conclusion that evening, but they could go on discussing it, and they might go on the next day and solve it.

Mr. FREEMAN supported Mr. Gorman. He thought it was a most important matter, and although it might not be decided that night, it ought to be discussed freely, and then postponed until the next day for a vote or division.

The Honorable RUPERT CARINGTON (Jerilderie) said he would like to point out that a few minutes ago it had been decided to go on with this motion.

Mr. ROSS (Hume) thought this was a very important question, and he agreed with what Mr. Brown had said, but he had not got a thorough grasp of the question, and it was important that it should be put before the Conference. Half of them did not know exactly what they were doing. It was a question upon which he would like to say something, but he would not be justified in discussing it, unless they had copies of it put before them.

Mr. BROOKE (Boggabri) said, a few minutes ago a motion was put to go on with the business; he voted to go on, but since then half a dozen amendments had been brought forward, and they were in a different position now. That was his reason for moving for the adjournment. He thought it was the same with all of them.

Mr. VANSTON (Goodooga) thought this matter deserved very great consideration, for the small man must not be a football. The small man was a cheap barrier against the rabbits, and he should have the franchise.

Mr. GIBSON (Hay) said he was leaving Sydney that night, and others must also, and he thought that the Conference should meet them, and go on with this discussion.

Mr. ALISON (Canonbar) gave notice that when the discussion came on he wished to make an amendment.

The motion for adjournment of this clause was then put to the Conference by the Chairman, and carried by 23 votes to 14.

Mr. ALISON (Canonbar) gave notice that he would move next day a resolution to this effect,— "That the voting power under this and the Pastures and Stock Protection Act, and the Sheep Act, be on a similar basis, and that the said basis be one vote for every 250 sheep, or ten head of large stock; that the Government nominate one representative, who shall not necessarily be the Chairman."

Mr. BROOKE (Boggabri) gave notice that he would move the next day, "That clause 5 be omitted, with a view to the insertion of clause 6 in its place, with the following amendments: In lines 1, 9, 16, 18, page 4, insert the word 'four' instead of 'three'; lines 24 and 26, page 4, insert 'one' instead of 'two'."

Mr. ALISON (Canonbar) said that in clause 26 (Mr. Brown's clause passed that morning) he would move, "That 'four' be inserted instead of 'three.'"

Mr. BACON (Brewarrina) seconded the motion.

Mr. T. BROWN, M.P. (Budgerabong), said that if the Conference would consent to it, he would like to withdraw clause (A) and substitute an amended clause. He explained that he drew up the resolution very hurriedly on the first day, and his idea was very crudely put.

The CHAIRMAN ruled that this would be out of order unless the clause was recommitted.

Mr. GORMAN (Berrigan) moved, "That clause 26 be recommitted."

Mr. T. BROWN, M.L.A. (Budgerabong), supported Mr. Gorman. He wished to know whether it was right that it should be recommitted now, or at a future time when they were able to go through the Bill again.

Mr.

Mr. HEBDEN (Wanaaring) thought it was understood that when this clause was passed they could go through it piece by piece, and pass it as it stood or alter it.

Mr. ALISON (Canonbar) said that they had accepted the principle with the right to amend it. He proposed that the sense of the meeting be taken as to whether it should be taken as a clause, and that it now be considered seriatim.

Mr. HEBDEN (Wanaaring) seconded it.

The CHAIRMAN said that had the clause been passed without any reservation being allowed by the Chairman, he should certainly rule that they go on with the other business, but on those grounds he thought that it might now be considered.

Mr. T. BROWN (Budgerabong) said that in lieu of subsection A he would submit the following:—
“That repayment of principal, together with interest, be on a similar basis as that provided for the payment of principal and interest on conditionally-purchased land.” That would enable the Minister to fix the interest and adjust the cost to the Department, and what was over and above that would go to the principal, and the effect would be, as the years went by, that the contribution towards the principal would be a yearly increasing one, and the contribution towards the interest would be a yearly decreasing one. That was what he had in his mind when he first drew up the resolution.

Mr. ALISON (Canonbar) withdrew his motion and seconded Mr. Brown's.

Mr. FLANAGAN (Gunbar) supported it.

Mr. BACON (Brewarrina) also supported it.

The CHAIRMAN then put the question to the Conference, and it was carried.

Clause 27.

Co-operation between neighbouring Boards.

27. Where the Rabbit Boards of neighbouring rabbit districts agree to co-operate in the erection of a barrier-fence for the joint protection of the said districts, the Rabbit Board which erects such fence shall be entitled to receive from the other Rabbit Board half the cost of erecting the said fence and half the annual cost of maintaining and repairing the same, unless the agreement shall provide for the payment of some other proportion of such costs; and for the purpose of this section the erecting of a barrier-fence shall include only the expense of rendering rabbit-proof any existing fence on the barrier that may be utilised or converted into a barrier-fence, and of erecting rabbit-proof fences in places on the barrier where such may be necessary: Provided always that any such agreement between Rabbit Boards shall be in writing.

Mr. BACON (Brewarrina) moved, “That clause 27, as printed, be adopted.”

Mr. GORMAN (Berrigan) said the resolution they had just passed was too vague. He thought they should put in 1 per cent. It ought to be fixed.

Mr. BACON (Brewarrina) desired that, as many of the gentlemen were going that night, they should get through as much of the business as possible.

Mr. GIBSON (Hay) seconded Mr. Bacon.

Mr. HEBDEN (Wanaaring) said that clause 25, as a whole, had not been passed yet. He proposed “That clause 26, as amended, be passed.”

Mr. GIBSON (Hay) seconded it.

Clause 26, as amended, was put to the meeting and passed.

Mr. BACON's motion, that clause 27 as printed be passed, was then put to the meeting and carried.

Clause 28.

Disputes between neighbouring Rabbit Boards.

28. In the case of any dispute arising between the Rabbit Boards of neighbouring Rabbit Districts as to the payment of any money or the doing of any act required to be paid or done under the provisions of this Act, or as to the carrying out of any agreement between them, the matter of the dispute shall be referred to the Minister, and his award thereon shall be final and conclusive to all intents and purposes: Provided that the Minister before making his award may refer the matter in dispute to any Local Land Board for investigation and report.

Mr. WILKES (Broken Hill) moved that clause 28 be passed as printed.

Mr. FLANAGAN (Gunbar) seconded it.

Mr. FREEMAN proposed that the word “provided” in line 4 down to the end be struck out.

Mr. WILKES (Broken Hill) wanted to know how the Minister was to decide on this; he did not think the Minister had sufficient machinery at his command. The Minister sent for investigation, he did not send for their decision. He must have some machinery for reporting, and he could not expect the Pastures and Stock Board to report to him, for that would be unfair as they would be concerned in the matter. Whom else could it be referred to. He thought it was only right that the Minister should have the right to refer it to some of his own officers, they being better officers than the Local Land Board.

Mr. FREEMAN, in moving the resolution, said he would like to point out that the Minister would have representation on both boards and the matter would be freely discussed, and any disagreement between the two courts could be fairly set out and be referred to the Minister as arbitrator only. If people disagreed and the matter was referred to arbitration, let the arbitrators settle it. Why should we have the delay. This may be an urgent matter and the rabbits might be increasing. They might want to get the wire-netting fences put up, and there might be some little disagreement about it. They might be delayed for six months while the whole matter was referred and discussed by the Local Land Board, and they sent for fences. The whole matter might be delayed for perhaps twelve months before it was settled. The whole matter could be fairly and honestly put before the Minister.

Mr. FREEMAN's amendment lapsed for want of a seconder.

Clause 28, as printed, was put to the meeting and carried.

Clause 29.

Rabbit Board may order destruction on private lands.

29. A Rabbit Board may, by notice in the *Gazette*, specify—
- (a) a date (not being less than _____ months from the date of the notice) on or before which the owners and occupiers of all private holdings and lands within the Rabbit District shall respectively commence the work of suppressing and destroying rabbits on all such holdings and lands; and
 - (b) a period during which the said work shall be continued and systematically carried out; and
 - (c) the means (being lawful means and not expressly disapproved of by the Governor) which shall be adopted for the carrying out the said work.

Any such notice, or an abstract thereof, shall also be published in some of the newspapers circulating in the Rabbit District; but any omission to publish the same shall not affect the validity of the notice published in the *Gazette*.

The Rabbit Board may also give to the owner or occupier of any private holding or lands within the Rabbit District a peremptory notice in writing to forthwith suppress and destroy all rabbits on such holding or lands, and to adopt such means for the purpose as may be specified in the notice.

Mr. J. M. ATKINSON said that at line 11 he would move that the word "private" be omitted before "holdings and lands."

Mr. STINSON seconded the motion.

Mr. T. BROWN, M.L.A. (Budgerabong), wished to know if he was to understand that it was the intention of the mover of this amendment that the Board should not have the power to compel the killing of rabbits on lands held privately.

Mr. WILKES (Broken Hill) had an amendment before that. In subsection A the word "months" should be struck out and "fourteen days" be put in.

Mr. WILKES' (Broken Hill) amendment lapsed for want of a seconder.

Mr. WILKES (Broken Hill) altered his motion to "one month."

Mr. BRETT (Urana) seconded it.

Mr. BACON (Brewarrina) thought it should be more than that. He would move that it be "not less than two months." A man might want to get phosphorus and other things, and he would not have time if it were less than two months in many cases.

Mr. J. M. ATKINSON seconded *pro forma*.

Members—Make it three.

Mr. BACON (Brewarrina) said that in deference to some of the members he would make it three months.

The CHAIRMAN then put Mr. Bacon's amendment to the meeting to insert three months, and it was lost by 16 votes to 10.

As the CHAIRMAN was about to put the original motion,

Mr. HEBDEN (Wanaaring) proposed that it be two months, and Mr. Moore seconded it.

The CHAIRMAN then put Mr. Hebden's amendment, and it was carried.

Mr. ATKINSON's amendment, that the word "private" be omitted, was then put and carried by a large majority.

Mr. FLANAGAN (Gunbar) referred to the following words in clause 29: "Any such notice or abstract thereof shall also be published in some of the newspapers circulating in the Rabbit District, but any omission to publish the same shall not affect the validity of the notice." He did not think it should be penal against a man who never saw the *Government Gazette*. He did not object to it appearing in the *Gazette*, but he did not want it to be penal if any landholder did not commence to kill rabbits on any day, unless it was also published in the local paper. He would move that in line 20 the words, "but any omission to publish the same shall not affect the validity of the notice published in the *Gazette*" be omitted.

Mr. VANSTON seconded it.

Mr. LITTLE (Bullock Creek North) thought a personal notice should be served. It would be very much better.

Mr. BACON (Brewarrina) moved that the notice be sent by registered letter. He thought this should be added to the clause; but he would support Mr. Flanagan's motion, and if these words were struck out, he would move that this should be added.

The Honorable RUPERT CARINGTON (Jerilderie) opposed it on the grounds of expense. It would cost 4d. to register a letter and 2d. for the original postage; this would be 6d. on every landowner. Let the proclamation be stuck outside the post office.

Mr. FLANAGAN (Gunbar) accepted Mr. Bacon's addition.

Mr. LESLIE (Forbes) wished to draw their attention to clause 57 in the Act, which made provision for the giving of notice. This, he thought, would cover the whole ground.

The CHAIRMAN thought Mr. Bacon's amendment was not necessary, as clause 57 appeared to cover the whole thing. He would, therefore, put Mr. Flanagan's motion, that these words be omitted, without taking any notice of Mr. Bacon's addition.

The CHAIRMAN then put Mr. Flanagan's amendment, which was carried by 20 votes to 14.

Mr. BACON (Brewarrina) moved that "private" be struck out in line 21, clause 29.

Mr. LESLIE (Forbes) seconded it.

The question was put to the Conference and carried.

Mr. ALISON (Canonbar) moved to insert the following words in line 25, "to destroy to the best of their means and ability" in the place of the word "all" which should be taken out.

Mr. T. BROWN, M.L.A. (Budgerabong), pointed out to Mr. Alison that the effect of his amendment would be that the Boards would not be able to carry out this clause. Who could determine "what was his ability" except the man himself, and he might say he had no ability at all. According to the amendment, could the Board step in and carry out the provision? It should be left to the Board to determine whether everything had been carried out properly.

Mr.

Mr. ALISON (Canonbar) did not think that anybody could possibly imagine that they could destroy *all*.

Mr. CUMMING (Hillston) seconded Mr. Alison's amendment.

Mr. GIBSON (Hay) said that if Mr. Alison would simply leave the word "all" out and use the other words it would be better.

Mr. ALISON (Canonbar) moved that the word "all" be struck out.

Mr. CUMMING (Hillston) seconded it.

The CHAIRMAN then said he was very glad they had proposed this. It would be an utter absurdity to say they could destroy "all" rabbits.

The question was then put and carried unanimously.

Mr. ALISON (Canonbar) moved to insert, "use all reasonable effort," for it seemed to him that they must have some limitation. That was all they could ask anybody to do, to use all reasonable effort. They could not compel people to do something which was beyond all reason. He thought there ought to be some safeguard to prevent oppression, and they ought to have some saving clause like this. Did anyone want them to use unreasonable efforts?

Mr. ATKINSON asked Mr. Alison to accept the following alteration "to use such efforts as may be deemed necessary by the Board."

Mr. ALISON (Canonbar) withdrew his amendment.

Mr. ATKINSON moved that the following words "to use such efforts as may be deemed necessary by the Board" should be inserted after the word "forthwith" in line 25, clause 29.

Mr. ALISON (Canonbar) seconded the amendment.

Mr. CUDMORE (Wentworth) moved to omit the word "necessary" from the amendment and to insert the word "sufficient."

Mr. ATKINSON accepted the alteration, and the question was put and carried.

Mr. WILKES (Broken Hill) moved that clause 29 as amended be passed.

Mr. HERDEN (Wanaaring) seconded the motion.

Question put to the Conference and carried.

Mr. ATKINSON moved the adjournment of the Conference until 10 o'clock next morning.

Mr. FREEMAN moved, that as there were only three clauses left they should go as far as part II.

Mr. ATKINSON said he moved the adjournment because clause 30 was so very important that they could not discuss it under two or three hours. They could not do it justice unless they arranged to come back and go on until 8 o'clock.

Mr. CUMMING (Hillston) seconded Mr. Atkinson's motion. He considered that the clause could not be settled under two or three hours.

Mr. BACON (Brewarrina) supported Mr. Freeman.

Mr. T. BROWN (Budgerabong) said they ought now to consider whether they should not devote a little more time to the Bill, considering the amount of work they had to do. They should stay later and sit in the evenings. He thought that if they sat later on that evening they could pretty well finish the Bill.

Mr. DILL (Hay) would support Mr. Brown. He thought they should go on.

Mr. CUMMING (Hillston) said it had been already decided that the Conference should not sit until 5 o'clock. A resolution to that effect, that they should sit till 5 o'clock, had been lost in the morning.

Mr. A. BROWN (Narrabri) said a motion had been carried in the morning that they should adjourn at 4 o'clock. Therefore this motion was quite out of order.

The CHAIRMAN said it had been proposed that they should sit on until 5 o'clock, and it had been negatived.

The CHAIRMAN then put the question for an immediate adjournment. On the vote being taken it was found to be equal, 18 for and 18 against. In view of the decision given in the morning the Chairman gave his casting vote for the adjournment.

The Conference then adjourned until 10 o'clock next morning.

FIFTH DAY—13TH MARCH, 1897.

Mr. A. LAKEMAN took the Chair at 10.5 a.m.

Notice of motion was given by Mr. Leslie as an amendment on Mr. Brown's amendment, part 2, section 33, that the word "one" be struck out and the words "one and a quarter" be inserted.

The minutes of the previous meeting were read and confirmed.

The CHAIRMAN then said the first business was to decide on the constitution of the Board that would have to administer this Rabbit Act. The first thing the meeting should do was to re-assert who was to administer the Rabbit Act, and how many members there should be. There were a lot of motions on the notice paper, and some members thought it should be one way, but others thought it should be another way.

The Hon. RUPERT CARINGTON (Jerilderie) thought it was most necessary that they should be practically unanimous on this question of the constitution. He was ready to withdraw his amendment if Mr. Brown would alter his amendment in the following way: That for the purposes of this Bill the constitution of the Stock Boards be altered so as to provide for the appointment of a member instead of a Chairman by the Governor, with three members elected under the Stock and Pastures Act as at present provided, with a minimum voting power of five head of stock, together with five members elected under the Diseases in Sheep Act as at present provided, with a minimum voting power of 200 head of sheep. If they could agree to that, if they could go to the Minister with an unbroken front, they would strengthen his hands, and Parliament might be induced to carry it through. If Mr. Brown would consent, he would assume it as his own amendment. This was a very important question, and he was very anxious that it should be settled unanimously if it could.

Mr. T. BROWN, M.P. (Budgerabong), said he saw that there was a wide divergence between the views held by different members of the Conference, and he took it that the Conference understood at the outset that they were placing this Bill under the control of the Stock and Pastures Board to administer,

on the understanding that that Board should be reconstructed, as it were, and it had been given to that Conference pretty definitely to understand, that if the Stock and Pastures Board were to have these powers under this Bill, then Ministerial representation of some kind or other must find a place upon that Board. To secure that representation they must reconstruct the Board. It had also been put forward as a necessity to that end, that the franchise of the Stock and Pastures Board should be enlarged, because of the increased taxation powers given under it so as to give the franchise to those who would be called upon to bear this increased taxation. That was the position as he understood it. The Hon. Rupert Carington had endeavoured to go in the direction of meeting that position, but he had not been prepared to go as far as he would like to go. If it would expedite the business of the Conference, and they could agree upon the matter, he would be prepared, if the Hon. Rupert Carington would withdraw his amendment, to withdraw his own, and allow the Hon. Rupert Carington to introduce a motion on the lines that he had suggested, a modification of the two resolutions.

Mr. BROOKE (Boggabri) could not see why they should not go back to the original Bill or modification of the Bill. They had all come to the conclusion that the Pastures and Stock Board should administer the Act. The Bill provided that. In nineteen cases out of twenty no one would ever question the Board; and if they did they would simply apply for an election, and they would have a new Board on new lines. If anybody could show him any reason why they should not utilise the machinery which was offered them in the Act he would withdraw. He thought the wisest thing they could do was to accept the Minister's proposals in the Act.

Mr. CAMERON (Ivanhoe) said that the reason why they should not adopt the lines suggested by the Minister was, that if they did they would have to adopt the franchise which would be objectionable to a very large portion of the Conference.

Mr. BROOKE (Boggabri) said that was only a temporary provision, and if it did not answer satisfactorily they could have an election as provided for in clause 7, and the franchise could be altered in any way the Conference proposed.

Mr. ROSS (Hume) said that when this matter was before the Conference he fully understood that the Stock and Pastures Board were to administer this Act in the same way as they administered the Stock and Pastures Act; but if the Stock and Pastures Board had to run two Acts they might just as well have two Boards. It appeared to be the opinion of the Conference that the franchise of the Stock and Pastures Board should be put lower. He was quite prepared to give every man a vote down to 100 sheep. He would like the Conference to adopt an enlarged vote for the Stock and Pastures Board, and that would enlarge the situation, and the Board could then work the whole thing. He would suggest that the Board was quite large enough with the addition of a Government nominee. He did not see why they ought to have two sorts of members on the Board. Let them look after the rabbits and everything else. He could not support any proposal to put two men on the Board solely to administer the Rabbit Act, because if the Stock and Pastures Board were to work the two Acts independently he would just as soon have two Boards.

Mr. ALISON (Canonbar) said that the position at the present time was that the Honorable Rupert Carington had withdrawn his motion and adopted Mr. Brown's amendment with some alterations. It would then stand something like this, "That for the purposes of this Bill the constitution of the Stock and Pastures Boards be altered so as to provide for (1) the appointment of a member by the Government; (2) that three members be elected under the Pastures and Stock Act as at present provided, with a minimum voting power of five head of large stock; and (3) that five members be elected under the Diseases in Sheep Act as at present provided, with a minimum voting power of 200 head of sheep." There was a reduction from ten head of stock to five head. The whole constitution would be simply the present Boards under the Diseases in Sheep Act and the present Boards under the Stock and Pastures Act, and one additional member nominated by the Governor. He would be quite willing to withdraw his amendment, but he thought the reduction to five head of large stock was too low; it would be advisable to retain the ten head. If a man had not ten head of large stock, the probability was that he would be only a carrier, or someone who was not directly interested in land or stockowning. He thought it would be dangerous in the interest of those who were stockholders; and he could not see that there was any difference between the interest of the small and large stockowners. He would be very willing to support the new amendment if that alteration were made. He thought the minimum of 100 head of sheep was too low. The Honorable Rupert Carington had placed it at 200, but he would like to see it put at 250. The maximum taxation of this Act was $\frac{1}{2}$ d. per sheep, and now a man with 100 sheep would only contribute 4s. 2d. towards the fund. He would sooner let that man off altogether. He should not be taxed at all. It was hardly worth collection. It was not worth bothering a man about, and the lower they reduced the franchise the more danger there would be to stockowners—more danger of bringing in outsiders. A man with 250 head of sheep would contribute 10s. 6d. That was very low indeed, but he supposed it was worth having. If these alterations were made he would withdraw his amendment, and perhaps Mr. Wilkes and Mr. Bacon would see their way to do the same.

Mr. BACON (Browarrina) said he would withdraw his resolution on the notice paper and support Mr. Brown's on the lines advocated by Mr. Alison.

Mr. T. BROWN, M.L.A. (Budgerabong), said that to meet Mr. Alison he was prepared to allow the Honorable Rupert Carington to substitute his motion, and to place the minimum voting power at ten head of stock, and the minimum voting power for sheep to 200, reserving to himself the right to try and reduce it afterwards by amendment.

The Honorable RUPERT CARINGTON (Jerilderie) then moved, "That, for the purposes of this Bill, the constitution of the Stock and Pastures Boards be altered so as to provide for (1) the appointment of a member by the Governor; (2) that three members be elected under the Pastures and Stock Act as at present provided, with a minimum voting power of ten head of large stock; (3) that five members be elected under the Diseases in Sheep Act as at present provided, with a minimum voting power of 200 head of sheep."

Mr. VARCOE (Hillston) seconded the motion.

Mr. BACON (Browarrina) thought that the amount had better be fixed at 250 head of sheep.

Mr. ALISON (Canonbar) said that the best means of arriving at this, whether it should be 200 head of sheep, or 100, or 250, was to take a vote at once and settle it.

Mr. BACON (Browarrina) considered that a vote should be taken as to whether 200 or 250 should be put in. This would save discussion.

On

On the question being put, the CHAIRMAN declared it carried that 250 should be inserted in the motion instead of 200. He said that the resolution would then read as under:—"That, for the purposes of this Bill, the constitution of the Stock and Pastures Boards be altered so as to provide for (1) the appointment of a member by the Governor; (2) that three members be elected under the Stock and Pastures Act as at present provided, with a minimum voting power of ten head of large stock; (3) that five members be elected under the Diseases in Sheep Act as at present provided, with a minimum voting power of 250 head of sheep."

Mr. BACON (Brewarrina) said he would also point out the necessity of stating some minimum amount which would be collected on agricultural lands. It might possibly happen that 1,000 acres would be rated at a sheep to 5 acres and the owner would only have to pay on 200 sheep; he would suggest that in no instance should there be a collection on less than 250 sheep.

Mr. ALISON (Canonbar) said that that would be dealt with later on.

Mr. OAKDEN (Cobar) pointed out that they had previously passed a resolution that public lands should be assessed as having a certain carrying capacity, and, under this assessment, the Crown would have the right to vote. He would propose that as under the new clause which was proposed the Government would have the right to nominate a representative, they should have no power to vote for the other members of the Board.

Mr. BROOKE (Boggabri) then asked whether, if this amendment were carried, it would destroy his motion on the notice paper for the recommittal of the clause.

The CHAIRMAN then said that if the Conference carried this amendment, he anticipated that they would vote against Mr. Brooke's motion for recommittal. He would impress upon all the members that the vote he was about to take would really finally settle who was to administer the Rabbit Act. He stated that the Honorable Rupert Carington's amendment was to add the following to clause 5:—

- (1.) The appointment of a member by the Governor.
- (2.) That three members be elected under the Pastures and Stock Act, as at present provided, with a minimum voting power of ten head of large stock.
- (3.) That five members be elected under the Diseases in Sheep Act, as at present provided, with a minimum power of 250 head of sheep.

He then put the question to the Conference whether this addition should be made to the new clause 5, and it was carried by a majority of 28 votes to 5.

The CHAIRMAN then said that the next thing they had before them was the question of assessing the cultivated lands, and their voting power.

Mr. ALISON (Canonbar) said that as he was responsible for the vote that these lands should be estimated on the basis of one sheep to 5 acres, he would say that they should have a vote equal to the number of sheep at which they were rated, with a minimum of 250 sheep.

On the suggestion of the Chairman, Mr. Alison altered his resolution to read, "that where no returns are sent in, occupiers of cultivated land shall have the right to vote for the constitution of the Pastures and Stock Boards, the voting power to be proportionate to the number of sheep at which their lands are assessed, the minimum number of sheep qualifying for a vote to be 250, and that as the Government have the right to nominate a member on the Board, they shall not have any voting power for the other members.

Mr. BACON (Brewarrina) seconded the motion.

Mr. FLANAGAN (Gunbar) said that he would point out that a man with 320 acres would be assessed at 65 sheep, but he must pay at the minimum of 250 sheep.

Mr. LESLIE (Forbes) said he would ask Mr. Alison if he would strike out the word "no." He contended that under the Pastures and Stock Act everyone had to make a return, and, consequently, "no" was misleading.

Mr. BACON (Brewarrina) said that if the previous assessment of a sheep to 5 acres were altered to a sheep to 1 acre it would meet Mr. Flanagan's wants.

Mr. VANSTON (Goodooga) moved that the minimum be reduced from 250 to 100.

Mr. FLANAGAN (Gunbar) said he would second it.

Mr. ALISON (Canonbar) rose to a point of order. A motion had just been passed unanimously or practically unanimously, that the minimum should be 250 sheep. It was purely wasting time to go back again.

Mr. VANSTON (Goodooga) said he understood that Mr. Brown seconded the Honorable Rupert Carington's motion with the right of amendment afterwards.

The Honorable RUPERT CARINGTON (Jerilderie) said that he would move that it be 200 sheep.

Mr. BROWN seconded.

Mr. WILKES (Broken Hill) moved a further amendment that it be one sheep or one head of large stock, and let there be one man one vote.

Mr. WILKES' (Broken Hill) amendment lapsed for the want of a seconder.

Mr. ALISON (Canonbar) said that he did not want to stop discussion, but they had already taken a vote as to the minimum, the decision being for 250.

The CHAIRMAN said that it had been a compromise, and he had allowed Mr. Brown to reserve the right to take a vote afterwards as to the 200 minimum.

Mr. WILKES (Broken Hill) said that he would oppose the resolution reducing the minimum to 200. A man with 2,000 sheep would have four votes. Against what? Every man that owned an acre of land, every man who owned ten head of large stock, no matter whether he was a bullock driver or what he was. They should have some reason in this matter. There had been a lot of clap trap about the big man and the small man. The big man should not be burked. He claimed to be as liberal as any of them, but he thought they were going much too far.

Mr. CUMMING (Hillston) said the whole thing was in a nutshell. They all agreed that there should be a lower franchise. Two hundred and fifty was as near as they could get it, and they must leave it then to Parliament. They could all see from the large numbers in that Conference that they could do very well with a very much smaller number, and there was no need to add to the Boards.

Mr. GORMAN (Berrigan) confessed that he was a little bit mixed as to how they were getting on. He did not hold with Mr. Wilkes that this was a question of small men *versus* big. There were big men in the Conference, and they were able to look after themselves. The small man did not want to outvote the big men at all. If the minimum were fixed to 250, there were a number of small men who would not be

be taxed at all, for without representation there could be no taxation. Some of the worst infested spots in his district belonged to men with only a couple of thousand acres. These men should be taxed. Then there was another point. They had passed a resolution that cultivated land should be taxed at an assessment. Many of the holders had let their lands on the share system, and probably the share men only had a couple of horses and a couple of cows. He presumed that these share men could not be called occupiers.

Mr. ATKINSON said they should be.

Mr. GORMAN (Berrigan) said that he did not think there was anything at all in the argument about the small man outvoting the big. It was simply a question about any man, no matter how small, having a vote.

The CHAIRMAN suggested to Mr. Bacon that he should add some words to his motion, "That every man be taxed up to the minimum."

Mr. BACON (Brewarrina) said that that was what he meant.

Mr. T. BROWN, M.P., said it was thought that 250 sheep should be the minimum voting power. That will mean that a man who returns stock would be taxed at the amount of 250 sheep, and a man who had no stock, but cultivated his land, would return 250 sheep, and would be entitled to the franchise. In order to be entitled to the franchise the holder of cultivated land must have 1,250 acres before he would reach that assessment. He contended that there were holders of less areas than that who would benefit by the Act, and they should be asked to contribute a fair share. In order to bring them in he wished to reduce the voting power, and make 100 the minimum. That would bring in the 640-acre man.

Mr. ALISON (Canonbar) said they would never get finished if they went on in this way. The small men did not escape the operation of the Act. They must destroy their own rabbits, but they would not have to pay any taxes. It simply was not worth while taxing them. There was the same principle of exemption under the land tax and the income tax. The amount to be collected from 100 sheep was not worth while. He did not see why they were so anxious to tax the smaller men, to compel them to pay their 4s. 2d. or 8s. 6d., as the case might be. They had already decided that by a vote, and if he chose to stick to a point of order it could not be raised again except by the consent of the meeting. He had no feeling in the matter. There was no necessity to bring in the men with under 250 sheep, and there was no harm in leaving them out; while, if they were left out, the expense of administration would be very much reduced, because it would cost as much as it was worth to collect the money.

Mr. LESLIE (Forbes) said that the members seemed to think that the Board would have to destroy rabbits. The Board would not. The destruction was to be done by the private owners. The Board would only have to administer the Act. Before the motion was put to the meeting he would like it to be made clear whether it was the intention of the proposer of the motion to increase the maximum voting power. He would be glad to give a man with 100 sheep the power to vote, but the big men should receive a much larger representation in order to compensate them.

The CHAIRMAN then put the question whether the minimum should be 100, 200, or 250 sheep.

The amendment that it be 100 sheep was lost by 23 votes to 11.

The amendment that it be 200 sheep was lost by 22 votes to 13.

The CHAIRMAN then put Mr. Alison's motion, "That where returns are sent in which are below the minimum, occupiers of cultivated lands shall have the right to vote for the constitution of the Stock and Pastures Boards, such voting power to be proportionate to the number of sheep at which their lands are assessed, the minimum number of sheep qualifying for a vote to be 250 sheep; and that as the Government have the right to nominate a member to the Board they shall not have any voting power for the other members."

The motion was carried by 20 votes to 10.

The Honorable RUPERT CARINGTON (Jerilderie) said that in his district they would be taxed twice, as far as he could make out, under this Bill. In his opinion they had made a great mistake in putting it on a stock basis instead of on a land basis.

Mr. ALISON (Canonbar) rose to a point of order. They had settled all that.

The Honorable RUPERT CARINGTON (Jerilderie) said they carried a certain amount of stock and they cultivated a certain amount of land in wheat, but they were able to run a number of sheep in summer on the stubble after the harvest was taken off, and that allowed them to carry a very much greater proportion of sheep than they could otherwise do.

The CHAIRMAN said that could not be gone into without the recommitment of the clause.

Mr. OAKDEN (Cobar) said he thought that they should now extend the franchise in the other way. They should at least give one more vote as the maximum. The limit now in the Diseases in Sheep Act was, for 30,000 sheep, four votes; and he proposed that an additional vote be given—40,000 sheep and over should have five votes.

The Honorable RUPERT CARINGTON (Jerilderie) wished to point out this voting would be partially under the Sheep Act, which provided for that.

Mr. OAKDEN proposed to add to the Schedule of the Diseases in Sheep Act, "40,000 sheep and over, five votes," because they had halved the minimum, and therefore he thought it was only fair to give an extra vote to the people who were the most interested. He supposed that for the hundred votes that had been admitted, they would only get one extra vote under this extra provision.

Mr. LESLIE (Forbes) seconded Mr. Oakden. He thought that the people who paid the largest contributions should have a larger representation than was provided for them. What was proposed was far less than might have been asked for, when they took into consideration the position of the men who held 100,000 sheep, who would return £416 13s. 4d. as against 10s. 6d. each contributed by five men owning 250 sheep, and being entitled to a vote. Mr. Oakden's proposition would place holders of that description in a position to exercise five votes, while the men who paid two guineas as against £416 13s. 4d. would have eight votes. He thought Mr. Oakden had hardly gone far enough in what he was asking for, and he was sure that he was influenced by a desire to conciliate those who did not seem to think the largest taxpayers should have a further voting power. They were all well aware of how it would work, and he thought no reasonable man would object to concede this small increase in the voting power.

Mr. T. BROWN, M.P. (Budgerabong) protested very strongly against this proposal of Mr. Oakden's. He had come there with several others and had agitated for separate Rabbit Boards under a separate constitution, and when they were defeated they were told that it was desirable to place the administration of the Rabbit Act under the Pastures and Stock Board, and for that purpose the franchise of the Pastures and Stock Board would be extended. Now, this would really be a curtailment of the present

present franchise of the Pastures and Stock Board, and would concentrate the voting power in the hands of a few. As far as extending the franchise was concerned, they had only brought it down to the same basis as would accord with the taxes raised. If they passed this resolution, they would place the small holders in a worse position than they were in before.

Mr. FLANAGAN (Gunbar) said he agreed with Mr. Brown.

Mr. T. BROWN, M.P. (Budgerabong) said the members had promised them an extended franchise, and now they wanted to take away all that had been given by increasing the plurality of the vote.

Mr. CUMMING (Hillston) thought that the Act could be left as it was. That would get over all objections. If they lowered it at one end and raised it at the other, their work would be destroyed.

Mr. GORMAN (Berigan) certainly thought that, in a spirit of fair play, if the large holders wanted this increased representation, the meeting should give it unambiguously. In nearly all districts, the small holders were increasing and the large holders decreasing.

Mr. ALISON (Canonbar) said that this could only apply to the very far west, and he thought it would not be of any great importance, even to the large holders, but he did not see that they need object to pass it.

Mr. DILL said, as a matter of fairness, he thought the motion should pass, and those in the meeting who wished to act in a spirit of fairness should vote for it.

Mr. VANSTON (Goodooga) said he thought it was a very large jump from 250 to 40,000 sheep. Out in the west there were many men with something like 1,000 sheep, and these men would only have one vote.

Mr. LAWRENCE (Balranald) supported Mr. Oakden. He thought it only fair that this representation should be conceded.

Mr. OAKDEN (Cobar) pointed out that Mr. Brown was mistaken in thinking that if this were conceded, it would be taking away what had already been given to the small owners. It would only apply in a few districts. It was a very small matter.

The CHAIRMAN then put the question, and it was carried by 22 votes to 12.

Mr. VANSTON (Goodooga) then moved that all holders of over 3,000 sheep should have two votes.

Mr. CAMERON (Ivanhoe) seconded it.

The CHAIRMAN put the question to the Conference, and it was declared carried.

Clause 30.

30. If any owner or occupier shall neglect or fail to comply with the terms of any notice, whether published in the *Gazette* or given to him in writing as aforesaid, such person may be cited to appear before the Rabbit Board, and unless he satisfactorily explains his neglect or failure, or receives an extension of time to comply with the notice aforesaid, any person authorised by the Rabbit Board may enter upon the holding or land and use all such means and take all such measures and do and perform all and every such acts or things as to him may appear proper or necessary to be done to ensure the destruction of the rabbits upon such holding or land, and shall have free right of ingress, egress, and regress into, over, and across such holding or land for such period as may, in his opinion, be necessary for destroying such rabbits: Provided that—

- (a) entry shall not be made upon any holding or land under the provisions of this section unless and until the Board shall have obtained the consent of the Minister; and
- (b) poison shall not be used without notice being given to the occupier of the holding or land of the intention to use the same; and nothing shall be done in contravention of the Animals Infectious Diseases Act of 1888; and
- (c) the authorised person may at any time withdraw from the holding or land upon payment of the costs, charges, and expenses incurred by him up to the date of such withdrawal; and
- (d) nothing contained in this section shall prejudice any proceedings taken under the provisions hereinafter contained for the recovery of any penalty which may have been incurred by an owner or occupier.

Mr. CUMMING (Hillston) moved, "That clause 30 be passed as printed."

Mr. CAMERON (Ivanhoe) seconded it.

Mr. WILKES (Broken Hill) moved that subsection (a) be omitted.

Mr. FLANAGAN (Gunbar) seconded Mr. Wilkes.

Mr. WILKES (Broken Hill) said that if they had to get the consent of the Minister to go on land, that meant public land, and the Minister would never let them go on to it.

Mr. CUMMING (Hillston) proposed that after the word "*Gazette*" the word "and" be inserted instead of "or" in line 2 of clause 30.

Mr. ALISON (Canonbar) seconded it.

Mr. Cumming's amendment was put to the Conference and carried.

Mr. ALISON (Canonbar) said he must oppose Mr. Wilkes's amendment, but thought that it was decidedly advisable that they should not put all the power in the hands of the Board. He believed in the Boards as a rule, but they should not leave everything to them. He did not believe in the Board going on any holding without having some authority from whom to get permission. The Board could put a man to the expense of £1 per acre, and there should be some reference to the Minister about it. The Minister would want to know what they were going to spend, and so on. It was an enormous power to put into the hands of the Boards.

Mr. LITTLE (Bullock Creek) said he must object to Mr. Alison's opposition, for his experience in dealing with rabbits had been that unless the Boards had full power they could do nothing. They knew the conditions; they saw the rabbits; they knew more about it than the Minister. He should certainly support Mr. Wilkes's proposal. He thought they should give enormous powers to the Boards rather than to the Minister. The Boards were elected upon a free-will franchise. It seemed to him utterly unnecessary to go to the Minister. It might be referred by the Minister to the Land Board before his consent would take effect. They must give the Rabbit Boards full power. The great thing was to take the rabbits in time.

Mr.

Mr. BACON (Brewarrina) said that Mr. Wilkes had taken this up under a misconception. His meaning and intention were very good. He took it that it referred to land that was owned or occupied, and therefore Mr. Wilkes's amendment was unnecessary. It did not refer to public land.

Mr. OAKDEN (Cobar) asked if the Crown was not the owner of the public land.

Mr. WILKES (Broken Hill) said if they curtailed the power and made them go to the Minister, they might as well curtail the Act. The Act was to make destruction compulsory. To get the Minister's consent would take a certain time, and they could not go to the Minister and ask his consent as to whether they were to go on his lands. It would be no use creating a Board unless they had this power.

The CHAIRMAN then put the question to the Conference as to whether these words should be struck out, and it was carried by 20 votes to 8.

Mr. ALISON (Canonbar) said that there was now no power of entry. The whole thing was stultified, and there was no power to get on the land at all.

Clause 30, as amended, was put to the meeting and carried.

Clause 31.

Board to be repaid expenses.

31. All costs, charges, and expenses incurred by a Rabbit Board in destroying rabbits upon any private holding or land under the foregoing provisions, shall be repaid by the owner of such holding or land, and until the payment thereof shall be and remain a charge upon such holding or land, and shall take precedence of all mortgages or other charges whatsoever, but shall not take precedence of any debt due to the Crown.

Mr. VANSTON (Goodooga) moved, "That the clause be passed as printed."

Mr. FLANAGAN (Gunbar) seconded.

Mr. BAYLIS (Narrandera) moved "That the word 'private' be struck out of line 2, clause 31."

Mr. STINSON (Coolamon) seconded it.

The CHAIRMAN put the amendment to the meeting and it was carried.

Mr. OAKDEN (Cobar) moved, "That after the word 'owner' in line 3 the words 'or occupier' should be put in."

Mr. CUDMORE (Wentworth) seconded it.

The question was put to the meeting and carried.

Clause 31, as amended, was put to the meeting and carried.

Clause 32.

Destruction of rabbits on public lands.

32. It shall be the duty of the Minister to check, suppress, and destroy all rabbits which may from time to time be in or upon public lands, but such duty shall not commence until a reasonable period after moneys have been made available by Parliament for the purpose. The Minister may authorise the Rabbit Board to expend such moneys for the purpose of rabbit destruction on public lands, or may apportion a proportion thereof for expenditure in the erection or repair of barrier-fences, or may make such other arrangements for its expenditure for either or both of such purposes as he may deem necessary or expedient in the public interest.

The maximum sum which the Minister may expend, or of which he may authorise the expenditure, in any Rabbit District for any one year, shall bear the same ratio to the total amount received as Rabbit Rates during that year as the area of public lands in that District bears to the area of private lands therein, and such maximum sum shall be ascertained by multiplying the total amount received as Rabbit Rates by the area of public land and dividing the product by the area of private lands.

Mr. BAYLIS (Narrandera) moved, "That the word 'all' be struck out of line 11."

Mr. OAKDEN (Cobar) seconded it.

The question was put to the Conference and carried.

Mr. WILKES (Broken Hill) proposed, "That all the words from line 20 be struck out." He took this to be a very important part of the Bill. They had made destruction compulsory, and if they left this clause in, it would be like putting a man in the middle of a river and telling him to swim, and then putting 2 tons weight on his feet, so that he could not swim. Where did the Minister come in to destroy rabbits on his land? Of course, he had been tackled by the Minister the other day for saying that he would not destroy; but he maintained that this power would not allow him to destroy. The most he would have would be about £208 on several million acres. Any gentleman who had had any experience in killing rabbits knew that £208 would not deal with a million acres. The Minister's country must be taken to be the worst infested rabbit country. If they tied the Minister down so that he could not pay more than this £208 they would practically see that he would not spend a penny in killing rabbits.

Mr. MORGAN said he presumed that a tax of 1d. per sheep was only for supervision. And he presumed also that the Minister must kill rabbits on his land.

Mr. CUDMORE (Wentworth) said he would support Mr. Wilkes's proposal.

The CHAIRMAN then put the question to the meeting and it was carried.

The Honorable RUPERT CARINGTON (Jerilderie) suggested that a new clause of which he had given notice should be put in here: "That for the purpose of this Act the Minister for Lands for the time being be deemed the owner of all unoccupied Crown lands."

Mr. FLANAGAN (Gunbar) seconded it.

The question of inserting this clause after line 19 of clause 32 was put to the Conference and carried.

Clause 32, as amended, was put to the meeting and carried.

Clause 33.

Private rabbit-proof fences.

33. For the purposes of this Part, a rabbit-proof fence shall be taken to be—
- (a) a substantial fence which is hung with galvanized wire netting of a maximum mesh of one and a half inch, minimum width of forty-two inches, the wire in the netting being of a minimum gauge of seventeen, and which is furnished with suitable rabbit-proof gates or other appliances at necessary breaks in the continuity of the fence: Provided always that the dimensions of such fence, its height above ground, the depth below ground of the posts thereof and of the wire-netting thereon, and all other details in connection therewith, shall be in accordance with specifications to be published in the *Gazette* by the Rabbit Board; or
 - (b) a fence erected in accordance with the requirements of the Rabbit Act of 1890 whilst such Act was in force; or
 - (c) a fence which is reasonably sufficient for the purpose of excluding rabbits.

And the date when the rabbit-proof fence was erected or the fence was made rabbit-proof shall be immaterial.

The Rabbit Board of the District within which any fence alleged to be rabbit-proof is situated shall, if so required in writing by the owner of the fence, cause the said fence to be inspected; and if the Rabbit Board, after such inspection, is satisfied that the fence alleged to be rabbit-proof is rabbit-proof it shall grant a certificate to that effect; or if not so satisfied shall specify the repairs or modifications which are required to make such fence rabbit-proof; and when such repairs or modifications have been effected the Rabbit Board shall cause the said fence to be again inspected, and if then satisfied that the fence is rabbit-proof, it shall grant a certificate to that effect.

Upon any proceeding before a Local Land Board in respect of a rabbit-proof fence, a certificate by the Rabbit Board that a fence is rabbit-proof shall be *prima facie* evidence of the fact; and evidence in rebuttal shall not be adduced, unless the party intending to adduce such evidence has given to the other party the prescribed notice of his intention to adduce the same.

Mr. LITTLE (Bullock Creek) said, that as Mr. Brown was absent he would move the clause given notice of by Mr. Brown, "That the clause be altered to read that the minimum width be 36 inches instead of 42 inches."

Mr. FLANAGAN (Gunbar) seconded it.

Mr. ALISON (Canonbar) supported it. He said it was no use to put the public to more expense. The question was then put to the meeting, and the amendment was declared lost by fifteen votes to thirteen.

Mr. LAURENCE (Balranald) proposed that the gauge be altered to eighteen; it was much cheaper and quite as effective.

Mr. CUDMORE (Wentworth) seconded the proposal.

Mr. LESLIE (Forbes) said he had given notice of a motion to the effect, that "1½ inch" be struck out and "1¼ inch" be substituted. He thought 1½ inch was no good. If fencing was to be of any effect, they must reduce the size of the mesh; and as the Conference had carried resolutions, asking the Minister to lend the money for the purpose of making fences to make the holdings rabbit-proof, the netting that was supplied must be effective or else the money would be wasted. He thought the Conference should affirm the necessity that that money should be expended in such a way that the netting would be as far as possible a total bar against the rabbits getting through. He might also point out that it would not in any way affect the fences which were already in existence. This new provision would only apply to the fences which would be hereafter erected, because the provisions went on to say "that nothing in this Bill would affect the rates which already existed;" and, therefore, he could not see that there could be any objection to the Conference affirming the desirability of having a 1¼ inch gauge instead of 1½ inch, as suggested in this Bill.

Mr. VARCOE (Hillston) seconded Mr. Leslie's proposal, but he would like the mover to alter it, so that it would read "that the mesh be 1¼ inch for a foot above the ground, and the mesh above that, say 1½ inch to 1¾ inch." The small mesh was only necessary for a foot from the ground.

Mr. CUMMING (Hillston) said that this provision was very necessary. He had seen that class of fence on Mr. Varcoe's holding, and it was one of the best fences he knew of.

Mr. BRETT (Urana) said he would second Mr. Leslie's original proposition without Mr. Varcoe's addition.

Mr. CUMMING (Hillston) said he would second Mr. Varcoe's amendment.

Mr. ALISON (Canonbar) thought they hardly recognised how enormously they proposed to increase the burden of the country if this motion of Mr. Leslie's were carried. They had already passed a motion allowing the Minister to advance money to the holders. He could advance 1½ inch mesh at a much better rate. If they made it 1¼ inch instead of 1½ inch and 42 instead of 36 they would put a great deal on to the cost. He thought 1½ inch was reasonably sufficient. He would ask the meeting to consider seriously before putting everybody in the whole of the Colony to such an enormous expense as this. He would much prefer to support Mr. Varcoe's provision than support Mr. Leslie's—that is to say, let it be 1¼ inch mesh for a foot from the ground. He was quite satisfied that rabbits would not get through 1¼ inch a foot above the ground. He thought that would be a reasonable compromise, which Mr. Leslie might accept; otherwise they would be putting a stop to wire-netting by a great many people all over the Colony.

Mr. LESLIE (Forbes) said he was quite willing to accept the amendment. He wanted a description of fence that would reasonably exclude rabbits.

Mr. CAMERON (Ivanhoe) said he thought that if Mr. Varcoe's proposition were accepted, that it be 1¼ inch a foot above the ground, or even less, so far as his experience went, then from that to the top the mesh need not be less than 2 inches. He was perfectly satisfied that no rabbit attempted to go through a fence except at a height level with its head. He submitted that the combination netting which was being made would be very little, if any, more costly than the 1½ inch. There was, on his boundary, netting of that gauge put up, and rabbits on the other side came through the 1½ inch, and he was not

protected at all, even if $1\frac{1}{2}$ inch were to be on the other three sides. A great many people were in the same position, and it would be very unfair for those who had to erect fences, if they were subject to rabbits coming in on one of their boundaries.

The CHAIRMAN pointed out if this amendment were carried he thought it would be necessary to do something with the 42 inches again, because it would read $1\frac{1}{2}$ inch for a foot from the ground, and then Mr. Varcoe said that $1\frac{3}{4}$ inch was quite sufficient above that.

Mr. LESLIE (Forbes) said that he could not accept $1\frac{3}{4}$ inch, but would accept $1\frac{1}{2}$ inch. That would make a good fence, and decrease the cost, but he could not accept $1\frac{3}{4}$ inch.

Mr. VARCOE (Hillston) said there would be 6 inches in the ground and 1 foot above the ground of $1\frac{1}{2}$ inch, and above that a larger mesh.

Mr. ATKINSON pointed out that there was an injunction out, that only one firm should make this combination mesh. It would be wrong to pass this resolution in view of that fact.

Mr. DAVIES (Gunnedah) thought that people who had large quantities of fencing already put up should be allowed to run a foot of $1\frac{1}{2}$ inch mesh along the bottom, instead of putting up a fresh fence.

Mr. NIXON (Gunbar) said it was well-known that many fences were not rabbit-proof, and they should have a fence that would be rabbit-proof, if they were to define anything at all. He had seen the combination mesh, and that could be supplied at the 42 inches for less than the $1\frac{1}{2}$ inch was supplied at 36 inches.

Mr. CUMMING (Hillston) thought it would be more effective if they left them to choose with the two.

Mr. LESLIE (Forbes) moved that the mesh be $1\frac{1}{2}$ inch for the whole way. He thought it was going to extremes to make it $1\frac{1}{2}$ inch the whole way. They might as well put up a galvanized iron fence. One and a half inches was a practical fence.

Mr. ALISON (Canonbar) seconded Mr. Leslie's proposition.

Mr. BRETT (Urana) thought that the lower 18 inches from the ground should be $1\frac{1}{2}$ inch. He knew very well that $1\frac{1}{2}$ -inch mesh was simply useless to keep rabbits in. He had seen them go through it in large numbers. He knew a man with $1\frac{3}{4}$ -inch mesh, who, since putting it up, had had to erect several miles of $1\frac{1}{2}$ -inch netting to prevent the rabbits getting through.

Mr. ALISON (Canonbar) then suggested that a separate vote be taken for $1\frac{1}{2}$ -inch mesh for the lower 18 inches of the netting, and then a separate vote about what the mesh for the rest of the width should be.

The CHAIRMAN then put the question as to whether $1\frac{1}{2}$ inch should be the mesh for the lower 18 inches of the netting, and it was carried.

The question of $1\frac{1}{2}$ inch for the rest of the width was put and lost.

The question of $1\frac{1}{2}$ inch for the whole width was put and lost.

Mr. LESLIE (Forbes) then moved, "That the balance of 2 feet above the lower 18 inches should be a maximum mesh of not more than $1\frac{1}{2}$ inch."

Mr. BRETT (Urana) seconded the motion.

Mr. ALISON (Canonbar) moved as an amendment, "That it be $1\frac{1}{2}$ -in."

Mr. LAURENCE (Balranald) seconded Mr. Alison's amendment.

The CHAIRMAN then put Mr. Alison's amendment, and it was carried.

The CHAIRMAN then said that he thought it would be better to put these two resolutions in one, and say that the lower 18 inches shall be $1\frac{1}{2}$ -inch mesh, and the other 2 feet shall be $1\frac{5}{8}$ -inch mesh.

The question, on being put to the meeting, was carried.

Mr. LAURENCE (Balranald) proposed, "That in line 35 the word 'seventeen' should be changed to 'eighteen.'"

Mr. LITTLE (Bullock Creek) seconded this motion.

Mr. ALISON (Canonbar) said that he had some No. 19 in use, and it had lasted for ten years very well indeed.

Mr. LAURENCE'S (Balranald) motion was then put to the meeting and carried.

Mr. DAVIDSON (Condobolin) then proposed, "That subsection (c) be struck out from this clause."

The amendment lapsed for the want of a seconder.

Mr. WILKES (Broken Hill) moved, "That in line 11 of page 14, clause 33, the words 'Court of Petty Sessions' be inserted instead of 'Local Land Board.'"

Mr. OAKDEN (Cobar) seconded the amendment.

The CHAIRMAN put the question to the Conference, and it was carried.

Clause 33, as amended, was put to the meeting and carried.

Clause 34.

"Boundary" and "adjoining."

34. For the purposes of this Part—

- (a) a rabbit-proof fence shall be taken to be on the boundary of any holding or land if it follows the line which is the actual, reputed, or accepted boundary thereof, or any line which in the opinion of the Local Land Board is sufficiently approximate to such boundary; and
- (b) the intervention of a road or watercourse (not being a permanent river) shall not prevent holdings or lands being taken to be adjoining.

Mr. WILKES (Broken Hill) proposed, "That in line 22, the words 'Pastures and Stock Board' be inserted instead of 'Local Land Board.'"

Mr. OAKDEN (Cobar) seconded the amendment.

Mr. LESLIE (Forbes) said he had an amendment before that. In subsection (a), after the words "boundary thereof" he wished to insert "or, where boundaries are inaccessible or unfenceable, as near as possible to the boundaries thereof, having due regard to the natural formation of the country." He said that if they asked for these powers, the Local Land Board would be the only Board which could determine matters of this sort; and before striking that out they should know whether it would be necessary for this amendment of his to be carried out or not.

Mr.

Mr. DILL (Hay) said it was a very necessary amendment to bring in, and he would second it.

Mr. WILKES (Broken Hill) said, with the consent of his seconder, that as Mr. Leslie's proposition was a very good one, he would withdraw his motion.

Mr. DAVIES (Gunnedah) said, in support of Mr. Leslie, that it was often very difficult to erect rabbit-proof fencing, either in shifting country or in rocky country, on the proper boundaries, and this was a very necessary amendment. It was necessary for all people to get up their fences as quickly as possible, and if they had to wait for the lines to be moved, and the boundaries re-marked, and get the approval of the Survey Department, and all that, they would never get their fencing up.

Mr. Leslie's (Forbes) proposition was then put to the Conference, and carried.

Clause 34, as amended, was put to the meeting and carried.

Clause 35.

Rabbit-proof fences across roads.

35. When any lands are intersected, divided, or bounded by a road or travelling stock reserve or route or public lands, the Local Land Board may grant to the owner of such lands permission to carry a rabbit-proof fence across such road, reserve, route, or public lands: Provided always that rabbit-proof gates be erected at places where the fence crosses such road or route, unless the Local Land Board shall in any case dispense for the time being with the erection of the same. Any permission or dispensation granted under this section may be revoked by the Board upon reference by the Minister or application by any person interested.

Mr. CAMERON (Ivanhoe) moved that Clause 35, as printed, be passed.

Mr. MOORE (Goodooga) seconded the motion.

The Honorable RUPERT CARINGTON (Jerilderie) said he presumed that the word "Board" in the last line but one meant "Rabbit Board."

Mr. CUDMORE (Wentworth) proposed that "gates should be registered in the usual way."

Mr. ALISON (Canonbar) then pointed out to Mr. Cudmore that there was a provision in another clause for a fine if a gate were left open, and Mr. Cudmore withdrew his amendment.

The original motion by Mr. Cameron was then put and carried.

Clause 36.

Rabbit-proof fences a distributed improvement.

36. When any Crown lands containing a rabbit-proof fence or portion thereof shall become the subject of any purchase or lease from the Crown, payment for such rabbit proof fence or portion thereof shall be made in accordance with the provisions of the Crown Lands Acts; but this enactment shall be subject to the following qualifications:—

- (i) Where any holding or group of holdings has been or shall be made rabbit-proof, the rabbit-proof fence shall be deemed to be an improvement distributed over the whole enclosed area of such holding or group of holdings (exclusive of any roads), so that every portion of such area shall be taken to be proportionately improved thereby.
- (ii) The amount so distributed in respect of the improvement shall, in all cases, be limited to one-half of the value of making the fence rabbit-proof: Provided always that if any portion of such rabbit-proof fence is upon or adjoining any land which becomes the subject of any purchase or lease from the Crown the purchaser or lessee thereof shall also be liable in respect of the fence itself.
- (iii) No portion of the value of any rabbit-proof fence erected as a barrier fence at the public expense shall be deemed to be distributed in accordance with this section.

Mr. LESLIE (Forbes) proposed, "That Clause 36 be passed as printed."

Mr. OAKDEN (Cobar) seconded the motion.

The Chairman put the question to the Conference, and it was carried.

Clause 37.

Rabbit-proof fences on occupation license or annual lease.

37. Any owner, whose holding consists wholly or in part of Crown lands under occupation license or annual lease, may give notice in the prescribed form to the Chairman of the Local Land Board that he intends to make such holding rabbit-proof; and in any case where notice as aforesaid shall have been given, and such holding shall have been made rabbit-proof in accordance with the terms thereof, such holding shall be deemed to have been made rabbit-proof as from the date of such notice, so far as regards the amount payable for improvements under this Act in connection with any lands which may be withdrawn from the occupation license or annual lease by becoming the subject of any purchase or lease from the Crown after the date of such notice: Provided always that the rabbit-proof fence shall be completed within one year from the date of such notice or within such further time as the Board on application may allow; and that the liability to pay any moneys under this Act in respect of such rabbit-proofing or any portion thereof shall be suspended until such fence shall have been completed.

Mr. LESLIE (Forbes) proposed that the "Local Land Board" should be struck out of lines 11 and 12.

Mr. CUDMORE (Wentworth) moved that the clause be passed as printed.

Mr. LITTLE (Bullock Creek) seconded Mr. Cudmore's proposition.

Mr. OAKDEN (Cobar) proposed that in line 21 the words "one or" should be altered to "two" years. If there was a large expense required, it might be impossible to carry out the work within a year.

Mr. DILL (Hay) seconded Mr. Oakden's proposition.

The CHAIRMAN then put Mr. Oakden's amendment to the meeting, and it was lost.

Mr. Cudmore's (Wentworth) original proposition, that the clause be passed, as printed, was then put to the Conference and carried.

Clause 38.

Rabbit-proof fences on lands within a group.

38. The provisions of the last preceding section shall apply in cases where it is intended to include the lands held under occupation license or annual lease within a group.

Mr. VARCOE (Hillston) proposed, "That this clause be passed as printed."

Mr. CAMERON (Ivanhoe) seconded the proposition.

The CHAIRMAN then put the question, and it was carried.

Mr. WILKES (Broken Hill) then moved the adjournment of the Conference, as the next matter to be dealt with was a very important one. They had only ten minutes left, and they could not discuss this very important clause in that time.

The CHAIRMAN, in adjourning the Conference, said he would like the members to carefully prepare any amendments they might have. They had plenty of time between this and Monday to go through the Bill thoroughly. He had to wait five and ten minutes sometimes before a gentleman would get up and propose an amendment. He hoped that on Monday they would all come prepared to get through the business quickly.

The Conference was then adjourned until 10 a.m. on Monday.

SIXTH DAY—15th MARCH, 1897.

Mr. Allen Lakeman (Hay) took the Chair at 10 a.m.

The minutes of the previous meeting were read and confirmed.

Clause 39.

Contributions towards cost of private rabbit-proof fences.

39. Where a boundary, or any part thereof, of any holding is fenced with a rabbit-proof fence, or a fence on such boundary, or part thereof, has been made rabbit-proof at the expense of the owner of such holding, a contribution towards the cost of the work shall be payable by the owner of any outside holding or lands adjoining the rabbit-proof fence.

The right to receive such contribution shall vest, and the liability to pay the same shall arise, when the then owner of such first-mentioned holding gives to the then owner of such last-mentioned holding or lands the prescribed notice of demand; and from and after the date when such notice is given, the amount of the contribution, or so much thereof as may for the time being be unpaid, shall, until payment, be and remain a charge upon the holding or lands in respect of which such contribution is payable.

The following provisions as to contributions shall apply:—

- (I) A contribution shall be payable only in respect of so much of the rabbit-proof fence as forms a common boundary fence.
- (II) The amount of the contribution shall in every case be assessed according to the benefit derived, and to be derived, from the rabbit-proof fence, and shall in no case exceed half the value of the rabbit-proof fence, or in the case of a fence which does not belong or wholly belong to the owner who makes the same rabbit-proof, such contribution shall not exceed half the value of the work of making such fence rabbit-proof; and such value shall be the value regarded as at the date when the aforesaid notice of demand is given, and as determined by the Local Land Board.
- (III) A contribution shall not be payable in any case where the Local Land Board is of opinion that the rabbit-proof fence has been erected, or the fence has been made rabbit-proof otherwise than *bonâ fide* for the purpose of excluding or destroying rabbits, or unless and until in the opinion of the Local Land Board the holding or lands from the owner whereof the contribution is demanded derives a benefit therefrom.
- (IV) Nothing in the Crown Lands Acts or in the Act ninth George the Fourth number twelve shall relieve any owner from the liability to pay a contribution under this Act.
- (V) It shall be immaterial whether the rabbit-proof fence was erected or the fence was made rabbit-proof before or after the passing of the Rabbit Act of 1890, or before or after the passing of this Act.

Mr. FREEMAN said, in sub-section (2) it said that "the amount of contribution should in every case be assessed according to the benefit to be derived from the rabbit-proof fence." It seemed to him that it would be a very hard matter to gauge what benefits would be derived from this rabbit-proof fence.

Mr. FLANAGAN (Gunbar) thought this provision dangerous. A fence might have been made rabbit-proof, but might have got into a bad state and so not be rabbit-proof, and as the Bill now stood there would be a danger that people who owned rabbit-proof fences which were not really rabbit-proof would be enabled to receive payment for their fences. Therefore he would wish to insert some words after these lines that would give the power to the Board to say whether they were rabbit-proof or not.

The CHAIRMAN said that to his mind the clause was explicit. They had already defined a rabbit-proof fence, and if it were not up to requirements the contribution could not be enforced.

Mr. FREEMAN moved, "That the whole of line 49 and line 50 down to the word 'shall' should be struck out and the words 'in every case,' in line 48, should also be struck out."

Mr. A. BROWN (Narrabri) seconded the motion.

Mr. ALISON (Canoubar) said he must oppose these words being struck out. He thought they were the most useful words they could have. In very many cases the benefit which was derived from the erection of a rabbit-proof fence was almost nil, and yet the one who derived no benefit from it had to pay.

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That was to him a very illogical thing to keep in a Bill. It was the one great flaw in the 1889 Act. He had a block of freehold land which joined a block of freehold land belonging to somebody else. The other person had erected a fence but there was a road between the two properties. He happened to be the licensee of the resumed area and he had to pay to his neighbour half the cost of his fence for something that did not do him the fraction of a farthing of benefit. He had to pay something like £20 or £30 a mile for the erection of this fence on his neighbour's property. This would show them at once how enormous the present danger was. If a resumed area were cut up enormously the licensee would be compelled to abandon the resumed area. He thought it was a most useful and just provision and should be left in the Bill.

Mr. WILKES (Broken Hill) said he must also oppose the motion. He was of the same opinion as Mr. ALISON. This was one of the finest clauses that had been embodied in the Bill. In the Western district the greatest objection to the 1890 Bill was this compulsory fencing. Surely, if a fence were put up by an eastern neighbour who had no rabbits, and on the west side of that the country was infested with rabbits, could anyone tell him where any benefit was to be derived by the western men. Most decidedly it would be the very reverse. Then why should the western side have to pay for that fence. In many cases such a fence was a harm to a man. It would have a very bad moral effect if a man had to go and pay for things that were absolutely detrimental to him. Suppose a man took a selection or a homestead lease on a run and the runholder put a fence round two sides of it that joined in a corner; it would not be of the slightest benefit to the homestead lessee, and he would have to pay his share.

Mr. CUMMING (Hillston) must also oppose the proposition. It would be very dangerous to take that clause out of the Bill. Mr. ALISON had put the thing in a nut shell. No man should have to pay unless he made use of the fence.

Mr. CAMERON (Ivanhoe) opposed it strongly. He spoke from experience of having to pay for a fence on one of his boundaries. It acted as a barrier to keep the rabbits in, and he had been very much inclined to make holes in it.

Mr. T. BROWN, M.L.A. (Budgerabong), also thought this was a wise provision. They knew that the rabbits were travelling from the western portion eastward, and the amount of benefit from a rabbit-proof fence depended very much which side of the fence you were on. It would benefit a man on the eastern side but it would be detrimental to a man on the western side.

Mr. FLANAGAN (Gunbar) supported Mr. Freeman's amendment. Some of the gentlemen seemed to think that the rabbits only travelled in one direction, west to east. Now, he held that when a man put up a rabbit-proof fence between himself and the adjoining holder it was the fault of the adjoining holder if he did not get any benefit. He might take it into his head not to erect fences on the other three sides, and if this clause were left in he would be compelled to pay half the cost of one side of his run being made rabbit-proof. He would be protected from one side. It was just the same as an enemy coming into the country. They did not know on what side the rabbits would come in. This compulsion to pay for half the boundary fence was of the greatest benefit in suppressing the rabbit plague.

Mr. VARCOE (Hillston) said he would also support Mr. Freeman's amendment, for although a man might not get much benefit from it, he would be prevented from allowing rabbits to stock his neighbour's run. No man had a right to be a nuisance to his neighbour, and he should therefore be a sharer in the fences between the two.

Mr. ROSS (Hume) hoped that this clause would be struck out. They knew very well it had been the great crux of the last Rabbit Bill. He knew, as a matter of fact, that this fencing clause had been applied with very hard results in the past. Some people had put up fences knowing they were of no benefit at all. Fences had been put up in defiance of people's interests. Fences had been put up on one side of a road, and, as the road was open, the man on the other side had had to fence as well as pay for half the fence erected by his neighbour.

Mr. ALISON (Canonbar) said that Mr. Brown would remember that at the last Conference this clause was put in for the small holders especially.

Mr. FREEMAN said that his resolution was really put forward on behalf of the small men. Big things come out of little matters, and if by the network of these fences the selectors to the east of them benefit by them, surely they must pay. Take Goree, in Mr. Ross' own district, for instance. It was not a rabbit-infested district. It was not within 100 miles of rabbits. He had induced the Goree people to wire-net their holdings, and all those selectors in that district, without any liability at all by Act of Parliament, paid freely, without hesitation, for a share of that fencing.

Mr. FREEMAN's amendment was put to the Conference and lost.

Mr. ALISON (Canonbar) said he would like to have it made clear whether subsection 5 interfered with fences that had been made rabbit-proof before the Act of 1890. Were certain rights under that Act wiped away by this clause? It seemed to him to be dangerous if that were the case. He would like the opinion of the meeting on that point.

Mr. ATKINSON said that in line 37 of clause 40 it stated, "nothing contained in this section shall affect any right to an annual contribution towards the cost of the maintenance and repair of a rabbit-proof fence, accrued under or by virtue of the provisions of the Rabbit Act of 1890, and the Local Land Board shall have power to assess and determine the amount of any such contributions."

The CHAIRMAN said that he thought they might add some such provision as that to clause 39.

Mr. ATKINSON said that subsection B of clause 1 settled the matter.

Mr. ALISON (Canonbar) withdrew his objections.

Mr. LESLIE (Forbes) proposed that clause 39, as printed, be passed.

Mr. DILL (Hay) seconded it.

The question was put to the meeting and carried.

Clause 40.

Contributions towards maintenance of private rabbit-proof fences.

40. In any case where a contribution towards the cost of a rabbit-proof fence is to be paid under the provisions of the last preceding section, an annual contribution towards the expenses incurred in the maintenance and repair of the rabbit-proof fence shall also be paid; and for the purposes of such annual contribution the years shall be taken to run from the date, or recurring date of the notice of demand required by the said section.

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The right to receive such annual contribution, and a corresponding duty to maintain and repair the rabbit-proof fence, shall run with the holding whereof the owner was entitled to receive payment of the aforesaid contribution towards the cost of the rabbit-proof fence; and the liability to pay such annual contribution shall run with the holding or lands whereof the owner was liable to pay the aforesaid contribution towards the cost of the rabbit-proof fence.

The amount of such annual contribution shall be one-half the expenses of, or incidental to, the maintenance and repair of the rabbit-proof fence as determined by the Local Land Board.

Nothing contained in this section shall affect any right to an annual contribution towards the cost of the maintenance and repair of a rabbit-proof fence accrued under or by virtue of the provisions of the Rabbit Act of 1890, and the Local Land Board shall have power to assess and determine the amount of any such contribution.

Mr. LESLIE (Forbes) proposed that clause 40, as printed, be passed.

Mr. ROSS (Hume) seconded the motion.

The question was put to the meeting and carried.

Clause 41.

Contributions from the Crown towards private rabbit-proof fences.

41. Where—

(a) a private rabbit-proof fence forms a common boundary fence between private and public lands; and

(b) particulars of the said fence have been furnished to the Minister before or after the erection thereof; and

(c) the Minister, after report by the Local Land Board, has approved in writing of the erection of such fence in accordance with such particulars,

the same contributions shall be payable by the Crown in respect of rendering the fence rabbit-proof as would be payable by any private owner, and the amount of such contributions shall be determined by the Local Land Board in the same manner as if the said public lands were private lands.

Mr. ALISON (Canonbar) said that under the last Act the Minister was liable to pay for any fencing erected on Crown lands where he approved of it, and every Minister had exercised this power of approval so much that he had disapproved of every proposal. What was the good of a clause like this if the Minister was going to exercise the power of disapproval every time. He thought they ought to amend this clause so as to make the Minister liable the same as any private person, and yet it seemed as if the Minister should have some power of approval, but he could hardly see a way to get over it.

Mr. FREEMAN proposed an amendment that in line 47 the last word "and" be struck out and the whole of subsection (c) be struck out, and that these words be inserted "provided always that where the Crown pays such contribution they shall have the power of recovery from an incoming tenant, as provided for with regard to the contributions in respect of private rabbit-proof fences."

Mr. FLANAGAN (Gunbar) did not think this amendment was necessary. The public lands were virtually the Minister's lands, and he could make what bargains he chose with an incoming tenant. It was not necessary.

Mr. CAMERON (Ivanhoe) had an amendment on this clause that would meet the difficulty in a very few words. He moved that the words "or after" and the whole of subsection (c) be struck out. This would place the Minister on the same footing as any private holder. He would not say that the State had shirked its duty, but they had never paid for fences put along the public lands, and as the Minister would have some voice in approving in the erection of a rabbit-proof fence, it would be met by having the question submitted to him before the fence was erected. He said they ought to have some definite expression in the Bill as to what would be the Minister's duties with regard to fences that were to be erected between the public lands and the private lands. People had erected fences upon resumed areas, upon the clear assumption to them, that according to the Act the Minister was liable to a contribution of half the cost of erection, and this Conference ought to deal with the Minister's responsibility in so clear a manner that any person reading the Act would be able to understand what responsibility the State took and the responsibility of a private owner.

Mr. CUMMING (Hillston) seconded Mr. Cameron's motion.

Mr. ROSS (Hume) said he did not see why the Minister should not stand in the same position as a private person in this matter. If the Minister had the power to approve of a fence, as in the past, he simply would not approve of it.

Mr. ALISON (Canonbar) said he had found by the last few words "that the amount of the contribution shall be settled by the Local Land Board," the Crown was protected.

Mr. FREEMAN said he was quite willing to accept Mr. Cameron's amendment, and withdrew his own.

Mr. CAMERON's (Ivanhoe) amendment was then put to the meeting and carried.

Mr. OAKDEN (Cobar) proposed that clause 41 as amended be passed.

Mr. T. BROWN, M.L.A. (Budgerabong), seconded the motion.

Mr. J. M. ATKINSON wished to insert the words "fences that have been put up previous to this Act." This was a very important matter. They should make the Crown contribute where these fences adjoined the common boundary. The clause as it stood did not affect the fences that had been put up and were in use, and for which the Crown had declined to contribute. Those people would be placed in a very unfair position. He would move that the words "before or after" be inserted in line 47 after the word furnished.

Mr. CAMERON (Ivanhoe) did not see exactly how this amendment could be put in, because it applied to fences which had been erected in the past. He did not know of any case in which the Minister's consent had been asked before the fence was erected.

Mr. FLANAGAN (Gunbar) also pointed out that there were some lands which had fallen into the hands of the Ministers since 1890. The fences on these might have been between lessee and lessee and now they came into the hands of the Minister for Lands.

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The CHAIRMAN said he did not think the amendment could be put in as indicated by Mr. Atkinson.

Mr. ATKINSON said he would put it in, in place of the word "and" in line 45. Supposing this Rabbit Bill were brought in, then owners who had erected wire-netting fences adjoining the Crown lands would at once furnish the Minister with the particulars required.

The CHAIRMAN said that he had better move for the recommittal.

Mr. VANSTONE (Goodooga) said he knew of cases where fences had been erected, and the lessee had brought his neighbours before the Land Board, and the fences had been proved to be not rabbit-proof.

Mr. OAKDEN'S (Cobar) motion that the clause be passed as amended was then put to the meeting and carried.

Clause 42.

Private barrier-fences.

42. Where fences within a Rabbit District have, before the commencement of this Act, been rendered rabbit-proof by the expenditure of moneys voluntarily contributed or paid for the purpose by any Stock and Pastures Boards, or by any persons, the Rabbit Board of the District may apply any moneys raised by rabbit rates within the District in repaying to the said Stock and Pastures Boards or persons the moneys so contributed or paid by them as aforesaid, or any part thereof, if in the opinion of the Rabbit Board, the fences are barrier-fences within the meaning of this Act.

Mr. LESLIE (Forbes) proposed that the clause be passed as printed.

Mr. T. BROWN, M.L.A. (Budgerabong), seconded the motion.

The question was put to the meeting and carried.

Clause 43.

Grouping of holdings.

43. When a ring fence enclosing two or more holdings or any portion or portions thereof is a rabbit-proof fence, and the work of making the same rabbit-proof has been done by agreement between the owners of such holdings, the lands so enclosed belonging to such owners shall, with the consent of the Rabbit Board of the District, form a group of holdings within the meaning and for the purposes of this Act.

Any existing fence or portion thereof may be adopted so as to form part of the ring fence of any group, but not without the consent of any owner of such fence or portion thereof whose holding thereby becomes a holding forming part of the group.

The Minister for Lands may agree that any public lands shall be included within a group, and the Crown shall thereupon become liable in the same way as the owner of any holding of private lands within the group.

The Rabbit Board may agree that any rabbit-proof fence utilised or erected by it may be used for the purpose of the grouping of holdings.

Where any holding has been enclosed with a rabbit-proof fence, and any part of the holding afterwards becomes the subject of any homestead selection, purchase, or lease from the Crown, and is thereby withdrawn from the holding so enclosed as aforesaid, the new holding created by such homestead selection, purchase, or lease, and the residue of the original holding shall be deemed to form a group of holdings; and any portion subsequently withdrawn from the residue shall also be a holding within the group.

Any group of holdings constituted under the Rabbit Act of 1890 shall be a group of holdings within the meaning and for the purposes of this Act.

When the external boundaries of any holding or group of holdings have been made rabbit-proof, the owner or owners thereof shall not be liable to contribute towards the cost of erecting or maintaining and repairing a rabbit-proof fence round any holding or land situate within such external boundaries as aforesaid, or towards the cost of making rabbit-proof any existing fence round such holding or land within such external boundaries; and it shall be immaterial whether the said external boundaries have been made rabbit-proof before or after the passing of this Act.

Mr. FLANAGAN (Gunbar) moved that "three or more" be inserted in line 12.

Mr. SIDES seconded the motion.

Mr. LITTLE (Bullock Creek N.) moved that it should be "one."

Mr. BAYLIS (Narrandera) moved that the clause as printed be passed.

Mr. CUDMORE (Wentworth) seconded the motion.

Mr. FLANAGAN'S (Gunbar) amendment was put and lost.

Mr. FREEMAN moved an amendment on subsection 3. It should be that on agreement to make a group of holdings the Minister may come in as a contributor. Supposing a number of holders cared to form a group, and a large portion of that was Crown land, the Minister might relieve himself of liability by not agreeing, and he thought it should be amended so that if an agreement be made to form a group the Minister shall be a contributor.

Mr. A. BROWN (Narrabri) seconded the motion.

The question was put to the meeting and lost.

The clause as printed was put and carried.

Clause 44.

Provisions governing groups.

44. A group of holdings shall be deemed to be a single holding so far as regards any such contribution towards the cost of the erection, maintenance, or repair of rabbit-proof fencing as may be payable by or to the owners of adjoining holdings outside the group. And the following provisions shall apply to the holdings forming part of a group, and to the owners thereof:—

- (i) The liabilities of such owners as between themselves, in respect of sums expended or to be expended for the erection or repair of the ring fence, or of amounts paid or to be paid as contributions towards the cost or maintenance of any portion of such fence, shall be proportionate to the respective areas of the holdings of such owners, and in any case of dispute shall be declared by the Local Land Board; and the amount declared by such Board to be payable by any such owner shall be a charge upon his holding.
- (ii) The majority in number of the owners whose lands may for the time being constitute a group may, from time to time, by an instrument in the prescribed form, appoint any person to be the secretary of the group; and proceedings may be taken by or against the secretary for the time being of a group, as nominal plaintiff or defendant representing all the owners of all grouped lands.
- (iii) In any case where a group of holdings is not known to have a duly appointed secretary or the duly appointed secretary cannot be found, the Rabbit Board of the district in which such group or any portion thereof is situated may designate the owner of any land included within the group to be the nominal defendant representing all the owners of all grouped lands for the purposes of any proceedings proposed to be taken against such group or such owners; and proceedings may thereupon be taken against such owner as nominal defendant in the same way as if he were the duly appointed secretary of the group.
- (iv) In any case where judgment has been recovered against the secretary of a group or other nominal defendant as aforesaid, and has not been satisfied, or where an order for the payment of money has been made against such secretary or other nominal defendant, and has not been complied with, the person entitled under such judgment or order may apply to the Local Land Board to settle the respective amounts to be contributed by the owners of the holdings within the group for satisfaction of such judgment or compliance with such order; and the Local Land Board shall thereupon settle the said respective amounts in proportion to the respective areas of the holdings of such owners; and the person entitled under such judgment or order may take proceedings against each or any of such holders for the amount settled by the Local Land Board.
- (v) If any part of a holding within a group shall be withdrawn from such holding, by reason of its becoming the subject of any homestead selection or purchase or lease from the Crown, or by reason of such holding being subdivided, the new holding created by such homestead selection or purchase, lease, or subdivision shall be a holding within, and forming part of, the group.
- (vi) A holding shall not cease to form part of a group, by reason only of any change of ownership in respect of such holding, or of any other holding within such group; but any owner may, with the permission of the Rabbit Board, and subject to any conditions which it may impose, detach his holding from the group of which it formed part if the boundaries of such holding have been made rabbit-proof.
- (vii) If at any time it be made to appear to the Rabbit Board that a group of holdings is too large to allow the work of destroying rabbits being satisfactorily performed, and that the owners holding not less than one-half of the grouped lands desire that such group of holdings may be subdivided, it shall be lawful for the Board to authorise the subdivision of such group, and to determine the line or lines of subdivision. And the subdivision rabbit-proof fence or fences shall, in all respects, be dealt with as if the same formed part of the ring fence of such group.

Mr. CAMERON (Ivanhoe) proposed that clause 44 as printed be passed.

Mr. VANSTON (Goodooga) seconded it.

The question was put to the meeting and carried.

Clause 45.

Destruction by owners and occupiers.

45. It shall be the duty of every owner and of every occupier of any private holding or lands from time to time to suppress and destroy, by lawful means, and at his own cost, all rabbits which may from time to time be upon such lands, or upon any roads bounding or intersecting the same, or any part thereof.

Any owner, or any occupier, of any private holding or lands who fails to fully and continuously perform such duty as aforesaid to the best of his means and ability shall be liable to a penalty on the first conviction of not less than *two* nor more than *ten* pounds, and on the second conviction of not less than *five* nor more than *twenty-five* pounds, and on the third or any subsequent conviction of not less than *thirty* nor more than *fifty* pounds; and the existence of rabbits on any private holding or lands shall be *prima facie* evidence that the owner or the occupier thereof (as the case may be) has failed to fully and continuously perform such duty to the best of his means and ability.

Mr. CAMERON (Ivanhoe) moved that the word "private," in line 14, and the word "all," in line 15, be struck out, and that the following be inserted after the word "cost," in line 15, "to the best of his ability and to the satisfaction of the Board." The first part of the clause would then read as

as follows:—"It shall be the duty of every owner and of every occupier of any holding or lands from time to time to suppress and destroy, by lawful means, and at his own cost, to the best of his ability and to the satisfaction of the Board, rabbits which may from time to time be upon such lands, or upon any roads bounding or intersecting the same, or any part thereof."

Mr. FLANAGAN (Gunbar) seconded the motion.

Mr. WILKES (Broken Hill) moved an amendment on Mr. Cameron's amendment that the words "to the best of his ability, &c.," be struck out of the amendment. They would entail endless litigation. There was no doubt that every man would come forward and say he had done it to the best of his ability. Destruction would never be compulsory if that were carried. If the Boards were not fit to deal with the question they were not fit to deal with any question. If these words were inserted it would destroy the whole force of the Act.

Mr. HEDDEN (Wanaring) seconded Mr. Wilkes' amendment.

Mr. CUDMORE (Wentworth) supported Mr. Cameron.

The Hon. RUPERT CARINGTON (Jerilderie) thought the House would never agree to pass this motion. They should leave the word "private" in.

Mr. J. M. ATKINSON wished to say a few words in reply to the Hon. Rupert Carington. The Minister had distinctly told them to frame their own Bill and to give it to him. It was no business of theirs what Parliament would pass. If Parliament passed any other Bill, they would be able to say they had not wanted it. They would be able to say, "We never recommended such a proposal; we proposed a certain Bill; we proposed what was right to us." The Hon. Rupert Carington wanted them to propose a bread-and-butter Bill to put before the House for them to swallow.

On Mr. ALISON's (Canonbar) suggestion the Chairman put the different portions of Mr. Cameron's motion separately.

The question of striking out the two words "private" and "all" in lines 14 and 15 was put and carried.

Mr. CAMERON (Ivanhoe) said he was quite willing, in view of Mr. Wilkes' amendment, to strike out the words "to the best of his ability."

The question of adding after the word "cost," in line 15, "and to the satisfaction of the Board the" was then put and carried.

Mr. T. BROWN, M.L.A. (Budgerabong), said that in compliance with the desire of the Condoblin Stock Board, he would move that the following words be struck out, "or upon any roads bounding or intersecting the same or any part thereof," unless the road was under lease or occupation.

Mr. ALISON (Canonbar) seconded the motion. He said the private holder should not have to destroy rabbits on the roads.

Mr. LESLIE (Forbes) moved a further amendment that the word "boundary," in line 16, be struck out. He would like the remainder of the words to be left in. He would point out that roads aggregating very large areas were fenced inside holdings, and therefore those that were inside any property that had been made rabbit-proof would of course be cleared by the owner. The owner should only be made to kill on roads when those roads were inside his run.

Mr. BAYLIS (Narrandera) said the amendment should be altered to read that the owner should kill rabbits "upon any roads enclosed by the said owner, bounding or intersecting the same."

Mr. FREEMAN thought that Mr. Brown's motion should be carried.

Mr. BACON (Brewarrina) said there was a difficulty. In the Western Division there was a reserved road of five or ten chains through the homestead leases. This road had to be paid for as part of the resumed area. Unless it was clearly defined that the holder of the homestead lease had to pay for the destruction of those rabbits it would lead to confusion. As it was now the pastoral tenant had to pay the rent for the road, although the homestead lessee had the use of it. The pastoral tenant should not be also made to pay for the destruction of the rabbits.

Mr. WILKES (Broken Hill) said there was not the slightest doubt that if a road were outside a holding the Crown should pay for the destruction of the rabbits. If the road was not in one lease it must be either in some other lease or else in possession of the Crown. He said that if a road were taken out of a homestead lease it was also taken out of lease and license. As a rule the roads were left in the homestead leases.

Mr. ALISON (Canonbar) said the case was not as Mr. Wilkes stated. He said that when roads were declared between selections, and so on, they were for the use of the public, but were still left in the license. They could easily imagine a resumed area being cut up so that the holder of the area had no use for the road at all. Under this clause he would be obliged to keep the rabbits down whether he had use for the road or not.

Mr. LESLIE (Forbes) said that it was in order to try and protect the lessee who was really paying for these roads, for which he had no use, that he proposed this amendment. Lessees had to pay rent for roads until they were proclaimed, although they were not in their occupation. He wanted to protect the interests of those men, so that they should not be compelled to kill rabbits on roads which were not in their occupation.

Mr. SIDES (Hay) said that the parties on either side of a road should have to pay for killing the rabbits on the road between them. Of course, if a road were within a run they were bound to kill them.

Mr. ROSS (Hume) could not support the clause as it stood. He thought the Rabbit Board should decide who should bear the cost. It would be hard on the Crown if they had to kill the rabbits on all the roads of the Colony, because half the roads were used by the holders of the adjoining lands. It would also be hard on a man on a holding to be compelled to kill rabbits on a road which was perhaps miles away.

Mr. DILL (Hay) said that he had lost nearly the whole of his resumed area. The roads, amounting to 40 or 50 miles, were enclosed by free selectors, and unless he abandoned the balance of the resumed area to the Crown he would be liable for killing the rabbits. If this clause were not carefully amended he and many others would be subject to injustice.

Mr. ATKINSON moved an amendment that the clause remain as printed, with the addition after "thereof" of the following, "if enclosed by the said owner."

Mr. ALISON (Canonbar) said he would accept the amendment.

Mr. ATKINSON said that, of course, would be on land which was enclosed with a rabbit-proof fence.

Mr. T. BROWN, M.L.A. (Budgerabong), pointed out to Mr. Alison that this clause was to deal with killing rabbits on holdings, whether they were enclosed by a rabbit-proof fence or not.

Mr. LITTLE (Bullock Creek North) seconded Mr. Atkinson.

Mr. ALISON (Canonbar) pointed out that this amendment would leave the clause exactly as before. There were no instances in the Colony where a resumed area had not been "enclosed," that was to say, enclosed with a wire-fence, but in many instances it was not wire-netting. "Enclosed," under the present Land Act, meant "enclosed by a sufficient fence," it did not mean a rabbit fence. He would like the mover of the amendment to make it read "enclosed with a rabbit fence."

Mr. FLANAGAN (Gunbar) said that the word "owner" should be substituted by the word "user." He knew of cases where there were fences on each side of a road, and the selector on one side had wire-netted. The man who had wire-netted could not use the road. He thought the Board should say who was the user of the road, and that would settle the matter. The man who used the road should destroy the rabbits on it.

Mr. Atkinson's amendment was then put and carried.

Mr. ALISON (Canonbar) moved to add "within a rabbit-proof fence" after the word "enclosed" in the resolution just passed.

Mr. CUMMING (Hillston) seconded Mr. Alison.

Mr. T. BROWN, M.L.A. (Budgerabong), pointed out to Mr. Alison that the effect of this resolution would be that there would be no compulsory destruction of rabbits enforced on any land not enclosed by a rabbit-proof fence. The object of this particular clause, on the contrary, was to provide for compulsory destruction of rabbits outside wire-netting enclosures.

Mr. ALISON (Canonbar) acknowledged the truth of Mr. Brown's remarks and withdrew his amendment.

Mr. BROWN (Budgerabong) then moved his amendment—that the following words, "or upon any road bounding or intersecting the same or any part thereof," be struck out.

Mr. ALISON (Canonbar) seconded the motion.

The question was then put and lost.

Mr. LESLIE (Forbes) proposed that the word "private" be struck out of line 18.

Mr. WILKES (Broken Hill) seconded the motion.

The question was put and carried.

Mr. LESLIE (Forbes) moved, that in line 20, after the word "ability," they should insert "and to the satisfaction of the Board."

Mr. T. BROWN, M.L.A. (Budgerabong), thought "to the best of his means and ability" should be struck out.

Mr. LESLIE (Forbes) accepted it.

Mr. WILKES (Broken Hill) seconded it.

Mr. ALISON (Canonbar) pointed out that it was very dangerous to strike out these words. Of course it would have to be to the satisfaction of the Board, because the Board—before it could enter upon any land—must be satisfied that the destruction was not being properly carried on. Individuals must be protected against the arbitrary power of the Board.

Mr. T. BROWN, M.L.A. (Budgerabong), said that Mr. Alison was speaking rather late in the day. He was only proposing to strike this out in conformity with what had been done before. If this were left in, who was to determine that the owner had used his best means and ability?

Mr. ALISON (Canonbar) said a man might be doing his very best to get the rabbits down, and yet the Board might decide that he was not doing his best. The Board should be made to prove its case. There should be a third person an arbitrator. Thousands and thousand of pounds might be thrown on to a man if this were cut out. They did not know whom the Boards would be composed of. If those words were struck out the private owner had no appeal whatever. He had to submit to what a bare majority of the Board might decide. Five men might put some individual, whom they disliked, to an expense of thousands of pounds. It was too much power to give any body of men, that of being judge and executive at the same moment. He hoped they would retain those words.

Mr. LITTLE (Bullock Creek North) pointed out that, unless the Boards had full power, nothing could be done. People would dodge the Boards, and while they had the power of electing the Stock Boards there was not the slightest danger of their being harshly dealt with.

Mr. WILKES (Broken Hill) supported Mr. Brown's amendment. Who was to say what was a man's ability? A man might say that he had done it to the best of his ability, and yet be blind or deaf and have no ability whatever. "Ability" here meant the word "willingness." It was only a quibble.

Mr. LESLIE (Forbes) pointed out that Mr. Alison had said that the owners would have no right to appeal. He would draw Mr. Alison's attention to clause 53 regarding powers of appeal.

The CHAIRMAN said he thought they were wasting time over nothing. The clause, as he read it, provided a penalty for occupiers who did not kill their rabbits. As the Stock and Pastures Board were going to administer the Act they would have to initiate the proceedings before anybody could be prosecuted under this clause. The clause was elastic enough, and yet gave the Pastures and Stock Board sufficient power.

Mr. ATKINSON suggested the further amendment, that the words, "to the best of his means and ability" be struck out, and that the words, "and to the satisfaction of the Board" be not inserted.

Mr. T. BROWN, M.L.A. (Budgerabong), pointed out that Mr. Atkinson's amendment was practically his.

Mr. J. M. ATKINSON withdrew his motion.

Mr. T. BROWN, M.L.A. (Budgerabong), pointed out that his strong objection to leaving the words in was that they set up another standard of what was sufficient killing, and the owner relying on that could frustrate the efforts of the Board to compel him to kill. A similar provision had to be wiped out of the Victorian Act before the Shire Councils there could enforce the provisions of the Act regarding killing.

Mr. T. BROWN, M.L.A. (Budgerabong), amendment was put and carried.

Mr. FLANAGAN (Gunbar) moved that the word "continuously" should be struck out of line 19. It would be a great hardship if this were left in. There were times when men were taking off their clips, and so on, when they could not busy themselves with killing.

Mr. ROSS (Hume) thought the word should be left in.

Mr. CUMMING (Hillston) seconded Mr. Flanagan. He thought the provision should be a little more elastic. A man might kill with a little arsenic many more than in another way, and after a shower of rain it would be better to wait for a week or two.

Mr.

Mr. T. BROWN, M.L.A. (Budgerabong), moved that the "minimum fines" be struck out and the "maximum fines" retained in clause 45. He thought this matter could be safely left to the Board.

Mr. HEBDEN seconded Mr. Brown's resolution.

The question was put and carried.

Mr. T. BROWN, M.L.A. (Budgerabong), moved that the words "and the existence of rabbits on any private holding or land shall be *prima facie* evidence that the owner or occupier thereof (as the case may be) has failed to fully and continuously perform such duty to the best of his means and ability" be struck out.

Mr. FLANAGAN (Gunbar) seconded the motion.

The question was put to the meeting and carried.

Mr. BROWN, M.L.A. (Budgerabong), moved that Clause 45, as amended, be passed.

Mr. HEBDEN seconded the proposal.

The question was put to the meeting and carried.

Clause 46.

Natural enemy of rabbits.

46. The Governor may from time to time, by proclamation in the *Gazette*, declare any animal, bird, or reptile to be a natural enemy of the rabbit, and prohibit within districts (whether Rabbit Districts or not) to be specified in such proclamation the wounding, killing, or capturing, selling or disposing of any such animal, bird, or reptile without a special permit in that behalf, and may from time to time correct, modify, or revoke any such proclamation.

Any proclamation issued under the Rabbit Act of 1890, whereby any animal, bird, or reptile was declared to be a natural enemy of the rabbit, shall continue in force according to the tenor thereof, unless and until revoked under the provisions of this section.

Any person who without lawful authority (the proof of which shall be on the person claiming to have the same) wounds, kills, captures, or sells or disposes of any animal, bird, or reptile declared to be a natural enemy of the rabbit shall be liable to a penalty of not less than *two* nor more than *twenty* pounds.

Mr. DAVIES (Gunnedah) thought the word "capturing" should be left out. He said if they had spring-traps they were more likely to catch the iguana and the snake than the rabbit. He thought they should provide that no trap should be used that was absolutely destructive to life. If they had tip-traps, and the natural enemy of the rabbit got in one, a neighbour who had a down on any man could get him fined. He thought spring-traps should not be used at all, for if the natural enemy of the rabbit got into the teeth of a spring-trap he would be destroyed.

Mr. OAKDEN (Cobar) moved that the word "wilfully" be put in before the word "wounds."

Mr. J. M. ATKINSON pointed out that the word "wilfully" would not do it. If they dug a hole or set a trap they did it "wilfully." It should be "intentionally."

Mr. WILKES (Broken Hill) seconded Mr. Oakden's amendment.

Mr. DAVIES (Gunnedah) moved that the setting of spring-traps, or any trap absolutely destructive to life, be prohibited.

Mr. FREEMAN seconded Mr. Davies' amendment.

Mr. FLANAGAN (Gunbar) opposed that. In his district there was a rabbit factory which had people trapping 10,000 rabbits a day. Would that not be more than the iguanas they would kill? It would be dangerous to hinder traps to be set for rabbits.

Mr. WILKES (Broken Hill) pointed out that Mr. Davies' amendment would not apply in all cases. In his district they must set traps for the native dogs.

Mr. CAMERON (Ivanhoe) pointed out that if this were carried, not only would the owners of land be prevented from using spring-traps, but they would be prevented from using any other method of killing rabbits which would be inimical to the life of the natural enemy. In many districts of the Colony the most efficient manner of destroying rabbits was the use of poisoned water, and yet this was dangerous to the natural enemy.

Mr. A. BROWN (Narrabri) pointed out that native cats came about the houses and destroyed chickens and so on, and in his district nothing would live unless they killed the native cats. He thought an exception should be made with regard to killing "about household premises or yards." When they found native cats or iguanas destroying the poultry about the homesteads they must kill them.

The CHAIRMAN said he thought they would kill them all the same.

A MEMBER: Wire-fence the fowls.

Mr. A. BROWN (Narrabri) moved an amendment "except within 100 yards of a dwelling house."

Mr. LAURENCE (Balranald) said that foxes were the natural enemy of the rabbit, and he wished to know if they were to be allowed to spread all over the country.

Mr. CUDMORE (Wentworth) said that if Mr. Brown had had as much experience with the rabbits as he had had, he would be glad to protect the wild cats, and put the fowls in a glass case.

Mr. OAKDEN (Cobar) seconded Mr. A. Brown's amendment, which was then put to the meeting and lost.

Mr. DAVIES' (Gunnedah) amendment was then put and lost by a large majority.

Mr. OAKDEN (Cobar) moved that the word "wilfully" be put in line 42, and in line 33 before the word "wounding" and the word "wounds."

Mr. WILKES (Broken Hill) seconded the resolution, which was then put and carried.

Mr. T. BROWN, M.L.A. (Budgerabong), moved that in line 45 the minimum fines be struck out.

This was put to the meeting and carried.

Clause 46, as amended, was then put to the meeting and carried.

Clause 47.

Burning without notice during winter months.

47. For the purpose of destroying or suppressing rabbits, any owner or occupier, may, at any time, with the consent of the Rabbit Board first had and obtained, notwithstanding anything in any Act contained, burn or ignite any straw, stubble, grass, herbage, scrub, wood, or other inflammable material on his land subject to conditions to be imposed by the Board.

Clause 47, as printed, was put to the meeting and carried.

Clause

Clause 48.

Authorised persons may enter private land.

48. Any authorised person may from time to time enter upon any private holding or land at any time with or without assistants, dogs, horses, and vehicles in order to search whether any rabbits are on such land, or to erect or repair barrier-fences or gates, or to examine and inspect land, or for any purpose whatsoever under this Act, and may remain thereon so long, and do all such things as may be necessary or reasonable.

Any person who falsely represents himself to be or personates an authorised person under this Act in any manner whatsoever shall be guilty of a misdemeanour, and shall on conviction be liable to be imprisoned with or without hard labour for any period not exceeding six months, or to forfeit and pay a penalty of not more than one hundred pounds, or both.

Any person who wilfully assaults, obstructs, hinders, or interrupts, or causes to be assaulted, obstructed, hindered, or interrupted, any authorised person in the exercise of any power or authority vested in him by this Act, shall for every such offence if not otherwise specially provided for be liable to a penalty not exceeding twenty pounds; and no proceeding for recovery of such penalty nor the payment thereof shall be a bar to any action at law for or in respect of any such assault as aforesaid, but every such action may be commenced and proceeded with as if this Act had not been passed, any law or usage to the contrary notwithstanding.

For the purposes of this section an authorised person means a person having authority from the Minister or from a Rabbit Board, and such authority may be a general authority.

Mr. T. BROWN, M.L.A. (Budgerabong), moved that in line 1 the words "on production of his authority on demand by the owner" be inserted after the word "person."

Mr. BAYLIS (Narrandera) seconded the motion.

The question was put and carried.

Mr. WILKES (Broken Hill) moved that in line 2, section 48, the words "private" and "dogs" be struck out.

Mr. OAKDEN (Cobar) seconded the resolution.

Mr. BRETT (Urana) proposed that the word "dogs" be left in.

On the request of Mr. Flanagan the Chairman put the two words separately.

The question of striking out the word "private" was carried.

The question of striking out the word "dogs" was lost.

The Hon. RUPERT CARINGTON (Jerilderie) moved that "horse" be substituted for "horses."

Mr. SIDES (Hay) seconded the motion.

Mr. BRETT (Urana) said he did not think the work could be done with less than three horses.

Mr. OAKDEN (Cobar) said it was a person who was authorised by the Board who was to use this authority, and he did not think the Board would allow him to do more than he ought.

The question was put and lost by a large majority.

Mr. T. BROWN, M.L.A. (Budgerabong), moved that the words "the Minister or from" be struck out of line 26.

Mr. WILKES (Broken Hill) seconded the motion.

Mr. T. BROWN, M.L.A. (Budgerabong), explained that this was merely to leave the power in the hands of the Board.

Mr. ALISON (Canonbar) said that if they struck out those words they did not leave the Minister any power of entry. Surely it was advisable that the Minister should have power of entry. It could do no harm. He did not see what it was put in for. But then he did not see why it should be struck out. The Minister should have power to go in and have a look if he liked.

Mr. FLANAGAN (Gunbar) did not agree with Mr. Alison. He said it would be a very strange proceeding if they wanted to go on a man's land to kill the rabbits if they had to wait for the permission of the Minister.

Mr. BACON (Brewarrina) said it would be an absurd thing to limit the Crown.

The question was put and lost by 18 votes to 17.

Clause 48, as amended, was put to the meeting and carried.

Clause 49.

Various offences.

49. Any person who—

(a) wilfully carries, drives, or passes any live rabbit through, under, or over any rabbit-proof fence or gate; or

(b) wilfully leaves open any gate in a rabbit-proof fence; or

(c) without lawful authority (the proof of which shall be on the person claiming to have the same) wilfully destroys, injures, tears-up, depresses, or removes any portion of a rabbit-proof fence or gate, or excavates under, or in any way tampers with, any portion of such fence or gate, so as thereby to endanger its effectiveness; or

(d) attempts to do any such act as is hereinbefore mentioned, or procures the same to be done

shall be liable to be imprisoned, with or without hard labour, for any term not exceeding six months, or to pay a penalty not exceeding one hundred pounds, or both.

A rabbit-proof fence or gate, for the purposes of this section, shall mean a fence or gate apparently intended to protect any land from rabbits, and shall include a barrier fence, or gate therein, and it shall be immaterial whether or not such fence or gate is in accordance with the requirements of this Act.

Mr. WILKES (Broken Hill) proposed, "That clause 49 as printed be passed."

Mr. BACON (Brewarrina) seconded the motion.

The question was put to the meeting and carried.

Clause

Clause 50.

50. Any person who without lawful authority (the proof of which shall be on the person claiming to have the same) wilfully liberates or attempts to liberate, or has in his possession any live rabbit, shall be liable to a penalty not exceeding *one hundred* pounds for every such offence; but nothing herein contained shall be construed to prohibit any person from keeping live rabbits in any safe enclosure with the permission of the Minister first had and obtained.

Mr. FLANAGAN (Gunbar) moved, "That clause 50 be passed as printed."
The question was put to the meeting and carried.

Clause 51.

51. Any person who destroys, injures, removes, or interferes with any trap, snare, poison, mator, or thing which is used or required for the purpose, of capturing or destroying rabbits, and which is lawfully placed upon any land for such purpose, shall be liable to a penalty not exceeding *twenty* pounds.

Mr. BROWN (Budgerabong) moved, and Mr. Cumming seconded, "That the clause be passed as printed."
The question was put to the meeting and carried.

Clause 52.

Summary proceedings before Justices.

52. Any proceedings for—

- (a) the recovery of any sum of money, which any private person is under or by virtue of the provisions of this Act required or made liable to pay, whether such sum of money be due in respect of rabbit rates, costs of rabbit destruction, contributions towards rabbit-proof fencing, or otherwise howsoever: or
- (b) the recovery of penalties or punishment of offences under this Act or any Regulation made thereunder

shall be heard and determined in a summary way before two Justices in accordance with the provisions of the Act or Acts in force for the time being regulating summary proceedings before Justices.

Where the Justices, upon such proceedings, adjudge or order any sum of money to be paid and the same is not paid, either immediately after the adjudication or conviction, or within the time then and there allowed by the Justices, payment of the said sum may be enforced by distress and sale of the goods and chattels of the person adjudged or ordered to pay the same in the manner provided by the said Act or Acts: Provided always that nothing herein contained shall affect any other remedy provided in the Crown Lands Acts.

Any person may take proceedings under this Act for the punishment of any offence hereby enacted; but where the land upon which an offence is committed is situate within a Rabbit District any fine or penalty imposed for such offence shall belong and be paid to the Rabbit Board of the District—any law or statute to the contrary notwithstanding—and the Justices imposing such fine or penalty shall order accordingly.

Mr. WILKES (Broken Hill) moved, "That in line 9, subsection (a), the word 'private' be struck out."
Mr. OAKDEN (Cobar) seconded it, and it was carried.

The Honorable RUPERT CARINGTON moved, "That lines 28 and 29 be struck out of clause 52 down to the word 'enacted', and that the following be inserted, 'all information shall be laid and proceedings at law taken by the Board through its officers.'"

Mr. BRETT (Urana) seconded the Honorable Rupert Carington's motion.

The question was put to the meeting and carried.

Mr. CUDMORE (Wentworth) said he would like to add, "That in section (b) they should insert 'Court of Petty Sessions' instead of 'two Justices' in line 17."

Mr. DILL (Hay) seconded it.

Mr. ALISON (Canonbar) said that it occurred several times, and should be altered in each case.

Mr. OAKDEN (Cobar) seconded Mr. Alison.

Mr. ALISON'S (Canonbar) amendment was put and carried.

Mr. VANSTON moved, "That clause 52, as amended, be passed."

Mr. CAMERON (Ivanhoe) seconded the motion.

The question was put to the meeting and carried.

Clause 53.

Appeals to General Sessions.

53. Any person who shall think himself aggrieved by any adjudication, order, fine, penalty, or punishment made or imposed by Justices under this Act, may appeal against the same, and the provisions of the Criminal Law Amendment Act of 1883 in respect of appeals in cases of summary conviction shall extend and apply to every such appeal.

Mr. LESLIE (Forbes) proposed, "That clause 53 be passed as printed."

Mr. CUMMING (Hillston) seconded.

The question was put to the meeting and carried.

Clause 54.

Orders may be enforced by action.

54. In any case under this Act where any sum of money is ordered to be paid by Justices or by a Court of General or Quarter Sessions, and the same is not paid within the period named in such order, it shall be lawful for the person entitled to receive payment of such sum to sue upon such order in the District Court or the Supreme Court.

Mr. LESLIE (Forbes) proposed, "That clause 54 be passed, as printed."

Mr. HEDDON (Wanaaring) seconded the motion.

The question was put to the meeting and carried.

Clause

Clause 55.

Objections to Jurisdiction.

55. In any proceedings under this Act, the jurisdiction of the Local Land Board, or Court, or Justices before whom the proceedings are had, shall not be ousted on the ground that the case raises any question of title to land, or that the defendant does not reside within the boundaries of the jurisdiction of the Board or Court or Justices before which or whom the proceedings are had: Provided that the land in respect of which the case arises shall be situated within the boundaries of the jurisdiction of such Board or Court of Justices.

A Rabbit Board shall be taken to be a Local Authority within the meaning and for the purposes of the Justices Enabling Act of 1872.

Mr. BACON (Brewarrina) moved, "That clause 55 be passed as printed."

Mr. J. M. ATKINSON seconded the motion.

The question was put to the meeting and carried.

Clause 56.

Proceedings before Local Land Boards.

56. In any proceedings which under this Act may be had before a Local Land Board for the determination of any contribution, value, or other sum of money (not being an amount payable under any rabbit rate or as compensation by a Rabbit Board), the Local Land Board in determining the sum payable may give time for the payment thereof, and to that end may determine instalments by which the same may be paid, and fix the dates on or before which such instalments shall respectively be paid.

Where any proceedings under this Act are had before a Local Land Board an appeal or reference shall lie to the Land Appeal Court; but if no appeal or reference is made the determination or decision of the Local Land Board shall be final and conclusive.

The provisions of the Crown Lands Acts regulating proceedings before Local Land Boards, and upon appeals and references to the Land Appeal Court under such Acts shall, as far as practicable, be applied to proceedings, appeals, and references under this Act; and for the purposes of proceedings under this Act, the Land Appeal Court and Local Land Boards and the respective members and officers thereof shall have the same authorities and powers as are conferred by the Crown Lands Acts for the purposes of proceedings under the said Acts, and in addition thereto the Land Appeal Court and a Local Land Board shall have power to make such orders as to the costs of any proceedings before the Local Land Board as may appear to be just.

Mr. LESLIE (Forbes) moved, "That clause 56 be passed as printed."

Mr. DAVIES (Gunnedah) seconded the motion.

The question was put to the meeting and carried.

Clause 57.

Provision for giving of notices.

57. Any notice given under or for the purposes of this Act, or any Regulation made thereunder, may be given in any one of the following ways:—

Personally to the person to whom the notice is addressed.

By letter sent through the post and directed to the last known place of abode or of business in New South Wales of the person to whom the notice is addressed.

By advertising the same twice at least in some newspaper circulating in the district in which the lands the subject of such notice are situate, an interval of a week or more being allowed to elapse between such advertisements: Provided that notice shall only be given as last aforesaid when the whereabouts, or the last place of abode or of business in New South Wales, of the person to whom such notice is addressed cannot be discovered by the person issuing such notice.

And any notice required by this Act to be given to the owner or the occupier (as the case may be) of any holding or land, shall in cases where several persons are the owners or the occupiers thereof, be duly given if given to one of such owners or occupiers as the case may be.

Mr. ALISON (Canonbar) moved, "That in line 43 the word 'registered' be inserted before the word 'letter.'"

The Honorable RUPERT CARINGTON (Jerilderie) said it would be too expensive.

Mr. FLANAGAN (Gunbar) seconded the resolution, as he thought that this would be the readiest way of proving delivery.

Mr. BACON (Brewarrina) supported it, and said that in a former Act a registered letter was required as proof of the service of the notice.

The amendment was put to the meeting and carried.

Clause 57, as amended, was put to the meeting and carried.

Clause 58.

58. For the purposes of any proceeding under this Act, the description of any holding or lands need not be a description by metes and bounds, but shall be sufficient if it make such reference to the holding or land either by name, situation, boundaries, or otherwise, as to allow of no reasonable doubt as to what holding or land is referred to.

Mr. BACON (Brewarrina) moved, "That clause 58 be passed as printed."

Mr. ALISON (Canonbar) seconded the motion.

The question was put to the meeting and carried.

Clause

Clause 59.

59. Where the name of the owner of any holding is unknown to any person giving notice or taking proceedings under this Act, any notice required to be given may be addressed to the owner as such without mentioning his name, and any order or decision may in like manner be made or given against the aforesaid owner as such.

Mr. CAMERON (Fvanhoe) proposed, "That clause 59 be passed as printed."
Mr. VABCOE (Hillston) seconded the motion.
The question was put to the meeting and carried.

Clause 60.

Moneys charged upon holdings.

60. Whenever by any section of this Act, any sum of money is expressed to be charged upon any private holding or land, any person thereafter becoming the owner of such holding or land shall be affected with notice of such charge, and shall be liable to pay the sum so charged or so much thereof as may for the time being be unpaid as if he were the person originally liable; but nothing herein contained shall operate to determine the liability of any person originally or previously liable.

Whenever any sum of money is charged upon any private holding or land, and any portion of such holding or land is detached from the residue thereof by subdivision, withdrawal, or otherwise howsoever, the portion so detached shall be charged with a ratable part of the aforesaid sum.

Mr. OAKDEN (Cobar) moved, "That in line 16 'private' be struck out, and also in line 23."
Mr. WILKES (Broken Hill) seconded the motion.
The question was put to the meeting and carried.
Mr. LESLIE (Forbes) moved, and Mr. OAKDEN seconded, "That the clause as amended be adopted."
The question was put to the meeting and carried.

Clause 61.

Power to raise money by mortgage.

61. It shall be lawful for any owner of a holding who holds the same as mortgagee to add to the mortgage debt any sums expended by, or recovered from, him for the erection or repair, or as a contribution towards the cost of the erection or repair of any rabbit-proof fence upon, near, or for the benefit of such holding; and it shall be lawful for any trustee of a holding to raise the sums required or recovered for any such purpose by mortgage of such holding, in the same way as if a power to mortgage had been contained in the instrument creating or declaring the trusts thereof.

Mr. ATKINSON moved, "That clause 61 be passed as printed."
Mr. LESLIE (Forbes) seconded it.
The question was put to the meeting and carried.

Clause 62.

Power to make Regulations.

62. Whenever in any section of this Act the expression "prescribed" is used in connection with any matter, and whenever in any section of this Act "Regulations" are referred to, the Governor may, in every such case, frame regulations for the purpose of giving effect to the provisions of such section. And for the purpose of carrying this Act into full effect generally, the Governor may make Regulations which may provide for the enforcement thereof by penalties not exceeding, in any case, ten pounds, and shall, upon being published in the *Gazette*, be valid in law: Provided that a copy of every such Regulation shall be laid before both Houses of Parliament within fourteen days from the publication thereof, if Parliament be then in Session, or otherwise within fourteen days after the commencement of the next ensuing Session.

Mr. LESLIE (Forbes) moved, and Mr. CAMERON seconded, "That clause 62 be passed as printed."
The question was put to the meeting and carried.
The CHAIRMAN then adjourned the Conference until 2 o'clock.

Clause 5.

The question of recommittal of clause 5 was put and carried.

Mr. ALISON (Canonbar) then moved for Mr. A. Brown the following amendment, "That the franchise for the Pastures and Stock Protection Boards be on the following basis:—

10,000 to 20,000 sheep	3 votes.
20,000 ,, 30,000 ,,	4 "
Above 30,000 ,,	5 "

He said that clause 5, as moved by the Honorable Rupert Carington, provided that the Pastures and Stock Protection Boards should be the Rabbit Board for the district, and that the working of the Rabbit Act be placed in the hands of the Pastures and Stock Board. The next sentence went on to say that the Crown might be represented on those Boards in proportion to the revenue paid by them as assessment to the Rabbit Destruction Fund. Now he understood that later on they had substituted for that the proposition that the Government should nominate one member. As a consequence the following words should be struck out, "the Crown may be represented on the Stock and Pastures Protection Boards in proportion to the revenue paid by them as assessment to the Rabbit Destruction Fund."

The CHAIRMAN then put the question of striking out these words, as it was a necessary consequence of having passed the resolution that the Government should nominate a member, and it was carried.

Mr.

Mr. ALISON (Canonbar) then moved Mr. A. Brown's motion.

The CHAIRMAN said he would like to point out that holders of 40,000 sheep and over were already given five votes under clause 5. He thought it would be better to fix the franchise from the beginning if they were going to alter it at all.

On resuming after lunch Mr. A. Lakeman took the chair at 2:20 p.m.

Clause 4.

Rabbit Districts.

4. For the purposes of this Act, New South Wales shall be divided into Districts, hereinafter referred to as Rabbit Districts.

The Districts into which New South Wales may from time to time be divided for the purposes of the Diseases in Sheep Acts shall be Districts for the purposes of this Act, but the operation of this provision shall be subject always to the powers next hereinafter conferred on the Minister.

The Minister may, by notification in the *Gazette*—

- (a) declare that any Borough or Municipal District shall form a Rabbit District; or
- (b) combine two or more Sheep Districts wholly or in part into one Rabbit District; or
- (c) create Rabbit Districts without reference to the boundaries of any Sheep District; or
- (d) alter or modify the boundaries of any Rabbit District.

Any such notification shall operate and take effect as from the date thereof, but may by notification be corrected, modified, or revoked.

Mr. LESLIE (Forbes) moved the recommittal of clause 4 with a view to insert "declared rabbit infested" in line 13 after the word "be".

The question of recommittal was put and carried.

Mr. LESLIE (Forbes) then moved, "That the words 'declared rabbit infested' be inserted in line 13 after the word 'be'".

Mr. FREEMAN seconded the insertion of those words.

Mr. ATKINSON opposed the motion.

Mr. T. BROWN, M.L.A. (Budgerabong), said he would like to know whether it would be desirable to declare the whole of the Colony to be rabbit infested. There was a large portion of the Colony in which there were no rabbits. Powers should be reserved to declare certain districts infested, but he could not see the force of declaring the whole Colony infested, when only a little more than a half was really infested.

Mr. LESLIE's (Forbes) motion was put and carried.

Clause 4, as amended, was put to the meeting and carried.

Clause 5.

Mr. ALISON (Canonbar) on behalf of Mr. A. Brown moved the recommittal of this clause with a view to amend the franchise.

From 5,000 to 20,000 sheep	...	...	...	...	3 votes.
" 20,000 " 40,000 "	"	"	"	"	4 "
Over 40,000 sheep	...	...	...	...	5 "

Mr. BROOKE (Boggabri) said he would second Mr. Alison's amendment.

Mr. SIDES (Hay) seconded Mr. T. Brown's amendment.

Mr. ALISON (Canonbar) said that it had been decided previously that 3,000 sheep should have two votes and Mr. Brown's amendment would alter that. He did not think that that was right, it was out of order.

The CHAIRMAN said that he could not accept Mr. T. Brown's amendment in that form. Strictly speaking, it was out of order.

Mr. T. BROWN, M.L.A. (Budgerabong), then moved, "That the voting be on the following basis:—

250 to 3,000 sheep	...	...	...	...	1 vote.
3,000 " 5,000 "	"	"	"	"	2 votes.
5,000 " 20,000 "	"	"	"	"	3 "
20,000 " 40,000 "	"	"	"	"	4 "
Over 40,000 sheep	...	...	...	...	5 "

Mr. LESLIE (Forbes) moved an amendment, "That the franchise be as follows:—

250 to 3,000 sheep	...	...	...	...	1 vote.
3,000 " 10,000 "	"	"	"	"	2 votes.
10,000 " 20,000 "	"	"	"	"	3 "
20,000 " 30,000 "	"	"	"	"	4 "
30,000 " 40,000 "	"	"	"	"	5 "
40,000 " 50,000 "	"	"	"	"	6 "
50,000 " 60,000 "	"	"	"	"	7 "
60,000 and over...	...	...	...	...	8 "

Mr. CUDMORE (Wentworth) seconded it.

Mr. LESLIE's (Forbes) amendment was put, and the voting was equal, 15 to 15.

The CHAIRMAN then took a second vote which resulted in Mr. Leslie's amendment being carried by 18 votes to 16.

Mr. ALISON (Canonbar) moved, "That lines 42, 43, 44, 45, 46 and 47 of the original Bill reading as under:—'A Rabbit Board shall, within such time as may be prescribed, appoint one of its members to be Chairman thereof, and if such Board shall fail to appoint a Chairman the Governor may appoint one of such members to be the Chairman of such Board; and the Chairman and other members shall be entitled to receive, out of the revenues of the Board, such fees as may be prescribed,'—be reinserted."

Mr. BAYLIS (Narrandera) seconded the motion.

The CHAIRMAN then put the question, and it was carried.

Clause

Clause 33.

Mr. LITTLE (Bullock Creek North) moved that clause 33 be recommitted with a view to inserting the word "thirty-six" in lieu of "forty-two" in line 34.

The recommittal was carried.

Mr. LITTLE (Bullock Creek North) then moved that "thirty-six" be inserted instead of "forty-two," and said his reason was that since they had fixed the width of the netting they had reduced the size of the mesh and this had made it very expensive. There was no reason why they should put up the extra 6 inches of width when it was only required in certain places such as where there were watercourses and rocky places. In these cases it would take 3 feet of extra width.

Mr. McGRATH (Mossgiel) said that if it were less than 42 inches it would be useless. The rabbits would jump it.

Mr. BAYLIS (Narrandera) said that in the Narrandera district the first that he put up was 36 inches and it had had to be made higher. He himself had seen rabbits jumping up and climbing over the 36-inch netting.

Mr. CUDMORE (Wentworth) said his experience had been the same. Leaves blew up against the fence and sand accumulated, and it was almost useless. If a fence were only 36 inches high it was so low that the rabbits could climb over easily.

Mr. ALISON (Canonbar) supported Mr. Little. In his experience he had never known a rabbit jump over a 36-inch wire netting. He had never heard of it before. They were there to vote a minimum. There was nothing to prevent the people from putting up 5 feet if they liked. They had to make a legal minimum. That was sufficient care of the individual's interest. They should not compel those who were not desirous of having a 42-inch netting to put it up. In many instances there were wires just above the netting which would prevent jumping over. This extra 6 inches would mean enormous expense, and they ought to think seriously before doing it.

Mr. SIDES said he quite agreed with Mr. Alison. He had several miles of 3-foot netting up surrounding crops. It had been up for years, and he had never known a rabbit to go over. While $\frac{1}{2}$ -inch netting at that height was better than 5 feet of 1 $\frac{1}{2}$ -inch, if 42 inches were made the legal minimum it would be a real hardship to many people.

Mr. DAVIDSON (Condobolin) supported Mr. Little. He thought 36 inches was quite sufficient.

Mr. BRETT (Urana) said that from his experience a 36-inch fence would be simply useless. The rabbits would jump over it in hundreds.

Mr. ROSS (Hume) opposed the motion to introduce 36-inch netting. He had seen them jump over it without touching it at all. He had had experience with both widths, and considered that anything under 42 inches would be perfectly useless.

Mr. BOLTON (Wagga) said they were to propose the most effective way of dealing with the rabbit question, and not to do anything in the way of cheeseparing, and say "possibly" a rabbit would not jump over. They must arrive at something thoroughly effective in every way.

Mr. DILL (Hay) said he could vouch for it that many of the gentlemen present had seen rabbits jumping over 36-inch fences. He had seen them not once, but often.

Mr. ATKINSON said that now that the rabbit stories were badly ousting the snake yarns, he would say that he had had experience with both widths, and his conclusion was that the 36-inch fence was useless. He had taken it down and replaced it with 42-inch, because the rabbits used to go over it.

Mr. LITTLE (Bullock Creek North) said he thought there must be something of the opossum about rabbits that climbed over fences as some gentlemen had said they did.

The CHAIRMAN then put the question of inserting "thirty-six" instead of "forty-two," and the voting was equal, 15 to 15.

On the vote being taken again Mr. Little's amendment was lost by 17 votes to 16.

Mr. ALISON (Canonbar) moved that in line 35 the word "seventeen" be reinserted in place of the word "eighteen," which had been inserted by amendment. He said that over the whole of Victoria and Queensland and New South Wales the gauge was 17, and although he was anxious to make the netting as cheap as possible and the minimum as low as possible, he was inclined to think that they had gone a little too far in deciding for the 18 gauge.

Mr. LESLIE (Forbes) seconded Mr. Alison's motion. He said if 18 gauge were the minimum they would compel a man adjoining to pay for half a fence in which he did not believe, and he thought the man who had to pay had a right to be considered.

The question was put and carried.

Clause 41.

Mr. ATKINSON moved the recommittal of clause 41, with a view to cut out subsections (a) and (b) with a view to the insertion of a fresh clause. The question of recommittal was put and carried.

Mr. ATKINSON then moved, "That subsections (a) and (b) be struck out, and the following inserted:—(a) A private rabbit-proof fence forms a common boundary fence between private and public lands whether erected before or after the passing of this Act; and (b) Particulars of the said fence shall be furnished to the Minister."

Mr. LITTLE (Bullock Creek North) seconded it.

The question was put to the meeting and carried.

Mr. J. FLANAGAN (Gunbar) moved, "That the following be inserted as a new clause:—'A small group of land owners, say five or more, may form their land into a sub-rabbit district, and have full management and control of same for the purposes of the Rabbit Act.'"

Mr. T. BROWN, M.L.A. (Budgerabong), seconded it.

Mr. ROSS (Hume) thought that was dangerous. He did not see why four or five small holders had the right to a district alone more than one large holder.

Mr. ATKINSON did not think it would be possible to make this provision unless they had their own little Stock and Pastures Board to themselves.

The question was put and lost.

Mr. A. L. P. CAMERON (Ivanhoe) moved, "That a new clause be introduced providing that any Rabbit Board be empowered to borrow moneys for the carrying out of this Act, such moneys not to exceed in the whole the revenue of the Board for three years."

Mr.

Mr. ALISON (Canonbar) rose to a point of order. They had decided the previous day that clause 25 should be struck out, and this really proposed to reinsert it.

Mr. M'GRATH (Mossgiel) seconded the resolution.

The CHAIRMAN then ruled it out of order.

The Hon. R. CARLINGTON (Jerilderie) then moved, "That the member of the Rabbit Board nominated by the Governor shall not be entitled to act as a member of either the Sheep or the Pastures and Stock Board unless he be duly elected by the existing franchise."

Mr. BROOKE (Boggabri) rose to a point of order.

The CHAIRMAN then ruled the Hon. Rupert Carington's motion out of order.

The Preamble.

A Bill to make better provision for the destruction of rabbits; for the erection and maintenance, and to provide for contributions towards the expense of rabbit-proof fences; to constitute and define the powers and duties of Rabbit Boards; to enable rates to be imposed; to amend the Crown Lands Acts; and for other purposes.

The CHAIRMAN then suggested that the Preamble of the Bill, which had been postponed, should be left to the Draftsmen to deal with.

Mr. ALISON (Canonbar) moved, "That the Preamble be postponed."

Mr. LESLIE (Forbes) seconded the motion, and it was put to the meeting and carried.

Clause 1.

BE it enacted by the Queen's Most Excellent Majesty, by and with the advice and consent of the Legislative Council and Legislative Assembly of New South Wales in Parliament assembled, and by the authority of the same, as follows:—

1. This Act may be cited as the "Rabbit Act of 1896"; and any references in the Animals Infectious Diseases Act of 1888 to the Rabbit Nuisance Act of 1883 shall be read as references to this Act.

The Rabbit Act of 1890, together with all regulations made thereunder, is hereby repealed.

The repeal hereby enacted shall not of itself—

- (i) abate, prejudice, or affect any proceeding now pending in any Court or before any Local Land Board or other authority;
- (ii) prejudice or affect any proceeding, matter, or thing lawfully done or commenced or contracted to be done under the authority of the said Act or any regulation made thereunder;

and provided always that notwithstanding such repeal—

- (a) all offences committed or penalties incurred against or under the said repealed Act, or any regulation made thereunder, may be respectively tried, punished, enforced, and dealt with as if this Act had not been passed; and
- (b) all rights accrued and obligations incurred under or by virtue of the said repealed Act or any regulation made thereunder shall, subject to any express provision of this Act in relation thereto, remain unaffected by such repeal.

Mr. ALISON (Canonbar) moved that Clause 1, as printed, be passed.

Mr. MOORE (Goodooga) seconded it.

The question was put before the meeting, and it was carried.

Clause 2.

Interpretation of Terms.

2. In this Act, unless the context otherwise requires:—

"Crown Lands Acts" means the Crown Lands Acts of 1884, 1889, and 1895, together with any Acts passed or to be passed for the amendment of the said Acts or any of them.

"Diseases in Sheep Acts" means the "Diseases in Sheep Act of 1886," together with all Acts passed or to be passed for the amendment thereof.

"Governor" means the Governor, with the advice of the Executive Council.

"Holding" means any land or aggregation of lands constituting one property, whether held under the same title or different titles or under titles of different kinds, together with all proclaimed, reserved, or reputed roads intersecting or bounding the same.

"Local Land Board" means the Local Land Board of the Land District in which the land in question is situate, or any Local Land Board duly appointed to act in place of such Board as aforesaid.

"Minister" means the Secretary for Lands for the time being, or any other Minister from time to time charged with the administration of this Act.

"Occupier" means the owner if he resides on the holding, but if not, his resident manager.

"Owner" means—

- (a) the person registered as the holder of any lease or license, or promise of lease or license from the Crown; or
- (b) The person registered as the holder of any purchase, whether conditional or otherwise, from the Crown; or
- (c) the applicant for a homestead selection whose application has been confirmed; or
- (d) The person entitled at law to an estate of freehold in possession in any land granted by the Crown for private purposes; or
- (e) the person in whom is vested any land taken or appropriated under authority of any statute authorising land to be taken or appropriated for the purpose of any private undertaking.

"Prescribed"

- "Prescribed" means prescribed by this Act or any regulation to be made thereunder.
 "Private holding" means a holding consisting of lands which are not public lands as hereinafter specified.
 "Private lands" means lands which are not public lands as hereinafter specified.
 "Public land" means—

- (a) land vested in the Crown which is not the subject of any lease or license, or promise of, or agreement for, any lease or license under the Crown Lands Acts or under any other Act authorising the occupation or use of land vested in the Crown, and which is not the subject of any contract for the sale thereof; or
 (b) any land which is the subject of any dedication or permanent reservation for public uses or purposes, not being for a road, whether the said land has been granted for the said uses or purposes or not, and which is not for the time being lawfully held under any lease or license, or promise of, or agreement for, any lease or license.

The CHAIRMAN then suggested that Clause 2 be left to the draftsman to make the interpretations according to the Bill.

Clause 2 was therefore postponed.

Clause 3.

Parts of the territory may be exempted from certain provisions.

3. The Governor may, by proclamation in the *Gazette*, exempt any part or parts of New South Wales to be specified in the proclamation from the operation of the provisions contained in Parts I and II hereof; but any such proclamation may by proclamation be corrected, modified, or revoked.

The CHAIRMAN said they had passed a resolution to the effect that New South Wales should be declared rabbit infested, and this clause 3 gave the Governor power to declare some districts not infested. These two resolutions were therefore conflicting. He thought they ought to cut out clause 3 if the Conference thought that the whole of New South Wales should be under one law without any exemption anywhere.

Mr. ALISON (Canonbar) said it might be desired to declare towns, villages, and boroughs, and so on, to be exempted from the operation of this Act.

The Hon. RUPERT CARINGTON (Jerilderie) thought the clause might read in this way, "the Governor may, by proclamation in the *Gazette*, exempt any part or parts of New South Wales from being declared rabbit infested." He thought it was a most valuable power to give the Governor. It was absurd to declare George-street, Sydney, rabbit infested.

Mr. FREEMAN said he would support Mr. Alison in this matter; it was much better to protect those portions of the Colony that were not at present infested from being open to become infested.

Mr. ALISON (Canonbar) said he wanted to draw the attention of the Conference to the fact that the two clauses were not in consonance. He moved "that the Governor may, by proclamation in the *Gazette*, exempt boroughs, towns, and villages from the operations of the provisions contained in parts 1 and 2 hereof."

Mr. BOLTON (Wagga) thought this Conference should make every feasible suggestion for the suppression of the rabbits. It was just possible that the rabbits might be as thick in a municipality as anywhere else. Mr. Carruthers had said that in Broken Hill they were so thick that the dying rabbits got under the school and it had to be closed. If they removed such a place from the operations of the Act and declared it uninfested they would be declaring an untruth.

Mr. SIDES (Hay) said it would be a mistake to exclude municipalities and towns. He had been in towns very early in the morning, and had seen as many rabbits about the stables as out in the fields.

Mr. HAYES said it was clear that if the Conference had passed a resolution that the whole of New South Wales be declared rabbit infested this clause should be struck out. As far as the municipalities were concerned everyone who knew the country knew that they were just as much infested as anywhere else. The town of Hay had as many rabbits as any other part of that district.

Mr. ALISON (Canonbar) said he had been misunderstood. He only wanted to point out that the two motions were contradictory. He did not mind if it was left one way or the other.

Mr. T. BROWN, M.L.A. (Budgerabong) said it ought to stay as it was. The Minister ought to have power to except certain portions.

Mr. DILL (Hay) proposed that clause 3 be struck out.

Mr. FREEMAN seconded.

The question was put before the meeting, and carried by 25 votes to 8.

Clause 25.

Mr. CAMERON (Ivanhoe) moved the recommittal of clause 25.

Mr. CUMMING (Hillston) seconded the motion.

The question of recommittal was put and carried.

Mr. CAMERON (Ivanhoe) proposed that clause 25 be struck out, and the following be inserted:—
 "That any Rabbit Board be empowered to borrow moneys for the carrying out of this Act, such moneys not to exceed in the whole the revenue of the Board for three years." He said that if they eliminated from the powers of the Board the power to borrow money they would thoroughly emasculate the Bill and make it unworkable. The Rabbit Board must be on the same lines as a Municipal Council. Without giving them the power to borrow money they would be practically useless. With regard to the part of the clause naming three years as the limit, he was not particular on that point. They could amend that in anyway they chose. They all knew perfectly well that the initial expenses of a Rabbit Board or any other Board were very much greater than they had any idea of. The Government would have power to buy wire-netting, and to advance it to those who required it under this Bill, but it was possible that that
 clause

clause would be rejected by Parliament, and they must make provision in that clause in case it was rejected. They should endeavour to make the suggestions which they drew as acceptable to the country and the Minister and themselves as it was possible to make them. If they objected to the power to borrow three years rates, let a vote be taken as to whether it should be three, two, or one. If the Conference rejected this clause he would endeavour to get what he wished put in the Bill in another form, that is, with two years inserted, and if that were rejected, then with one year; and then if that were rejected, and they adhered to the decision that was given a day or two previously, then he would feel that they had in a measure damned the Bill, and, as Mr. Flanagan had said, they might as well go home.

Mr. BOLTON (Wagga) said he quite agreed with the last speaker. He said that if war were declared against anyone else there would be a large sum of money voted for it, and he said that a large sum of money should be voted to wage war against the rabbits. It appeared to him that they must resist the rabbits at any expense, and should put forth every effort by main force to keep them down. He hoped the operations of this Act would be so successfully carried out that they would have no great call or necessity for borrowing later on, but now they required a large sum to take proper measures. He had great pleasure in seconding Mr. Cameron's motion.

Mr. FLANAGAN (Gunbar) said he would support Mr. Cameron's motion. They were giving certain powers to deal with the rabbits, and one of the powers conferred was that of erecting barrier fences. Now they knew very well that they could not erect barrier fences without money, and rates could only be collected once a year, and one year's rates, he was certain, would not erect much barrier fence. Therefore, if they were going to deal with this national nuisance, they would have to confer a power on the Board to borrow money.

Mr. J. HAYES, M.L.A. (Deniliquin), said that this was a matter which he thought absolutely necessary. Many of the Boards would find it necessary to put a ring fence round their district, and this would cost money. The Conference would therefore act wisely in carrying this motion unanimously.

Mr. CUMMING (Hillston) said that he thought that they were overlooking the fact that the initial expense would be the heaviest of all. They must leave something to posterity. It would be quite safe to give the Boards this power.

Mr. ALISON (Canonbar) rose to oppose the motion. He really thought that Mr. Cameron's allusion to the municipalities was a most unfortunate one, because up to the present moment most of the municipalities in this Colony were bankrupt.

A Member: That is their own fault.

Mr. ALISON (Canonbar) said he thought it might be the Rabbit Board's own fault, too. They might borrow four years' revenue, and they might lay such a burden on the Rabbit Boards that they would have nothing to spend on rabbit destruction for a long time. He really thought they would be acting wisely if they refrained from conferring this power of borrowing. They did not know how far it might be extended if they left this part of the clause in as for one, two, or three years. It might be desirable to leave it in for four years. Very few of them would vote for four years. If they passed the clause allowing the Boards to borrow, as sure as fate four years would be inserted when in Parliament. From the experience of the past history of the Colony of bodies being allowed to borrow, he thought if they had not got the experience now that it was exceedingly dangerous they did not profit by their experience.

Mr. WILKES (Broken Hill) said that they had affirmed the principle of the Boards being elected from year to year, and why should they tie down the Boards in this way? This year the Board would borrow, and next year's Board would be tied down hand and foot.

Mr. ROSS (Hume) said he would oppose the reintroduction of this clause. He thought that it was most dangerous. He considered the main object of the Stock Boards under the Rabbit Bill would be to see that private individuals killed the rabbits themselves. He did not want the Stock Boards to kill rabbits. All the Boards were to do was to see that private individuals killed the rabbits themselves. If they gave the Boards power to borrow they would do it in the most extensive way.

Mr. CAMERON (Ivanhoe) said the case had been instanced by Mr. Alison of the difficulty that had arisen with regard to municipalities borrowing money. If the municipalities had already borrowed too much money that was their look-out, and their own fault. And Mr. Alison's argument, as far as he could see, would apply to any Board in any part of the world borrowing money. Any Board in the world might get themselves into difficulties by borrowing too much money. But they did not necessarily get themselves into difficulties, and notwithstanding the difficulties that the municipalities had got themselves into, nobody in that Conference supposed for one moment that corporate bodies should not have the power to borrow money for some time or other. He was not particular whether it was two years or three years, but he did say that unless they had that power it would be impossible to carry on the business of the Rabbit Board. He thought that Mr. Hayes had put it clearly before the Conference that that Board could not carry on without some borrowing powers. If members had not made up their minds which way they would vote, he implored them to vote to give the Boards some borrowing power.

The question was put and lost by 25 votes to 13.

Mr. ALISON (Canonbar) moved that a committee be appointed to confer with Mr. Alexander Oliver, with a view to drafting the proposals of the present Conference so as to bring them into harmony with one another and with other Acts. That the said committee consist of the Chairman, the Honorable Rupert Carington, Mr. J. M. Atkinson, Mr. Bacon, Mr. T. Brown, M.L.A., Mr. Leslie, Mr. Cudmore, Mr. Freeman, Mr. Flanagan, and the mover, two to form a quorum.

Mr. HEBDEN (Wanaaring) proposed that the resolutions passed by the Conference be handed to Mr. Alexander Oliver, and that he be asked to draft a Bill on those resolutions, and that there be no committee.

Mr. WILKES (Broken Hill) supported Mr. Hebdon's motion, and said that if the resolutions were not clear enough to be understood by Mr. Oliver, then it was certain that the committee could not explain them.

Mr.

Mr. T. BROWN, M.L.A. (Budgerabong), suggested that the Conference should adjourn until Wednesday morning, and that the Chairman should interview Mr. Alexander Oliver, and report to the Conference, on Wednesday morning, how long it would take Mr. Oliver to draft the Bill. They could then come to a decision whether a committee was required or not.

The Chairman then read the following letter from the Secretary of the Board for Exports:—

Department of Mines and Agriculture, Board for Exports, 40, Young-street. Sydney, 15 March, 1897.

Sir,

By direction of the Honorable the Minister for Mines and Agriculture, I have the honor to request the indulgence of your Conference, before closing the session of to-day, in order to lay before the gentlemen present the action being taken by my Board in connection with the export of hares and rabbits.

I shall be in attendance for that purpose.

I have, &c.,

JAS. STEPHENSON,

Secretary.

A. Lakeman, Esq., Chairman, Rabbit Conference.

Mr. T. BROWN, M.L.A. (Budgerabong), said that this was an important matter, and the Secretary of the Board for Exports would be in a position to give them valuable information. He would move that the Conference allow Mr. Stephenson the opportunity of addressing them at the conclusion of the business on Wednesday.

Mr. Brown's motion was carried unanimously.

The Chairman then adjourned the Conference until Wednesday morning at 10 a.m.

SEVENTH DAY—17TH MARCH, 1897.

Mr. Allen Lakeman took the Chair at 10 a.m.

The minutes of previous meeting were read and confirmed.

The CHAIRMAN then reported that he had seen Mr. Oliver; but he could not have the Bill ready until, at the earliest, the beginning of the following week. It would be a rather difficult matter to draft.

Mr. BAYLIS (Narrandera) said, that as many of the delegates were anxious to get home, and it was no use their remaining for another week, he would propose that a sub-committee be formed of five gentlemen to confer with Mr. Oliver, and receive the Bill from him, and present it to the Minister, and to explain the intentions of the Conference both to Mr. Oliver and to the Minister if necessary. He would nominate the Chairman, Mr. Allen Lakeman, together with Mr. T. Brown, M.L.A., the Honorable Rupert Carington, Mr. Alison, and Mr. Bacon as the sub-committee of five to deal with this matter.

Mr. J. M. ATKINSON seconded Mr. Baylis' motion.

Mr. BAYLIS (Narrandera) said that three should form a quorum.

Mr. J. M. ATKINSON thought that one should form a quorum, as it was only a matter of explaining the intentions of the Conference.

Mr. BAYLIS' (Narrandera) motion was then put, and carried unanimously.

The CHAIRMAN then reported that he had received a note from Mr. Alexander Oliver, from which he would like to read them an extract, and which ran as follows:—"I hardly understand what is the intention of the Conference in regard to the constitution of the 'Rabbit Boards.' Referring to clause 5 on the printed amendments—'That for the purposes of the Bill, &c.,'—does this mean that the constitution of the Pastures and Stock Protection Boards is to be altered only for *Rabbit Administration purposes* or *generally* and for all purposes? If the latter, it will be an amendment of the Stock and Pastures Acts, and not of Mr. Carruthers' Bill only. It will, on the other hand, be rather awkward to have the Boards constituted one way for stock purposes, another for rabbits, especially at meetings when business of both kinds is to be transacted."

Mr. ALISON (Canonbar) said he thought the idea, when the clause dealing with that matter was passed, was this, that the Sheep Diseases Directors met and transacted their business, and then the Stock Board met and transacted their business, and then it was the intention he thought, that the Rabbit Directors would meet and transact their business, but they would sit as separate Boards.

Mr. ATKINSON took it that they had to alter the constitution of the Diseases in Sheep Act, as they put in nine men instead of eight. He thought the Government representative would take the Chair on the Rabbit Board and form the ninth man.

The Hon. RUPERT CARINGTON (Jerilderie) said that sitting as they did together there had never been any friction between the Sheep Directors and the Stock and Pastures Directors. They did the sheep business first and the other afterwards. Why should there not be a third section? He did not see that the Government nominee would have any more right to sit as a Sheep Director than the Stock and Pastures Directors had.

Mr. T. BROWN, M.L.A. (Budgerabong), said that this was quite a revelation to him, and to use a hacknied expression, he did not know where he was on this question. The Minister's Bill provided for a separate Rabbit Board, and it went on to provide that the present Stock and Pastures Board might for the purpose of this Bill be constituted a separate Rabbit Board, that Municipalities might be constituted separate Rabbit Boards according to their areas, and the people affected might come in and require a Rabbit Board to be constituted on an elective basis, independently of the Stock Board or of the Municipalities. These were the provisions of the Minister, and that was the constitution that he was supporting. Now every speech that had been made on the occasion of the passing of that clause was in the direction of giving the Stock and Pastures Board the power to administer this Rabbit Act. It was struck out that the Minister should have no power of constituting, on the wish of the people affected, any other Board but the Pastures and Stock Board to do this work. Now he understood from that position that the wish of this Conference was that the administration of this Act, from the top to the bottom, with the exception of the Municipal Councils, should be part and parcel of the work given to the Stock and Pastures Board, and looking upon it from that standpoint, and knowing the large interests that would be affected by it, and seeing that it was not practically with the province of the Stock and Pastures Board as at present constituted,

constituted, he had set himself the task of liberalising the franchise of the Stock Board not for the purpose of constituting out of the Stock and Pastures Board another Board—the Rabbit Board—but for the general purposes of the Stock and Pastures Act, and that was what he had pointed out to the Conference all along, that to carry out their idea they would have to amend the Pastures and Stock Act and the Diseases in Sheep Act in order to give the rest of the taxpayers a franchise. That would not be necessary if another Board were established to administer this Rabbit Act. Now they had set to work to liberalise the franchise for the Stock and Pastures Board, and they had done so in such a manner, he was inclined to think, that they had liberalised the apex and curtailed the base, and that when it came before Parliament the whole edifice would topple over. They had liberalised the franchise reducing the minimum to 250 sheep, and increasing the voting power from four to eight. Now, if that did not apply to the other functions of this Stock and Pastures Protection Board, in so far as that dealt with Stock and Pastures matters, and Diseases in Sheep matters, then on this basis they were constituting another Board with a different franchise, and it did not follow that the men elected on the one franchise would be the men who would be chosen on the other. What he wanted to know was this: What was the position this Conference intended to take up? The whole thing was fraught with difficulties. The Conference had set out with the idea of placing the whole of the administration of this Bill in the hands of the Stock and Pastures Board, as constituted for Stock and Pastures purposes, but as they had gone on they had lost that idea, and had been working with a view of establishing a separate Board within the Stock and Pastures Board for purposes of administering this Bill. (Members: No, no.) If that was not so, then why was it objected that the Government nominee should not sit upon matters affecting any business but the rabbit business? Would he not be a member of the Stock and Pastures Board? If this combination were not given, his contention was, that they were not placing the administration of this Bill under the Stock and Pastures Board, but they were placing it under a separate Board, with a different function. Now they had got themselves into this very difficult position, and it seemed to him that he was borne out in his contention by Mr. Oliver. Mr. Oliver could not say what was the intention of this Conference. It might be, looking at it from one standpoint, that the Stock and Pastures Board were to administer this Act. But when they came to other provisions in this Bill he could only come to the conclusion that the Stock and Pastures Board as a Stock and Pastures Board, and might not be, was to administer the Act. He thought the Conference should rescind the whole of the resolution, and go back to the Minister's proposal. The Stock Boards would be the administering machinery, and it would only be where the people came and asked for some other form of administration to be set up that it would be set up.

The CHAIRMAN said that he would rule any discussion on the matter out of order. Why he read this letter was to show the difficulties which Mr. Oliver had, and the difficulties that the Committee would have, and he thought it just as well to take the sense of the large body of the Conference, as they were there, as to what really was the meaning of that particular section of the Act which they had passed, whether the Stock Boards were to be constituted as a separate Board, or, as Mr. Brown put it, whether the Rabbit Boards were to be handed over to the Stock Boards, and the Stock Boards were to be constituted with a new franchise.

Mr. ALISON (Canonbar) said that he thought Mr. Brown had altogether mistaken what had been said in the morning. The franchise under the Sheep Diseases Act would be altered. The Constitution of the Stock and Pastures Board would be altered. In accordance with their resolutions those people who were Directors under the Sheep Act and under the Pastures and Stock Act would be the Rabbit Board under this Bill for the purposes of this Bill, and then there would be the Government representative who for the purposes of this Bill, for the purposes of the Rabbit Act, would be called in. The Government did not provide any funds under the Stock and Pastures Act, and therefore they should not have a man representing them on the Pastures and Stock Board. It was their intention that when rabbit business was to be discussed the Government representative should enter the room and discuss it. They had not altered anything or proposed to alter anything except to liberalise the franchise. He did not know that he altogether approved of it himself, but it was done and they could not alter it. They did not propose that there should be a separate election for the Rabbit Board. There would be one election for the Sheep Directors and one election for the Pastures and Stock Board Directors, and the whole of these people formed a Rabbit Board, with the addition of one man for the Rabbit Act, and the Rabbit Act alone, to represent the Government.

The CHAIRMAN then said that he thought this was one of the difficulties that Mr. Oliver would have, and he thought that what Mr. Alison had stated simplified the matter, and it should be put to Mr. Oliver that the Pastures and Stock Board were to be elected on the franchise of the new Rabbit Board, so to say, but that they would conduct their own business as a Stock and Pastures Board for themselves, and the Diseases in Sheep Act Directors would conduct their business, and the Rabbit Board would be conducted by the nine members. If that was what the Conference meant he would be glad to have them vote on the question, and he would convey their decision to Mr. Oliver.

The Chairman then took a vote as to whether this view was the view of the Conference, and it was carried.

Mr. CUMMING (Hillston) moved that the following resolution be pressed upon the consideration of the Minister "That the Government should continue to offer a substantial reward for a discovery that would tend to entirely destroy the rabbit pest, and ask the Governments of other colonies to also contribute." He thought that this matter was worthy of their consideration. Science no doubt would step in one day and solve the problem, as it had done already in Europe with regard to the silk industry, which had been saved by science, and in America the citrus industry had been saved by science also. He thought that if this succeeded it would save all the trouble of this Bill or any other.

Mr. FLANAGAN (Gaubar) seconded it. He thought it would be a very wise thing if the expenses could be curtailed by some new invention. It would be a foolish thing if they did not ask the Government to keep on offering rewards for inventions that would deal more effectively than they could with the rabbits.

The resolution was then put to the Conference and carried.

Mr. T. BROWN, M.L.A. (Budgerabong), then moved, "That Mr. Stevenson, the Secretary of the Board for Exports, be now allowed an opportunity of addressing the Conference."

Mr. ALISON (Canonbar) seconded, and it was carried.

Mr.

Mr. STEVENSON said he had no intention of detaining them very long. He came there merely by direction of the Board for Exports, and with the consent of the Minister for Mines, to explain to them on what lines the Board for Exports intended dealing with the rabbits and hares of the Colony. Although the rabbits were under the Lands Department, the hares were under the Department of Mines. He supposed that if they had arrived at a cross-breed it would have to be administered by a third department. The Board for Exports had made certain arrangements, based to a certain extent on the lines adopted in Victoria. About two years ago, when Victoria first took up the export of hares and rabbits, more particularly the latter, they sent a few hundreds of carcasses just as an experiment. It was with great difficulty that the merchants were got to take it up. Last year they sent 1,318,000 carcasses to London, besides about 60 per cent. more, rejects; altogether more than $2\frac{1}{2}$ millions of rabbits were destroyed last year under those arrangements. In January this year they sent 183,000 carcasses to London, bringing back a total return of about £7,250. That was instead of having the pest destroyed by letting the carcasses lie on the ground, they were making a commercial article of them. It was proposed to do the same in New South Wales. The Board for Exports had made arrangements for cold storage, and had imported an expert from Victoria to manage the business. The proposal was that the Board for Exports would arrange for refrigerating chambers built in Sydney, that local refrigerating stores should be constructed in the country, and cool trucks provided on the railways. The country produce would be brought to Sydney, stowed in the freezing chamber, and packed and exported by the Board. The Board for Exports would find all cases, and the cost of these would be included in the charges. The conditions were that the rabbits should be trapped or snared, killed, gutted, and bled, and the liver and kidneys must be left in the carcass. Care must be taken to keep the furs clean, and this could be done by hanging them over rails in pairs. Cases with a rail from end to end, and holding from fifteen to twenty pairs, were the best for this purpose. The carcasses, immediately on being killed, were to be forwarded to the Export Depot by a quick train. The Government expert would receive, grade, pack, and brand them, and the charge for handling, freezing, and shipping would be $1\frac{1}{2}$ d. per pair, cases included. All sweated, damaged, or unsightly carcasses would be rejected, and must be immediately removed by the owner or his agent. The railway rates for hares and rabbits, in not less than 5 cwt. lots, delivered to the Government Export Depot in Darling Harbour, would be:—

	s.	d.		s.	d.
Up to 50 miles ...	6	0	Up to 200 miles ...	18	8
" 75 " ...	8	6	" 225 " ...	20	0
" 100 " ...	10	10	" 250 " ...	21	5
" 125 " ...	12	11	" 300 " ...	24	2
" 150 " ...	15	0	" 350 " ...	26	11
" 175 " ...	16	10	" 400 " ...	29	6

It might be roughly argued that a ton of railway freight would represent about 140 pairs of hares or 340 pairs of rabbits. That was the position up to the present, and the Minister had arranged that he would go with the expert and Mr. Stevenson, and meetings would be held in the country to speak on this question, and to discuss the matter fully there. A meeting would be held in Bathurst on the following Monday, and in other towns at later dates. Information that might be sent to the Board would be received and carefully attended to. They had all preparations made, and they had no doubt that within a few years they would be able to say that scarcely a rabbit could be seen near a railway line where it could be got to the market.

Mr. CAMERON (Ivanhoe) said that he had listened to Mr. Stevenson's remarks with pleasure, but he considered that the rabbits in New South Wales, or in any part of Australia, should not in any way be regarded as a subject for commercial enterprise. To him the rabbit was a scourge that they ought to stamp out by every means that lay in their power. There was no doubt that all those living within the vicinity of railway lines, or even within 20 miles of them, would benefit very much by this, but those portions of the Colony were insignificant in comparison with the large area which was overspread with rabbits, and he did not think that the Conference should recommend anything of that sort. Let them treat the rabbits as their worst enemy, and let them form no portion of any scheme of commercial enterprise in this Colony.

The Honorable RUPERT CARINGTON (Jerilderie) would cordially support the remarks made by Mr. Cameron. He would go even further; he would give any man six months who froze rabbits for export. He would move a resolution, "That it is inadvisable that rabbits should be made an article of export."

Mr. CAMERON (Ivanhoe) seconded the Honorable R. Carington's motion.

Mr. ROSS (Hume) said he felt, like the Honorable Rupert Carington, very strongly on this matter. He thought the Conference last year had passed a similar resolution. The exportation of rabbits was a thing that should not be encouraged. It would be all very well where there were railways and where the rabbits were not too thick, but where the rabbits were numerous they were not fit for export. And if they were to encourage the export of rabbits—to send them home—it would simply be to encourage the breeding of rabbits. Of course, they knew that where those rabbits were caught, and sent home, was where the country was good and the rabbits not so thick. He thought they ought not to encourage this in any shape or form; for wherever a rabbit factory was established, the rabbits would simply increase rapidly. The Government should let the matter alone.

Mr. SIDES (Hay) said he did not think the Conference came here to make rabbits a commercial commodity. They had come here to devise some means to destroy their worst enemy. It was beyond question that they were their enemy, and if rabbits were to be cultivated, they might as well stop breeding sheep; because, if rabbits were exported and put on the market in London, their sheep would come down in value terribly as the meat supply would be so much increased. He thought they should put their faces totally against cultivating rabbits in this way.

Mr. WILKES (Broken Hill) said that the best argument with regard to this was given to the Minister yesterday on the blackberry question. He showed them that there were a number of people who were living, in a manner, on the blackberries. He said they could not help that; the pest must be got rid of. There was one thing Mr. Stevenson had not pointed out. There was only a certain class of rabbits

rabbits that was good for export. In his district there were tinning works, and during the winter months there were no rabbits good for that purpose, because the does were heavy in young and were, therefore, not fit for export. He would most heartily support the Honorable Rupert Carington's motion.

Mr. FLANAGAN (Gunbar) said that the local authorities should see the rabbits were not being kept for commercial purposes in any locality, and when the power was in the hands of any Stock Board it was their duty to see that the rabbits were not kept for commercial purposes, but he thought they were unnecessarily alarmed, and should not prevent a person alongside a railway fetching in an auxiliary to catch rabbits and do the work for him, sending them to Sydney for export and so giving employment to labour. He certainly thought they should not foster the rabbits but the Stock Boards should not interfere with a private individual if he chose to try to make money out of the rabbits he killed.

Mr. T. BROWN, M.L.A. (Budgerabong), said that this was a most extraordinary development. It seemed to him that some of the members had got so completely hypnotised by the idea that the rabbits were to be destroyed by the Rabbit Boards, that they could not conceive of their being destroyed in any other way and turned to some benefit. Now he thought that what Mr. Stevenson had done was simply to show to the Conference how they might in another way destroy the rabbits. He did not propose that the rabbits should be cultivated for export, he proposed to destroy them and convert them into an article for export. One gentleman announced the extraordinary idea that if they put rabbits on the English market the price of sheep would go down. He did not see if they could turn the rabbits into a profitable product for export, why it could not be done as well as sending all the skins as they did now. They skinned the rabbits and exported the skins, so long as it was profitable to do so, and why should they not export the rabbits? If it would interfere with the value of the sheep he would not mind. It would simply be a matter of the survival of the fittest. It seemed to him to be a most extraordinary stand to pass such a resolution as this. He would propose that Mr. Stevenson be thanked for having given them this address, and he would certainly oppose the Honorable Rupert Carington's resolution.

Mr. ALISON (Canonbar) said that without reflecting on Mr. Brown in any way, he thought the picnic the previous day must have affected him. He had been getting hold of the wrong ideas altogether. They were there to consider how to eradicate the rabbit and they only wanted to put their disapproval on anything that would continue the rabbit. If they made rabbits an article of export they might continue for ever, and they were there to destroy them root and branch. They had brought in all sorts of resolutions to make everybody destroy the rabbit, and it would not do for them to say that they had a contract with the Meat Company to supply rabbits for export. He agreed with the Honorable Rupert Carington, and thought that if the factories were put up it would create vested interests. Their situation was different to that in Victoria. In Victoria they were not more than 60 miles from a port and never far from a railway. That made it more profitable. The last resolution passed by the Conference was to the effect that the Government be asked to renew the reward for a means of destruction. It had been stated that the Queensland Government had discovered that they could propagate chicken cholera so effectually as to destroy the rabbits. He supposed that that was the hope of all of them that something of that kind would come about. But seeing the idea was utterly foreign to them he might say that so far as chicken cholera was concerned M. Pasteur found that where he was beaten on that point was purely that the climatic conditions of western New South Wales were fatal to the virus that he was propagating, and that when it had reached a temperature of 110 the virus was destroyed. However, it might be found that a virus could be cultivated that could stand that temperature.

The Hon. RUPERT CARINGTON (Jerilderie) then said that he would like to preface his amendment by moving, "That the thanks of the Conference to Mr. Stevenson be accorded for having so kindly ventilated his views on the subject." His paper was very interesting and they thanked him very kindly for the discussion, although they did not agree with him.

The vote of thanks to Mr. Stevenson was then carried unanimously.

Mr. STEVENSON said that he must have made himself understood very poorly if he did not convey his meaning that they should use all possible means to stamp out the rabbits, and he had suggested this as one of the means adopted with a considerable measure of success in Victoria. Within a few miles of the railway in Victoria they never see a rabbit. However it was no use to attempt to assist men who would not be assisted, and he could only now have the pleasure of conveying the resolution of the Conference to the Minister, and he had no doubt that the Minister would allow the matter to drop into that obscurity which, perhaps, it should never have been brought from.

The Hon. RUPERT CARINGTON'S (Jerilderie) resolution that it was not advisable that rabbits should be made an article of export was then put and carried.

Mr. W. LAWRY moved the following resolutions:—

1. "That if the present Act is efficiently administered, no fresh legislation is either necessary or desirable."
2. "That the only means of effectually dealing with the rabbit pest is to *make it worth while* for those holding lands under various tenures from the Crown to undertake the cost and trouble of destruction."
3. "That this can best be done by granting such extension of their tenancies, or such other concessions as may be considered desirable, as will not only induce them to wire-net their boundaries, but also to subdivide with wire-netting. Freeholders will, in their own interests, take such remedial measures as they consider advisable to protect their property."
4. "That as the whole Colony is admittedly over-run, the whole Colony should be declared infested, and the many salutary provisions of the present Act be thus brought into operation."
5. "That in the administration of the present Act the Government should give facilities, if possible by Regulations thereunder, for neighbouring owners, lessees, or licensees to obtain prompt remedies by legal action against one another for breaches of the Act; and it should be provided that all Crown lands, in order to prevent the law being a dead letter, should be treated in exactly the same way as those held by private owners."
6. "That barrier fences having proved to be only temporary expedients no taxation be imposed on the sheep farmer for their erection or maintenance,"

7. "That with regard to the unoccupied scrub and inferior lands and resumed areas in the hands of the Crown, the Minister should obtain, if necessary, any special powers required to deal with these areas in a broad and statesmanlike manner in the direction of giving long tenure, with a first charge for cost of improvements approved by the Crown, thus bringing the major part of the lands into productive occupation, making them eventually an asset of value, and causing in the meantime the expenditure of large sums in wire-netting and other improvements, and the consequent employment of large numbers of working men."
8. "That such portions of the above-mentioned lands as are too barren to be utilised in any way, and are found to be dangerous as breeding grounds of vermin, should be fenced off with wire-netting when found to be infested."

Mr. T. BROWN, M.L.A. (Budgerabong), asked the Chairman's ruling as to whether Mr. Lawry was in order in bring in these questions now.

The CHAIRMAN then said that Mr. Lawry would not be in order.

Mr. ALISON (Canonbar) moved, "That Mr. Lawry be heard."

Mr. ROSS (Hume) seconded the motion.

The question was then put, and lost by 13 votes to 10.

Mr. ALISON (Canonbar) moved, "That the hearty thanks of the Conference be accorded to Mr. Allen Lakeman for his services as Chairman." They would all agree that Mr. Lakeman by his keen and quick picking out of the situation had expedited their work in the most astonishing fashion, and he was sure that Mr. Lakeman had enabled the gentlemen present to return to their homes probably a week sooner than any other gentleman.

The vote of thanks was carried with acclamation.

The Conference was adjourned *sine die*.

(No. 1.)

DRAFT of Amended Rabbit Bill embodying the alterations and additions proposed at the Rabbit Conference, together with others consequential thereon, for submission to the Secretary for Lands.

60^o VICTORIÆ, 1897.

A BILL

intituled

An Act for suppressing or checking the Rabbit Pest by means of Local Administration, and by systematic and effective methods; and to make provision in furtherance of, or in connection with, the said purposes.

BE it enacted by the Queen's Most Excellent Majesty, by and with the advice and consent of the Legislative Council and Legislative Assembly of New South Wales in Parliament assembled, and by the authority of the same, as follows:—

1. This Act may be cited as the "Rabbit Act of 1897."

Short title.

2. The Rabbit Act of 1890, together with all regulations made thereunder, is hereby repealed:

Repeal of Rabbit Act of 1890.

Provided that the repeal hereby enacted shall not of itself—

Proviso.

(I) abate, prejudice, or affect any proceeding now pending in any Court or before any Local Land Board or other authority;

(II) prejudice or affect any proceeding, matter, or thing lawfully done or commenced or contracted to be done under the authority of the said Act or any regulation made thereunder;

and that notwithstanding such repeal—

(a) all offences committed or penalties incurred against or under the said repealed Act, or any regulation made thereunder, may be respectively tried, punished, enforced, and dealt with as if this Act had not been passed; and

(b) all rights accrued and obligations incurred under or by virtue of the said repealed Act or any regulation made thereunder shall, subject to any express provision of this Act in relation thereto, remain unaffected by such repeal.

New South Wales to be deemed rabbit-infested.
Proviso.

3. For the purposes of this Act the entire territory of New South Wales shall be deemed to be either actually rabbit-infested or liable to become so: Provided always that the Governor may, by proclamation in the Gazette, from time to time, declare exempt from the provisions of Parts I and II of this Act any part or parts of the Eastern Division of this Colony; and may by like proclamation alter or revoke any such proclamation.

PART I.

Rabbit Districts and Boards—Powers of Boards—Rates, &c.

Rabbit Districts.

4. The several Districts for the time being constituted Districts for the purposes of the Diseases in Sheep Acts, and hereinafter referred to as Sheep Districts, shall be Districts for the purposes of this Act.

Constitution of Rabbit Boards.

5. For every Rabbit District there shall be a Rabbit Board, which shall consist of nine members, constituted as hereinafter provided, who shall each hold office for one year:

Provided always that if it should appear to the Governor that the member appointed by the Governor as hereinafter provided has failed to do or is incapable of doing his duty, he may remove such member and appoint a person in his place for the unexpired period of office of the member removed.

Every Rabbit Board shall, within the prescribed time, appoint one of its members to be Chairman thereof, and if such Board shall fail to appoint a Chairman the Governor may appoint one of such members to be such Chairman. Every member shall be entitled to receive, out of the revenues of the Board, the prescribed fees.

Constitution of Rabbit Board.

6. The Rabbit Board of a Rabbit District shall be composed as follows:—

Quorum.

One member shall be appointed by the Governor.

Five members, being those holding office for the time being as Directors of the Sheep District which coincides with such Rabbit District.

Three members, being those holding office for the time being as Directors elected under the provisions of the Pastures and Stock Protection Acts.

Such nine persons shall be the Rabbit Board for a Rabbit District, and five of such persons being present at any meeting of such Board shall be a quorum.

Rabbit Board to be a corporate body.

7. The members of a Rabbit Board shall be a corporate body under the style or title of the "Rabbit Board of District," and under such style or title every such Board shall have perpetual succession and a common seal, and be capable in law of suing and being sued.

The validity of any acts of a Rabbit Board shall not be affected by any informality or irregularity in its constitution; and the fact that at any time all the seats on the Board are vacant shall not of itself operate to dissolve the corporation.

Provisions regulating the Board's transaction of business.

8. A Rabbit Board—

(a) may employ a Secretary and such other officers and servants as may be necessary, and pay them out of the revenues of the Board:

Board: Provided that all such officers and servants shall be under the exclusive control, and hold office during the pleasure, of the Board; .

- (b) shall cause proper minute books to be kept of all its proceedings;
- (c) shall cause true and regular accounts to be kept of all moneys received or paid under the authority of this Act, and shall give the owner or occupier of any private holding within the Rabbit District access thereto at all reasonable hours;
- (d) shall produce for inspection to any person duly authorised in writing by the Minister or the Colonial Treasurer all its books, accounts, agreements, vouchers, letters, or other documents which may relate to any matter under this Act;

9. All fines, penalties, rates, and other moneys received by a The Rabbit Fund. Rabbit Board under or by virtue of this Act shall form part of a fund to be called the Rabbit Fund of the District.

Moneys forming part of the Rabbit Fund of the District may be applied by the Rabbit Board to the payment of any expenses of, or incidental to, the administration of this Act by the Board, or of any costs or expenses incurred in accordance with provisions of this Act, and not otherwise.

The Governor may cause the accounts in connection with the Rabbit Fund of the District to be audited, and the expenses of the audit shall, if the Governor so require, be paid out of the Rabbit Fund.

10. Every Rabbit Board shall in each year make or cause to be Rabbit rate. made an estimate of the probable sum which will be required (in addition to fines, penalties, and other revenues) for the effective administration of this Act in the Rabbit District; and the said sum shall be raised by a Rabbit Rate upon stock within the District.

Subject to the provisions hereinafter contained, the amounts levied under the rate shall be proportionate as far as practicable to the stock returns under the Pastures and Stock Protection Acts—

- (I) The Rabbit Board shall, in the first instance, strike the rate upon an assessment of so much per sheep, but not so as to exceed one halfpenny per sheep in any one year.
- (II) Public lands shall be taken to be capable of carrying one sheep to ten acres, and be rated on that basis.
- (III) Cultivated private lands shall be taken to be capable of carrying one sheep to five acres, and be rated on that basis in every case where no returns for such cultivated lands have been made under the Stock and Pastures Protection Acts:

Provided always that only half rates shall be levied upon any holding now or hereafter enclosed by a fence which, in the opinion of the Board, is rabbit-proof.

- (iv) The Rabbit Board shall have access as prescribed to—
 - (a) returns of sheep made to Clerks of Petty Sessions and Inspectors of Sheep under the Diseases in Sheep Acts or any other Acts; and
 - (b) returns collected by the police or other authorised persons for statistical or other purposes.

11. When the amount payable under the rate upon any holding Notice of amount due under rate to be given. has been determined the prescribed notice of such amount shall be given to the person liable to pay the same.

The amount so determined shall, except in case of appeal, be paid to such person or bank, and on or before such date as may be respectively specified for the purpose in such notice: Provided that the amount may be payable in instalments if the Board so directs.

The person liable to pay such amount shall be the occupier of the holding if the same be occupied, but if not, then the owner thereof; but nothing herein contained shall affect any agreement between landlord and tenant in respect of the said liability.

Rate-book to be kept.

12. Every rate and every determination of the amount payable upon any holding under such rate shall be entered in a book—to be called the Rabbit Rate Book—which shall be kept in the prescribed form and manner; and all persons shall have access thereto at all reasonable times. The said book shall, on the production thereof, be *prima facie* evidence of the rate and of the amount determined as being payable under such rate upon any holding. The Rabbit Board may from time to time make such amendments and supply such omissions in the entries in such book as may be necessary, and no such amendment or omission shall be held to invalidate the rate or any determination of amount: Provided that—

- (a) every person aggrieved or affected by any such alteration shall have the same right of appeal therefrom as he would have had if his name had been originally inserted therein or if no such alteration had been made; and
- (b) except in the case of an amendment rendered necessary by the result of an appeal, the determination of the amount payable shall be taken to have been made at the date of the amendment.

Evidence of rate,
Rate when not
invalidated.

13. The production of a copy of the Gazette containing the hereinbefore required notice of the striking of a rate by a Rabbit Board shall be conclusive evidence that the rate has been duly struck.

No determination of the amount payable shall in any case be held to be invalid by reason of any failure to give notice of such amount in accordance with the provisions hereinbefore contained: Provided always that, except in cases of appeal, proceedings shall not be taken to recover the amount payable in respect of any holding unless and until due notice thereof has been given.

Appeal from rate
to Court of Petty
Sessions.

14. If any person is aggrieved by the amount determined as payable by him under the rate, he may, within twenty-one days after the aforesaid notice has been given, appeal to a Court of Petty Sessions by a notice in the prescribed form, accompanied by the prescribed deposit; and the said Court shall determine the amount payable under the rate, and may order interest to be paid thereon at the rate of five pounds per centum per annum, calculated from the date specified in the notice as the date for payment; and payment of the amount finally determined, with or without interest, as the case may be, shall be made to the person or bank specified in the notice within one month from the date of the final determination thereof.

Recovery of unpaid
rates, &c.

15. Any amount due as Rabbit Rate may be recovered in a summary way before a Court of Petty Sessions.

Any sum due as a Rabbit Rate in respect of any private holding or land shall be, and until the payment thereof, remain, a charge upon the said holding or land.

Rabbit Board may
erect and maintain
barrier fences.

16. A Rabbit Board shall have power to—

- (a) erect a barrier fence on any land, whether public or private, within or without the Rabbit District, and repair and maintain the said fence; and
- (b) utilize and convert into a barrier fence any private fence, whether rabbit-proof or not, on any land within or without such District, and repair and maintain the said fence; and
- (c) erect and maintain a barrier fence across any road or travelling stock route making gates in such fence for the passage of members of the public and their stock; and
- (d) place a rabbit-proof gate in any barrier fence wheresoever the same may be required, and repair and maintain such gate; and
- (e) co-operate with the Rabbit Board of any neighbouring Rabbit District in the construction and maintenance of any such work as is hereinbefore mentioned.

A barrier fence shall be taken to mean a rabbit-proof fence which protects, or will protect from the incursions of rabbits the Rabbit District, or any part thereof, whether erected without or within the boundaries of the Rabbit District; and the decision of the Stock Board that a barrier fence protects, or will so protect, the Rabbit District or any part thereof shall be conclusive of the fact, as against the owner or occupier of any holding or lands within the Rabbit District.

17. If any barrier fence shall be erected by any Rabbit Board on the boundary of any Rabbit District, the Board of the adjoining District shall be liable to pay to such Board as aforesaid half the cost of erection and maintenance of such fence, or such fence may be erected and maintained at their joint expense in accordance with such agreement as they may enter into.

Payment for boundary fence of two districts.

18. A Rabbit Board shall not be liable to pay or make compensation for anything lawfully done in exercise of the foregoing powers except where a barrier fence is erected upon any private holding or land so as to cause damage by severance.

Case where compensation given.

The amount of compensation due to any person shall, upon application by him as prescribed, be determined by a Court of Petty Sessions; and in fixing such compensation the said Court may take into consideration and set off any benefit accruing to such person's property by the construction of such fence, and shall have power to award costs to or against any party appearing before it.

19. It shall be the duty of the Rabbit Board to keep in good repair and efficiently maintain—

Barrier fences to be maintained.

- (a) every barrier-fence erected by it and every fence converted by it into a barrier-fence; and
- (b) every barrier-fence erected or to be erected at the expense of the Crown within the boundaries of the Rabbit District:

Provided always that—

- (c) where any such fence as last aforesaid is along the common boundary of two Rabbit Districts the Minister, if the Boards of such Districts fail to agree in regard to the maintenance of such fence, shall determine which of the two Rabbit Boards shall be charged with the aforesaid duty, and the Rabbit Board charged therewith shall be entitled to receive from the other of such Boards half the annual cost incurred in discharging such duty;
- (d) it shall be the duty of the Railway Commissioners to keep in good repair and efficiently maintain any barrier-fence erected or to be erected at the expense of the Crown along the boundaries of any lands vested in them, but the costs incurred in the repair and maintenance of any such fence shall be a charge upon the Consolidated Revenue Fund.

20. It shall be lawful for the Minister, out of any moneys voted for that purpose by Parliament, to purchase and supply to Rabbit Boards, or to owners of private lands, wire-netting and other materials required in the construction of rabbit-proof fences, and also any machinery, plant, or substances for the destruction of rabbits; and may enter into contracts for the sale or letting out thereof to such Boards or owners: Provided that the repayment of principal and interest thereon shall be on a basis similar to that prescribed by law for payment of principal and interest on conditionally-purchased lands—

Supplying netting and materials.

that the security for such repayment be a first mortgage on the holding to be wire-netted or supplied with other appliances for the destruction of rabbits;

that the said netting be erected within twelve months after delivery thereof;

that

that the amounts and times and mode of supplying such wire-netting and other appliances be in the discretion of the Minister;

that the letting of machinery or other appliances for the destruction of rabbits be subject to such terms and conditions as may be agreed upon between the Minister and the Boards or between the Minister and the owners of private lands.

Co-operating Board to contribute toward barrier fence.

21. Where the Rabbit Boards of neighbouring Rabbit Districts agree in the prescribed manner to co-operate in the erection of a barrier fence for the joint protection of the said Districts, the Rabbit Board which erects such fence shall be entitled to receive from the other Rabbit Board half the cost of erecting the said fence and half the annual cost of maintaining and repairing the same, unless the agreement shall provide for the payment of some other proportion of such costs; and for the purpose of this section the erecting of a barrier fence shall include only the expense of making rabbit-proof any existing fence on the barrier that may be converted into or used as a barrier fence, and of erecting rabbit-proof fences in places on the barrier where such may be necessary.

Arbitration in case of disputes between Boards.

22. In the case of any dispute arising between the Rabbit Boards of neighbouring Rabbit Districts as to the payment of any money or the doing of any act required to be paid or done under the provisions of this Act, or as to the carrying out of any agreement between them, the matter of the dispute shall be referred to the Minister: Provided that the Minister before making his award may refer the matter in dispute to any Local Land Board for investigation and report; and may thereupon either make such award himself or refer the whole matter, together with such report (if any), to the Land Appeal Court to make an award. Every such award shall be final and conclusive for all purposes.

Rabbit Board may require rabbits to be destroyed.

23. A Rabbit Board may, by notice in the Gazette, specify—
- (a) a date (not being less than two months from the date of the notice) on or before which the owners and occupiers of all holdings and lands within the Rabbit District shall respectively commence the work of suppressing and destroying rabbits on all such holdings and lands; and
 - (b) a period during which the said work shall be continued and systematically carried out; and
 - (c) the means (being means previously sanctioned by the Minister) which shall be adopted for the carrying out the said work.

Any such notice, or an abstract thereof, shall also be published in some of the newspapers circulating in the Rabbit District.

The Rabbit Board may also give to the owner or occupier of any holding or lands within the Rabbit District a peremptory notice in writing to take all proper steps in order to suppress and destroy rabbits on such holding or lands, and to adopt such means for the purpose as may be specified in the notice. The expression "proper steps" in this section means such steps as may be deemed proper by the Rabbit Board.

Powers of Board if owner or occupier makes default.

24. If any owner or occupier shall neglect or fail to comply with the terms of any notice whether published in the Gazette, or given to him in writing as aforesaid, such person may be summoned to appear before the Rabbit Board, and unless he shall explain his neglect or failure to the satisfaction of the Board, or receives an extension of time to comply with the notice aforesaid, any person authorised by the Rabbit Board may enter upon the holding or land and use all such means and take all such measures and do and perform all and every such acts or things as to him may appear proper or necessary to be done to ensure the destruction of the rabbits upon such

such holding or land, and shall have free right of ingress, egress, and regress into, over, and across such holding or land for such period as may, in his opinion, be necessary for destroying such rabbits: Provided that in any case in which a Municipal Council is such owner or occupier, the Council Clerk shall be the person to be summoned on behalf of such Council, and provided also that—

- (a) poison shall not be used without notice being given to the occupier of the holding or land of the intention to use the same; and nothing shall be done in contravention of the Animals Infections Diseases Act of 1888; and that
- (b) the authorised person may at any time withdraw from the holding or land upon payment of the costs, charges, and expenses incurred by him up to the date of such withdrawal; and that
- (c) nothing contained in this section shall prejudice any proceedings taken under the provisions hereinafter contained for the recovery of any penalty which may have been incurred by an owner or occupier.

25. All costs, charges, and expenses incurred by a Rabbit Board in destroying rabbits upon any holding or land under the foregoing provisions shall be repaid by the owner or occupier of such holding or land, and until the payment thereof shall be and remain a charge upon such holding or land, and shall have priority over all mortgages or other charges whatsoever upon such holding or land, other than debts due to the Crown. In the case of land within a Borough or Municipal District such costs, charges, and expenses shall, until payment, be and remain a charge on the revenues of such Borough or District.

Owner or occupier
to pay expenses
incurred by Board.

26. It shall be the duty of the Minister to suppress and destroy all rabbits which may from time to time be in or upon public lands, but in any case where moneys have been made available by Parliament for the purpose of rabbit destruction, such duty shall not be taken to have commenced until after the expiration of months from the day when such moneys so became available. The Minister may authorise the Rabbit Board to expend such moneys or any portion thereof for the purpose of rabbit destruction on public lands, or may apportion a proportion thereof for expenditure in the erection or repair of barrier-fences, or may make such other arrangements for its expenditure for either or both of such purposes as he may deem necessary or expedient in the public interest.

Minister to destroy
rabbits on public
lands.

27. The fact that Parliament has not appropriated moneys for the purpose of suppressing or destroying rabbits in any Rabbit District, or that moneys are not available for that purpose, shall not exonerate the Minister from liability under this Act as an owner of public lands in any case in which a private owner would be liable in respect of private land: Provided that any claim for costs, charges, or expenses lawfully incurred by a Rabbit Board in the destruction or suppression of rabbits upon public lands shall be enforceable by such Board against the Minister as nominal defendant pursuant to the provisions of the "Claims against the Colonial Government Act," and any Act amending the same. And a Court of Petty Sessions shall be deemed to be a "competent court" within the meaning of the Act thirty-ninth Victoria number thirty-eight: Provided always that it shall be lawful for the Minister in any case to apply to the Land Appeal Court for an order of such Court staying any proceedings taken against him under this section; and such Court may grant such order if satisfied on the evidence before it that—

Liability of Minister
under this Act.

- (a) The Minister has taken, or is about to take, immediate steps for the purpose of suppressing or destroying rabbits on the public lands in question.
- (b)

- (b) The degree to which the public lands in question are infested by rabbits is so inconsiderable that no danger of adjoining lands becoming infested thereby will be incurred for a period of months.
- (c) The public lands in question are being so fenced off, or separated by rabbit-proof fencing, from adjoining lands, as to practically preclude or reduce to a minimum the danger of adjoining lands becoming infested by the rabbits on such public lands.

Any such order staying proceedings under this section shall be under the hand of the President of the Land Appeal Court, and shall be obeyed by the Court to which it is directed, but shall in no case continue in force for a longer period than months from the date of such order.

PART II.

Private Rabbit-proof fences—Grouping of Holdings, &c.

Description of a
rabbit-proof fence.

28. For the purposes of this Part, a rabbit-proof fence shall be some one of the three kinds of fence herein described—

- (a) a substantial fence at least forty-two inches in width hung with galvanised-wire netting of a maximum mesh of one and a quarter inches for the lower width of eighteen inches, and one inch and five-eighths of an inch for the remaining width, the wire in the netting being of a minimum gauge of seventeen, such fence being furnished with suitable rabbit-proof gates or other appliances at every necessary break in the fence: Provided that all other dimensions of such fence, including the height above ground, the depth below ground of the posts thereof and of the wire netting thereon, and all other details in connection therewith shall be in accordance with specifications to be published in the Gazette by the Rabbit Board; or
- (b) a fence erected in accordance with the requirements of the Rabbit Act of 1890 while such Act was in force; or
- (c) a fence reasonably sufficient in the opinion of the Land Board for the purpose of excluding rabbits.

And the date when the rabbit-proof fence was erected or the fence was made rabbit-proof shall be immaterial.

The Rabbit Board of the District within which any fence alleged to be rabbit-proof is situated shall, if so required in writing by the owner of the fence, cause the said fence to be inspected; and if the Rabbit Board, after such inspection, is satisfied that the fence alleged to be rabbit-proof is rabbit-proof it shall grant a certificate to that effect; or if not so satisfied shall specify the repairs or modifications which are required to make such fence rabbit-proof; and when such repairs or modifications have been effected the Rabbit Board shall cause the said fence to be again inspected, and if then satisfied that the fence is rabbit-proof, it shall grant a certificate to that effect.

Upon any proceeding before a Local Land Board in respect of a rabbit-proof fence a certificate by the Rabbit Board that a fence is rabbit-proof shall be *prima facie* evidence of the fact; and evidence in rebuttal shall not be adduced, unless the party intending to adduce such evidence has given to the other party the prescribed notice of his intention to adduce the same.

29. For the purposes of this Part—

- (a) a rabbit-proof fence shall be taken to be on the boundary of any holding or land if it follows the line which is the actual, reputed, or accepted boundary thereof, or where the boundaries are inaccessible or incapable of being fenced, if such fence follows such boundaries as nearly as possible, having regard to the physical features of the country, or if such fence follows any line which in the opinion of the Local Land Board is sufficiently approximate to such boundary; and
- (b) the intervention of a road or water-course (not being a permanent river) shall not prevent holdings or lands being taken to be adjoining.

Definition of
"boundary" and
"adjoining."

30. When any lands are intersected, divided, or bounded by a road or travelling stock reserve or route or public lands, the Local Land Board may grant to the owner of such lands permission to carry a rabbit-proof fence across such road, reserve, route, or public lands: Provided always that rabbit-proof gates be erected at places where the fence crosses such road or route, unless the Local Land Board shall in any case dispense for the time being with the erection of the same. Any permission or dispensation granted under this section may be revoked by the Board upon reference by the Minister or application by any person interested.

Rabbit-proof fence
may cross road.

31. When any Crown lands containing a rabbit-proof fence or portion thereof shall become the subject of any purchase or lease from the Crown, payment for such rabbit-proof fence or portion thereof shall be made in accordance with the provisions of the Crown Lands Acts; but this enactment shall be subject to the following qualifications:—

Rabbit-proof fence
to be an improve-
ment.

- (I) Where any holding or group of holdings has been or shall be made rabbit-proof, the rabbit-proof fence shall be deemed to be an improvement distributed over the whole enclosed area of such holding or group of holdings (exclusive of any roads), so that every portion of such area shall be taken to be proportionately improved thereby.
- (II) The amount so distributed in respect of the improvement shall, in all cases, be limited to one-half of the value of making the fence rabbit-proof: Provided always that if any portion of such rabbit-proof fence is upon or adjoining any land which becomes the subject of any purchase or lease from the Crown the purchaser or lessee thereof shall also be liable in respect of the fence itself.
- (III) No portion of the value of any rabbit-proof fence erected as a barrier fence at the public expense shall be deemed to be distributed in accordance with this section.

32. Any owner, whose holding consists wholly or in part of Crown lands held under occupation license or annual lease, may give notice in the prescribed form to the Chairman of the Local Land Board that he intends to make such holding rabbit-proof; and in any case where notice as aforesaid shall have been given, and such holding shall have been made rabbit-proof in accordance with the terms thereof, such holding shall be deemed to have been made rabbit-proof as from the date of such notice, so far as regards the amount payable for improvements under this Act in connection with any lands which may be withdrawn from occupation license or annual lease by becoming the subject of any purchase or lease from the Crown after the date of such notice: Provided always that the rabbit-proof fence shall be completed within one year from the date of such notice or within such further time as such Board on application may allow; and

Notice of intention
to fence occupation
license or annual
lease, &c.

that the liability to pay any moneys under this Act in respect of such rabbit-proofing or any portion thereof shall be suspended, until such fence shall have been completed.

Notice of intention to bring occupation license or annual lease within a group

Adjoining holdings to contribute half value of rabbit-proof fence.

The provisions of this section shall apply in cases where it is intended to include the lands held under occupation license or annual lease within a group.

33. Where a boundary, or any part thereof, of any holding is fenced with a rabbit-proof fence, or a fence on such boundary, or part thereof, has been made rabbit-proof at the expense of the owner of such holding, a contribution towards the cost of the work shall be payable by the owner of any outside holding or lands adjoining the rabbit-proof fence.

The right to receive such contribution shall vest, and the liability to pay the same shall arise, when the then owner of such first-mentioned holding gives to the then owner of such last-mentioned holding or lands the prescribed notice of demand; and from and after the date when such notice is given, the amount of the contribution, or so much thereof as may for the time being be unpaid, shall, until payment, be and remain a charge upon the holding or lands in respect of which such contribution is payable.

The following provisions as to contributions shall apply:—

- (I) A contribution shall be payable only in respect of so much of the rabbit-proof fence as forms a common boundary fence.
- (II) The amount of the contribution shall in every case be assessed according to the benefit derived, and to be derived, from the rabbit-proof fence, and shall in no case exceed half the value of the rabbit-proof fence, or in the case of a fence which does not belong or wholly belong to the owner who makes the same rabbit-proof, such contribution shall not exceed half the value of the work of making such fence rabbit-proof; and such value shall be the value regarded as at the date when the aforesaid notice of demand is given, and as determined by the Local Land Board.
- (III) A contribution shall not be payable in any case where the Local Land Board is of opinion that the rabbit-proof fence has been erected, or the fence has been made rabbit-proof otherwise than *bonâ fide* for the purpose of excluding or destroying rabbits, or unless and until in the opinion of the Local Land Board the holding or lands from the owner whereof the contribution is demanded derives a benefit therefrom.
- (IV) Nothing in the Crown Lands Acts or in the Act ninth George the Fourth number twelve shall relieve any owner from the liability to pay a contribution under this Act.
- (V) It shall be immaterial whether the rabbit-proof fence was erected or the fence was made rabbit-proof before or after the passing of the Rabbit Act of 1890, or before or after the passing of this Act.

Adjoining holding to contribute half cost of maintenance.

34. In any case where a contribution towards the cost of a rabbit-proof fence is to be paid under the provisions of the last preceding section, an annual contribution towards the expenses incurred in the maintenance and repair of the rabbit-proof fence shall also be paid; and for the purposes of such annual contribution the years shall be taken to run from the date or recurring date of the notice of demand required by the said section.

The right to receive such annual contribution, and a corresponding duty to maintain and repair the rabbit-proof fence, shall run with the holding whereof the owner was entitled to receive payment of the aforesaid contribution towards the cost of the rabbit-proof fence; and the liability to pay such annual contribution shall run with the holding or lands whereof the owner was liable to pay the aforesaid contribution towards the cost of the rabbit-proof fence. The

The amount of such annual contribution shall be one-half the expenses of, or incidental to, the maintenance and repair of the rabbit-proof fence as determined by the Local Land Board.

Nothing contained in this section shall affect any right to an annual contribution towards the cost of the maintenance and repair of a rabbit-proof fence accrued under or by virtue of the provisions of the Rabbit Act of 1890, and the Local Land Board shall have power to assess and determine the amount of any such contribution.

35. Where a private rabbit-proof fence, whether erected before or after the passing of this Act, forms a common boundary fence between private and public lands, and particulars of such fence have been or shall be furnished to the Minister, the same contributions shall be payable by the Crown in respect of rendering the fence rabbit-proof as would be payable by any private owner, and the amount of such contributions shall be determined by the Local Land Board in the same manner as if the said public lands were private lands.

The Crown to contribute in certain cases.

36. Where fences within a Rabbit District have, before the commencement of this Act, been rendered rabbit-proof by the expenditure of moneys voluntarily contributed or paid for the purpose by any Stock Boards, or by any persons, the Rabbit Board of the District may apply any moneys raised by rabbit rates within the District in repaying to the said Stock Boards or persons the moneys so contributed or paid by them as aforesaid, or any part thereof, if, in the opinion of such Board, the fences are barrier-fences within the meaning of this Act.

Barrier fences erected before the passing of this Act may be paid for.

37. When a ring fence enclosing two or more holdings or any portion or portions thereof is a rabbit-proof fence, made rabbit-proof by agreement between the owners of such holdings, the lands so enclosed shall, with the consent of the Rabbit Board of the District, form a group of holdings within the meaning and for the purposes of this Act.

Formation of groups.

Any existing fence or portion thereof may be adopted so as to form part of the ring fence of any group, but not without the consent of any owner of such fence or portion thereof whose holding thereby becomes a holding forming part of the group.

The Minister may agree that any public lands shall be included within a group, and the Crown shall thereupon become liable in the same way as the owner of any holding of private lands within the group.

The Rabbit Board may agree that any rabbit-proof fence used or erected by it may be used for the purpose of the grouping of holdings.

Where any holding has been enclosed with a rabbit-proof fence, and any part of the holding afterwards becomes the subject of any homestead selection, purchase, or lease from the Crown, and is thereby withdrawn from the holding so enclosed as aforesaid, the new holding created by such homestead selection, purchase, or lease, and the residue of the original holding shall be a group of holdings; and any portion subsequently withdrawn from the residue shall also be a holding within the group.

Any group of holdings constituted under the Rabbit Act of 1890 shall be a group of holdings within the meaning and for the purposes of this Act.

When the external boundaries of any holding or group of holdings have been made rabbit-proof, the owner or owners thereof shall not be liable to contribute towards the cost of erecting or maintaining and repairing a rabbit-proof fence around any holding or land situate within such external boundaries as aforesaid, or towards the cost

Person not coming within group not entitled to contribution.

cost

cost of making rabbit-proof any existing fence around such holding or land within such external boundaries; and it shall be immaterial whether the said external boundaries have been made rabbit-proof before or after the passing of this Act.

Grouped holdings.

33. A group of holdings shall be deemed to be a single holding so far as regards any such contribution towards the cost of the erection, maintenance, or repair of rabbit-proof fencing as may be payable by or to the owners of adjoining holdings outside the group. And the following provisions shall apply to the holdings forming part of a group, and to the owners thereof:—

- (I) The liabilities of such owners as between themselves, in respect of sums expended or to be expended for the erection or repair of the ring fence, or of amounts paid or to be paid as contributions towards the cost or maintenance of any portion of such fence, shall be proportionate to the respective areas of the holdings of such owners, and in any case of dispute shall be declared by the Local Land Board; and the amount declared by such Board to be payable by any such owner shall be a charge upon his holding.
- (II) The majority in number of the owners whose lands may for the time being constitute a group may, from time to time, by an instrument in the prescribed form, appoint any person to be the secretary of the group; and proceedings may be taken by or against the secretary for the time being of a group, as nominal plaintiff or defendant representing all the owners of all grouped lands.
- (III) In any case where a group of holdings is not known to have a duly appointed secretary or the duly appointed secretary cannot be found, the Rabbit Board of the District in which such group or any portion thereof is situated may designate the owner of any land included within the group to be the nominal defendant representing all the owners of all grouped lands for the purposes of any proceedings proposed to be taken against such group or such owners; and proceedings may thereupon be taken against such owner as nominal defendant in the same way as if he were the duly appointed secretary of the group.
- (IV) In any case where judgment has been recovered against the secretary of a group or other nominal defendant as aforesaid, and has not been satisfied, or where an order for the payment of money has been made against such secretary or other nominal defendant, and has not been complied with, the person entitled under such judgment or order may apply to the Local Land Board to settle the respective amounts to be contributed by the owners of the holdings within the group for satisfaction of such judgment or compliance with such order; and the Local Land Board shall thereupon settle the said respective amounts in proportion to the respective areas of the holdings of such owners; and the person entitled under such judgment or order may take proceedings against each or any of such holders for the amount settled by the Local Land Board.
- (V) If any part of a holding within a group shall be withdrawn from such holding, by reason of its becoming the subject of any homestead selection or purchase or lease from the Crown, or by reason of such holding being subdivided, the new holding created by such homestead selection or purchase, lease, or subdivision shall be a holding within, and forming part of, the group.

Rabbit.

- (vi) A holding shall not cease to form part of a group, by reason only of any change of ownership in respect of such holding, or of any other holding within such group; but any owner may, with the permission of the Rabbit Board, and subject to any conditions which it may impose, detach his holding from the group of which it formed part if the boundaries of such holding have been made rabbit-proof.
- (vii) If at any time it shall appear to the Rabbit Board that a group of holdings is too large for the effective destruction of rabbits, and that the owners holding not less than one-half of the grouped lands desire that such group may be subdivided, it shall be lawful for the Board to authorise the subdivision of such group, and to determine the line or lines of subdivision. And the subdivision rabbit-proof fence or fences shall, in all respects, be dealt with as if the same formed part of the ring fence of such group.

PART III.

Destruction of rabbits by owners and occupiers—Offences, &c.

39. It shall be the duty of every owner and of every occupier of any holding or lands from time to time to suppress and destroy, by all lawful means, at his own cost, and to the satisfaction of the Rabbit Board, rabbits which may from time to time be upon such lands, or upon any roads bounding or intersecting the same, or any part thereof.

Any owner or occupier of any holding or lands who fails to fully and continuously perform such duty as aforesaid shall be liable to a penalty on the first conviction of not more than *ten* pounds, and on the second conviction of not more than *twenty-five* pounds, and on the third or any subsequent conviction of not more than *fifty* pounds.

40. The Governor may from time to time by proclamation in the *Gazette* declare any animal to be a natural enemy of the rabbit, and prohibit within districts (whether Rabbit Districts or not) to be specified in such proclamation the wilful wounding, killing, or capturing, selling, or disposing of any such animal without a special permit in that behalf, and may from time to time correct, modify, or revoke any such proclamation.

Any proclamation issued under the Rabbit Act of 1890 whereby any animal was declared to be a natural enemy of the rabbit, shall continue in force according to the tenor thereof, unless and until revoked under the provisions of this section.

Any person who without lawful authority (the proof of which shall be on such person) wilfully wounds, kills, captures, or sells or disposes of any animal declared to be a natural enemy of the rabbit shall be liable to a penalty of not more than *twenty* pounds.

41. For the purpose of destroying or suppressing rabbits, any owner or occupier, may, at any time, with the consent of the Rabbit Board first obtained, and notwithstanding anything in any Act contained, burn or ignite any straw, stubble, grass, herbage, scrub, wood, or other inflammable material on his land subject to conditions to be imposed by the Board.

Authorised person
may enter holding.

42. Any authorised person may, on the production of his authority, if demanded by any owner, from time to time enter upon any holding or land with or without assistants, dogs, horses, and vehicles in order to search whether any rabbits are on such land, or to erect or repair barrier-fences or gates, or to examine and inspect land, or for any purpose whatsoever under this Act, and may remain thereon so long, and do all such things as may be necessary or reasonable.

Penalty for person-
ating or obstructing
authorised person.

Any person who falsely represents himself to be or personates an authorised person under this Act shall be guilty of a misdemeanour, and shall on conviction be liable to be imprisoned with or without hard labour for any period not exceeding *six* months, or to pay a penalty of not more than *one hundred* pounds.

Any person who wilfully assaults, obstructs, hinders, or interrupts, or causes to be assaulted, obstructed, hindered, or interrupted, any authorised person in the exercise of any power or authority vested in him by this Act, shall for every such offence if not otherwise specially provided for be liable to a penalty not exceeding *twenty* pounds; and no proceeding for recovery of such penalty nor the payment thereof shall be a bar to any action at law for or in respect of any such assault as aforesaid, but every such action may be commenced and proceeded with as if this Act had not been passed, any law or usage to the contrary notwithstanding.

For the purposes of this section an authorised person means a person having authority from the Minister or from a Rabbit Board, and such authority may be a general authority.

Penalty for
miscellaneous
offences.

43. Any person who—

- (a) wilfully carries, drives, or passes any live rabbit through, under, or over any rabbit-proof fence or gate; or
- (b) wilfully leaves open any gate in a rabbit-proof fence; or
- (c) without lawful authority (the proof of which shall be on such person) wilfully destroys, injures, tears-up, depresses, or removes any portion of a rabbit-proof fence or gate, or excavates under, or in any way tampers with, any portion of such fence or gate, so as thereby to endanger its effectiveness; or
- (d) attempts to do any such act as is hereinbefore mentioned, or procures the same to be done

shall be liable to be imprisoned, with or without hard labour, for any term not exceeding *six* months, or to pay a penalty not exceeding *one hundred* pounds, or both.

A rabbit-proof fence or gate, for the purposes of this section, shall mean a fence or gate apparently intended to protect any land from rabbits, and shall include a barrier fence, or gate therein, and it shall be immaterial whether or not such fence or gate is in accordance with the requirements of this Act.

Penalty for keeping,
liberating, &c.,
rabbits.

44. Any person who without lawful authority (the proof of which shall be on the person claiming to have the same) wilfully liberates or attempts to liberate, or has in his possession any live rabbit, shall be liable to a penalty not exceeding *one hundred* pounds for every such offence; but nothing herein contained shall be construed to prohibit any person from keeping live rabbits in any safe enclosure with the permission of the Minister first had and obtained.

Permission to keep
rabbits.

Penalty for
interfering with
traps, &c.

45. Any person who destroys, injures, removes, or interferes with any trap, snare, poison, matter, or thing which is used or required for the purpose of capturing or destroying rabbits, and which is lawfully placed upon any land for such purpose shall be liable to a penalty not exceeding *twenty* pounds.

PART IV.

Procedure—Miscellaneous provisions.

46. Any proceedings for—

- (a) the recovery of any sum of money, which any person is, pursuant to the provisions of this Act, required or made liable to pay, whether such sum of money be due in respect of rabbit rates, costs of rabbit destruction, contributions towards rabbit-proof fencing, or otherwise howsoever; or
- (b) the recovery of penalties or punishment of offences under this Act or any regulation made thereunder

Petty Sessions to adjudicate summarily on offences and money claims.

shall be heard and determined in a summary way before a Court of Petty Sessions in accordance with the provisions of the Act or Acts in force for the time being regulating summary proceedings before Justices.

Where the Court of Petty Sessions, upon such proceedings, adjudge or order any sum of money to be paid and the same is not paid, either immediately after the adjudication or conviction, or within the time then and there allowed by the said Court, payment of the said sum may be enforced by distress and sale of the goods and chattels of the person adjudged or ordered to pay the same in the manner provided by the said Act or Acts: Provided always that nothing herein contained shall affect any other remedy provided in the Crown Lands Acts.

Any person may take proceedings under this Act for the punishment of any offence hereby enacted; but where the land upon which an offence is committed is situate within a Rabbit District any fine or penalty imposed for such offence shall belong and be paid to the Rabbit Board of the District—any law or statute to the contrary notwithstanding—and the Court imposing such fine or penalty shall order accordingly.

47. Any person aggrieved by any adjudication, order, fine, penalty, or punishment made or imposed by a Court of Petty Sessions under this Act, may appeal against the same, and the provisions of the Criminal Law Amendment Act of 1883 in respect of appeals in cases of summary conviction shall extend and apply to every such appeal.

Power to appeal from Petty Sessions.

48. In any case under this Act where any sum of money is ordered to be paid by a Court of General or Quarter Sessions, and the same is not paid within the period named in such order, it shall be lawful for the person entitled to receive payment of such sum to sue upon such order in the District Court or the Supreme Court.

Action in the Supreme or District Court in certain cases.

49. In any proceedings under this Act, the jurisdiction of the Local Land Board, or Court before whom the proceedings are had, shall not be ousted on the ground that the case raises any question of title to land, or that the defendant does not reside within the boundaries of the jurisdiction of the Board or Court before which the proceedings are had: Provided that in such last-mentioned case the land in respect of which the proceedings are had shall be situated within the boundaries of the jurisdiction of such Board or Court.

Jurisdiction of Court or Justices not to be ousted.

50. In any proceedings before a Local Land Board for the determination of any contribution, value, or other sum of money (not being an amount payable under any Rabbit Rate or as compensation by a Rabbit Board), the Local Land Board in determining the sum payable may allow time for the payment thereof, and may determine the instalments by which the same may be paid, and appoint the dates on or before which such instalments shall respectively be paid.

Proceedings before Local Land Board and on appeal.

Where

Where any proceedings under this Act are had before a Local Land Board an appeal shall lie to the Land Appeal Court; and the Minister or such Board shall have the like powers of reference to such court so far as practicable, as he or it now has under the Crown Lands Acts; but if there be no appeal or reference the determination or decision of the Local Land Board shall be final and conclusive.

The provisions of the Crown Lands Acts as to procedure to apply.

The provisions of the Crown Lands Acts regulating proceedings before Local Land Boards, and upon appeals and references to the Land Appeal Court under such Acts shall, as far as practicable, be applied to proceedings, appeals, and references under this Act; and for the purposes of proceedings under this Act, the Land Appeal Court and Local Land Boards and the respective members and officers thereof shall have the same authorities and powers as are conferred by the Crown Lands Acts for the purposes of proceedings under the said Acts, and in addition thereto the Land Appeal Court (on appeal) and a Local Land Board shall have power to make such orders as to the costs of any proceedings before the Local Land Board as may appear just.

Whenever any question of law shall arise in a case before the Land Appeal Court, such Court shall, if required in writing by any of the parties within the prescribed time and upon the prescribed conditions, or may of its own motion, state and submit a case for decision by the Supreme Court thereon, which decision shall be conclusive. Every such case shall purport to be stated under this section, and shall state the names of the persons who are parties to the appeal, reference, or other proceeding, and shall be transmitted to the Prothonotary of the Supreme Court to be dealt with as to the setting down of the case for argument, and the hearing of the same, and its return with the decision of the Supreme Court thereon, as the Judges or any two of them shall direct. The Supreme Court for the purposes of this section may consist of two Judges only, and shall have power to deal with the costs of, and incidental to, any case stated under this section as it may think fit.

Authentication of documents, &c.

51. Any notice, information, complaint, agreement, or other document, by or from a Rabbit Board, shall be sufficiently authenticated if it is signed by the Chairman of the Board, or under his direction by the Secretary of the Board, and authority in the Chairman or Secretary to so sign shall be presumed unless and until the contrary is shown; and it shall not be necessary for the Rabbit Board to affix its common seal to any document not being a deed.

Any notice or other document given to or served upon a Rabbit Board may be given to or served upon the Secretary or Chairman thereof.

Service of notices.

52. Any notice given under or for the purposes of this Act, or any regulation made thereunder, may be given in any one of the following ways:—

Personally to the person to whom the notice is addressed.

By registered letter sent through the post and directed to the last known place of abode or of business in New South Wales of the person to whom the notice is addressed.

By advertising the same twice at least in some newspaper circulating in the District in which the lands the subject of such notice are situate, an interval of a week or more being allowed to elapse between such advertisements: Provided that notice shall only be given as last aforesaid when the whereabouts, or the last place of abode or of business in New South Wales, of the person to whom such notice is addressed cannot be discovered by the person issuing such notice.

And

And any notice required by this Act to be given to the owner or the occupier (as the case may be) of any holding or land, shall in cases where several persons are the owners or the occupiers thereof, be duly given if given to one of such owners or occupiers as the case may be.

53. For the purposes of any proceeding under this Act the description of any holding or lands need not be a description by metes and bounds, but shall be sufficient if it make such reference to the holding or land either by name, situation, boundaries, or otherwise, as to allow of no reasonable doubt as to what holding or land is referred to. General description of lands sufficient.

54. Where the name of the owner of any holding is unknown to any person giving notice or taking proceedings under this Act, any notice required to be given may be addressed to the owner as such without mentioning his name, and any order or decision may in like manner be made or given against the aforesaid owner as such. Proceedings when owners unknown.

55. Whenever by any section of this Act, any sum of money is expressed to be charged upon any private holding or land, any person thereafter becoming the owner of such holding or land shall be taken to have notice of such charge, and shall be liable to pay the sum so charged or so much thereof as may for the time being be unpaid as if he were the person originally liable; but nothing herein contained shall operate to discharge the liability of any person originally or previously liable. Effect of moneys being charged.

Whenever any sum of money is charged upon any holding or land, and any portion of such holding or land is detached from the residue thereof by subdivision, withdrawal, or otherwise howsoever, the portion so detached shall be charged with a ratable part of the aforesaid sum.

56. It shall be lawful for any person in whom any holding is vested as mortgagee to add to his mortgage debt any sums expended by, or recovered from, him for the erection or repair, or as a contribution towards the cost of the erection or repair of any rabbit-proof fence upon, near, or for the benefit of such holding; and it shall be lawful for any person in whom any holding is vested as a trustee to raise the sums required or recovered for any such purpose by mortgage of such holding, in the same way as if a power to mortgage for any or all of such purposes had been contained in the instrument creating or declaring the trusts thereof. Power to raise money by mortgage.

57. Whenever in any section of this Act the expression "prescribed" is used in connection with any matter, and whenever in any section of this Act "regulations" are referred to, the Governor may, in every such case, frame regulations for the purpose of giving effect to the provisions of such section. And for the purpose of carrying this Act into full effect generally the Governor may make regulations which may provide for the enforcement thereof by penalties not exceeding, in any case, *ten* pounds, and shall, upon being published in the Gazette, be valid in law: Provided that a copy of every such regulation shall be laid before both Houses of Parliament within fourteen days from the publication thereof, if Parliament be then in Session, or otherwise within fourteen days after the commencement of the next ensuing Session. Regulations by the Governor-in-Council.

58. In this Act, unless the context otherwise requires:— Interpretation.
 "Crown Lands Acts" means the Crown Lands Acts of 1884, 1889, and 1895, together with any Acts passed or to be passed for the amendment of the said Acts or any of them.
 "Diseases in Sheep Acts" means the "Diseases in Sheep Act of 1866," together with all Acts passed or to be passed for the amendment thereof.

"Governor" means the Governor, with the advice of the Executive Council.

- “Holding” means any land or any collection of lands constituting and worked as one property, whether held under the same title or different titles or under titles of different kinds, together with all proclaimed, reserved, or reputed roads intersecting or bounding the same.
- “Local Land Board” means the Local Land Board of the Land District in which the land in question is situate, or any Local Land Board duly appointed to act in place of such first-mentioned Board.
- “Minister” means the Secretary for Lands for the time being, or any other Minister from time to time charged with the administration of this Act.
- “Notification” means notification published in the *Government Gazette*.
- “Occupier” means the owner if he resides on the holding, but if not, his resident manager.
- “Owner” means—
- (a) the person registered as the holder of any lease or license, or promise of lease or license from the Crown; or
 - (b) the person registered as the holder of any purchase, whether conditional or otherwise, from the Crown; or
 - (c) the applicant for a homestead selection whose application has been confirmed; or
 - (d) the person entitled at law to an estate of freehold in possession in any land granted by the Crown for private purposes; or
 - (e) the person in whom is vested any land taken or appropriated under authority of any statute authorising land to be taken or appropriated for the purposes of any private undertaking;
 - (f) in respect to public lands, the Minister;
 - (g) in respect of lands situate within the boundaries of any Borough or Municipal District, the Council of such Borough or District for the time being.
- “Pastures and Stock Protection Acts” means the Act forty-fourth Victoria number eleven, or as amended by the Act forty-fifth Victoria number twenty-three, or any other Act now or hereafter to be passed.
- “Prescribed” means prescribed by this Act or any regulation to be made thereunder.
- “Private holding” means a holding consisting of lands which are not public lands as hereinafter described.
- “Private lands” means lands which are not public lands as hereinafter described.
- “Public Land” means—
- (a) land vested in the Crown which is not the subject of any lease or license, or promise of, or agreement for, any lease or license under the Crown Lands Acts or under any other Act authorising the occupation or use of land vested in the Crown, and which is not the subject of any contract for the sale thereof; or
 - (b) any land which is the subject of any dedication or permanent reservation for public uses or purposes, not being for a road, whether the said land has been granted for the said uses or purposes or not, and which is not for the time being lawfully held under any lease or license, or promise of, or agreement for, any lease or license.
- “Stock Board” means the Board of Directors constituted pursuant to the provisions in force for the time being of the “Pastures and Stock Protection Act” as amended by the Act forty-fifth Victoria number twenty-three, or any other Act.

(No. 2.)

DRAFT of a Bill amending the "Diseases in Sheep Acts Amendment Act of 1878."

60° VICTORIÆ, 1897.

A BILL*intituled*

An Act to amend the "Diseases in Sheep Acts Amendment Act of 1878," in respect of Elections of Sheep Directors thereunder.

BE it enacted by the Queen's Most Excellent Majesty, by and with the advice and consent of the Legislative Council and Legislative Assembly of New South Wales in Parliament assembled, and by the authority of the same, as follows:—

1. For the purposes of the First Election of Directors under the Diseases in Sheep Acts Amendment Act (forty-first Victoria number nineteen) to be holden after the passing of this Act, and for all subsequent Elections of such Directors, instead of the words "five hundred" in section five of that Act, the words "two hundred and fifty" shall be read; and for the purposes aforesaid instead of the First Schedule to the said Act, there shall be substituted the Schedule following, viz.:—

FIRST SCHEDULE.

SCALE of Votes which owners or superintendents of sheep stations shall be entitled to record at Elections of Sheep Directors.

250 and not over 3,000 sheep	...	...	...	1 vote.
Over 3,000 and not over 10,000 sheep	...	...	...	2 votes.
Over 10,000 and not over 20,000 sheep	...	...	...	3 votes.
Over 20,000 and not over 30,000 sheep	...	...	...	4 votes.
Over 30,000 and not over 40,000 sheep	...	...	...	5 votes.
Over 40,000 and not over 50,000 sheep	...	...	...	6 votes.
Over 50,000 and not over 60,000 sheep	...	...	...	7 votes.
Over 60,000	...	...	...	8 votes.

2. In any case in which the returns made under the Diseases in Sheep Act of 1866, or any Act amending that Act, are for a less number of sheep than two hundred and fifty, the owners or occupiers of the land in respect of which such returns have been made, shall, if the same be wholly or mainly cultivated lands, have a right to vote at the Elections of Sheep Directors on a scale proportioned to the carrying capacity of such lands; provided that the carrying capacity of such lands shall be taken to be acres to one sheep.

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

RABBIT BILL.

(PETITION FROM SELECTORS AND LANDHOLDERS RESIDENT IN THE BULLOCK CREEK SOUTH DISTRICT, IN FAVOUR OF.)

Received by the Legislative Assembly, 3rd August, 1897.

To the Honorable the Speaker and Members of the Legislative Assembly of New South Wales in Parliament assembled.

The Petition of the undersigned Selectors and Landholders resident in the Bullock Creek South District, and being members of the Bullock Creek South Farmers' Association,—

HUMBLY SHOWETH THAT:—

1. Legislation to deal with the rabbit and other noxious animal pests is urgently required, and that a Bill having this object in view is shortly to be introduced into your Honorable House.

2. Your Petitioners are landholders within the district named, who are seriously affected by the presence of the rabbit and other noxious animal pests, and will therefore be materially advantaged by an effective legislation dealing therewith.

3. Your Petitioners are of opinion that the prevalence of these pests and the futility of all attempts to deal with same, are largely due to the fact that large areas of Crown lands, in the infested districts, are unoccupied, having been abandoned, or are occupied by a very sparse population, altogether insufficient to cope with the pests by known methods; and furthermore, such lands have, within recent years, become overrun with scrub and other noxious growths, forming a harbour for these pests and rendering the problem of their eradication the more difficult of solution. Because of these conditions, the lands of your Petitioners have become very much deteriorated, notwithstanding the continuous efforts and expenditure incurred to protect the same, and under existing conditions the outlook is most unpromising.

4. As the outcome of past experience, your Petitioners are convinced that the most effective means of coping with these pests is by enclosing individual holdings with wire-netting, and thus rendering it possible to keep down the pests within such enclosed holdings, thereby bringing same back to a profitable state of occupancy. On account of the very heavy initial expense necessary to secure this means of protection, your Petitioners have not been able to avail themselves largely of it.

5. Your Petitioners respectfully and earnestly commend to your favourable consideration the proposals contained in the 20th clause of the Rabbit Bill as drafted for your consideration by the late Rabbit Conference. This clause, as will be seen, provides the machinery by which your Honorable House may place at the disposal of the Minister funds with which to purchase wire-netting, and resell same to landholders to enclose their holdings on terms which will enable said landholders to treat with the Minister for its purchase, and will at the same time secure the State against loss.

6. Whilst urging that this clause may be embodied in proposed legislation in its entirety, your Petitioners would suggest that it be made sufficiently elastic as to extend protection against other noxious animals, such as wallabies and hares, which, in some districts, are becoming a menace equal to that of the rabbit pest, so that your Honorable House and the Minister may be enabled to afford assistance to cope with all forms of noxious animals where deemed desirable to do so.

Your Petitioners humbly pray, therefore, that when considering the proposed Rabbit Bill in detail your Honorable House will provide legislation empowering your Honorable House to place such sums of money at the disposal of the Minister as will enable him to purchase wire-netting and resell same to landholders on such terms as will permit them acquiring same, and will at the same time secure the State against losses on such transactions, thereby enabling holders to cope with the rabbit and other noxious pests; and to this end your Petitioners desire to commend to your favourable consideration clause 20 of the Rabbit Conference's Draft Rabbit Bill.

And your Petitioners, as in duty bound, will ever pray.

[Here follow 33 signatures.]

A similar Petition was received,—

On 3rd August, 1897, from certain Selectors and Landholders and others resident in the Alectown District.—19 signatures.

[3d.]

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

RABBIT BILL.

(PETITION FROM LANDHOLDERS AND SELECTORS RESIDENT IN PEAK HILL AND DISTRICT,
IN FAVOUR OF.)

Received by the Legislative Assembly, 19 August, 1897.

To the Honorable the Speaker and Members of the Legislative Assembly of New South Wales in
Parliament assembled.

The Petition of the undersigned, being landholders and selectors resident in Peak Hill and district,—

HUMBLY SHOWETH:—

That your Petitioners are seriously affected by the depredations of wallabies, rabbits, and other noxious animal pests. The measures taken by the aforesaid landholders for the destruction of the said pests are abortive, owing principally to the large areas of Crown lands in the infested districts which are unoccupied or sparsely populated, and not able to cope with the said pests by any known means. Owing to these conditions the lands are deteriorating in value, and the owners are greatly impoverished through losses of stock and extra expenditure incurred to protect the same, and must ultimately lead to the abandonment of a majority of the holdings. Experience shows that the only means of effectually coping with these pests is by enclosing holdings, or groups of holdings, with wire netting, making it possible to eradicate the pests inside the said holdings.

Your Petitioners respectfully believe that the proposals embodied in the 20th clause of the Rabbit Bill now before you for your consideration will meet the exigencies of the case by providing wire netting on the deferred-payment principle, thereby saving the State and landholders from loss.

The initial expense of procuring wire netting being beyond the means of the majority of your Petitioners, your Petitioners pray, when considering the proposed Rabbit Bill, that you will favourably consider the 20th clause of the Rabbit Conference Draft Rabbit Bill, also making it sufficiently elastic to embrace wallabies and other noxious animals.

And your Petitioners, as in duty bound, will ever pray.

[Here follow 9 signatures.]

Similar Petitions were received—

On 19th August, 1897, from certain landholders and selectors, resident in the Peak Hill District;
17 signatures.

On 19th August, 1897, from certain landholders and selectors, resident in the Peak Hill District;
10 signatures.

1897.

—

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

RABBIT BILL.

(PETITION FROM CERTAIN LANDHOLDERS IN DUBBO AND SURROUNDING DISTRICTS,
IN FAVOUR OF.)

—
Received by the Legislative Assembly, 24 August, 1897.
—

To the Honorable the Speaker and Members of the Legislative Assembly of New South Wales in
Parliament assembled.

The Petition of the undersigned landholders,—

RESPECTFULLY SHOWETH:—

That whilst commending to your favourable consideration the proposal contained in the 20th clause of the Rabbit Bill, as drafted for your consideration by the late Rabbit Conference, we desire to pray that said clause be made sufficiently elastic in its provisions so as to provide protection against other noxious animals, such as hares, wallabies, rats, &c., which are a menace in this portion of the Dubbo and surrounding districts.

And your Petitioners, as in duty bound, will ever pray.

[Here follow 11 signatures.]

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

RABBIT BILL.

(PETITION FROM FARMERS AND LANDHOLDERS IN THE CONDOBOLIN LAND DISTRICT, IN FAVOUR OF.)

Received by the Legislative Assembly, 26 August, 1897.

To the Honorable the Speaker and Members of the Legislative Assembly of New South Wales in Parliament assembled.

The Petition of the undersigned Selectors and Landholders in the Condobolin Land District, and being members of the Molrose and Walker's Hill and other Farmers' Associations, and others,—

HUMBLY SHOWETH THAT:—

1. Legislation to deal with the rabbit and other noxious animal pests is urgently required, and that a Bill having this object in view is shortly to be introduced into your Honorable House.

2. Your Petitioners are landholders within the district named, who are seriously affected by the presence of the rabbit and other noxious animal pests, and will therefore be materially advantaged by any effective legislation dealing therewith.

3. Your Petitioners are of opinion that the prevalence of these pests and the futility of all attempts to deal with same, are largely due to the fact that large areas of Crown lands, in the infested districts, are unoccupied, having been abandoned, or are occupied by a very sparse population, altogether insufficient to cope with the pests by known methods; and furthermore, such lands have, within recent years, become overrun with scrub and other noxious growths, forming a harbour for these pests and rendering the problem of their eradication the more difficult of solution. Because of these conditions, the lands of your Petitioners have become very much deteriorated, notwithstanding the continuous efforts and expenditure incurred to protect the same, and under existing conditions the outlook is most unpromising.

4. As the outcome of past experience, your Petitioners are convinced that the most effective means of coping with these pests is by enclosing individual holdings with wire-netting, and thus rendering it possible to keep down the pests within such enclosed holdings, thereby bringing same back to a profitable state of occupancy. On account of the very heavy initial expense necessary to secure this means of protection, your Petitioners have not been able to avail themselves largely of it.

5. Your Petitioners respectfully and earnestly commend to your favourable consideration the proposals contained in the 20th clause of the Rabbit Bill as drafted for your consideration by the late Rabbit Conference. This clause, as will be seen, provides the machinery by which your Honorable House may place at the disposal of the Minister funds with which to purchase wire-netting, and resell same to landholders to enclose their holdings on terms which will enable said landholders to treat with the Minister for its purchase, and will at the same time secure the State against loss.

6. Whilst urging that this clause may be embodied in proposed legislation in its entirety, your Petitioners would suggest that it be made sufficiently elastic as to extend protection against other noxious animals, such as wallabies and hares, which, in some districts, are becoming a menace equal to that of the rabbit pest, so that your Honorable House and the Minister may be enabled to afford assistance to cope with all forms of noxious animals where deemed desirable to do so.

Your Petitioners humbly pray, therefore, that when considering the proposed Rabbit Bill in detail your Honorable House will provide legislation empowering your Honorable House to place such sums of money at the disposal of the Minister as will enable him to purchase wire-netting and resell same to landholders on such terms as will permit them acquiring same, and will at the same time secure the State against losses on such transactions, thereby enabling holders to cope with the rabbit and other noxious pests; and to this end your Petitioners desire to commend to your favourable consideration clause 20 of the Rabbit Conference's Draft Rabbit Bill.

And your Petitioners, as in duty bound, will ever pray.

[Here follow 54 signatures.]

Similar Petitions were received,—

On 26th August, 1897, from certain Selectors and Landholders and others resident in the Condobolin District, and members of the Mowabla and Kiacatoo Farmers and Selectors' Association.

” ” from Selectors and Landholders resident in the Bulbodney District, and members of the Bulbodney Selectors' Association.

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

RABBIT BILL.

(PETITION FROM LANDHOLDERS AND SELECTORS RESIDENT IN THE BULBODNEY DISTRICT, IN FAVOUR OF THE 20TH CLAUSE OF THE RABBIT CONFERENCE DRAFT BILL.)

Received by the Legislative Assembly, 20th October, 1897.

The Honorable the Speaker and Members of the Legislative Assembly of New South Wales, in Parliament assembled.

The Petition of the undersigned Selectors and Landholders resident in the Bulbodney District, and being members of the Bulbodney Selectors' Association,—

HUMBLY SHOWETH THAT:—

1. Legislation to deal with the rabbit and other noxious animal pests is urgently required, and that a Bill having this object in view is shortly to be introduced into your Honorable House.

2. Your Petitioners are landholders within the district named, who are seriously affected by the presence of the rabbit and other noxious animal pests, and will therefore be materially advantaged by any effective legislation dealing therewith.

3. Your Petitioners are of opinion that the prevalence of these pests, and the futility of all attempts to deal with same, are largely due to the fact that large areas of Crown lands, in the infested districts, are unoccupied, having been abandoned, or are occupied by a very sparse population, altogether insufficient to cope with the pests by known methods; and furthermore, such lands have, within recent years, become overrun with scrub and other noxious growths, forming a harbour for these pests and rendering the problem of their eradication the more difficult of solution. Because of these conditions, the lands of your Petitioners have become very much deteriorated, notwithstanding the continuous efforts and expenditure incurred to protect the same, and under existing conditions the outlook is most unpromising.

4. As the outcome of past experience, your Petitioners are convinced that the most effective means of coping with these pests is by enclosing individual holdings with wire-netting, and thus rendering it possible to keep down the pests within such enclosed holdings, thereby bringing same back to a profitable state of occupancy. On account of the very heavy initial expense necessary to secure this means of protection, your Petitioners have not been able to avail themselves largely of it.

5. Your Petitioners respectfully and earnestly commend to your favourable consideration the proposals contained in the 20th clause of the Rabbit Bill as drafted for your consideration by the late Rabbit Conference. This clause, as will be seen, provides the machinery by which your Honorable House may place at the disposal of the Minister funds with which to purchase wire-netting, and resell same to landholders to enclose their holdings on terms which will enable said landholders to treat with the Minister for its purchase, and will at the same time secure the State against loss.

6. Whilst urging that this clause may be embodied in proposed legislation in its entirety, your Petitioners would suggest that it be made sufficiently elastic as to extend protection against other noxious animals, such as wallabies and hares, which, in some districts, are becoming a menace equal to that of the rabbit pest, so that your Honorable House and the Minister may be enabled to afford assistance to cope with all forms of noxious animals where deemed desirable to do so.

Your Petitioners humbly pray, therefore, that when considering the proposed Rabbit Bill in detail your Honorable House will provide legislation empowering your Honorable House to place such sums of money at the disposal of the Minister as will enable him to purchase wire-netting and resell same to landholders on such terms as will permit them acquiring same, and will at the same time secure the State against loss on such transactions, thereby enabling holders to cope with the rabbit and other noxious animal pests; and to this end your Petitioners pray for your favourable consideration of 20th clause of the Rabbit Conference's Draft Rabbit Bill.

And your Petitioners, as in duty bound, will ever pray.

[Here follow 35 signatures.]

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

REPORT

OF THE

PROCEEDINGS OF A CONFERENCE

RESPECTING THE

NOXIOUS WEEDS PEST

IN

NEW SOUTH WALES,

COMMENCED AT THE CHAMBER OF COMMERCE, SYDNEY,

ON TUESDAY, MARCH 16TH, 1897,

In response to invitations issued at the direction of the Hon. J. H. Carruthers,
Minister for Lands.

Printed under No. 2 Report from Printing Committee, 6 May, 1897.



SYDNEY: WILLIAM APPELEGATE GULLICK, GOVERNMENT PRINTER.

1897.

NOXIOUS WEEDS CONFERENCE,

HELD 16TH, 17TH, 18TH, AND 19TH, MARCH, 1897.

Report of Proceedings, for presentation to the Honorable J. H. Carruthers,
Minister for Lands.

THE proceedings were opened by the Minister, who had invited representatives from the different Pasture and Stock Boards, Selectors' Associations, and Farmers' Unions in the country, as well as from the leading Agency Firms of Sydney, to take part in the deliberations for the purpose of discussing the provisions of the Noxious Weeds Bill, with a view to making fresh recommendations on which to base an amended Bill.

The Honorable Rupert Carington was unanimously elected Chairman of the Conference, in which the following gentlemen took part:—

Alfred Brown, Narrabri.	E. Hayes, at invitation of Minister.
John Dill, Hay.	H. G. Freeman, do.
F. W. Bacon, Brewarrina.	A. H. M'Collough, Deniliquin.
Philip Oakden, Cobar.	E. A. Stinson, Coolamon.
J. Wilkes, Broken Hill.	P. R. Brett, Urana.
J. W. Brougham, Menindie.	J. J. Baylis, Narrandera.
A. Laurence, Balranald.	C. F. Bolton, Wagga Wagga.
T. S. Pearse, Orange.	G. C. Little, Bullock Creek, N.
T. C. Worboys, Orange.	T. Brown, M.L.A., Budgerabong.
R. T. B. Gaden, Dubbo.	T. Looney, Bullock Creek, S.
Thomas Leslie, Forbes.	R. H. Maund, O'Connell.
A. Anderson, Corowa.	R. H. Kirkpatrick, Nyngan.
W. F. Lawry, invitation of Minister.	John Ward, Nyngan.
W. H. Armstrong, Canonbar.	G. Davidson, Condobolin.
J. H. Davies, Gunnedah.	J. R. Varcoc, Hillston.
J. M. Atkinson, invitation of Minister.	A. Cumming, Hillston.
W. Alison, Canonbar.	P. J. Gorman, Berrigan.
R. Gibson, Hay.	J. R. Cooke, Berrigerry.
The Honorable Rupert Carington, Jerilderie.	A. T. Brooke, Boggabri.
A. L. B. Cameron, Ivanhoe.	John M'Aneney, Trundle.
J. Flanagan, Gunbar.	— Wilson,
F. A. Oatley, at invitation of Minister.	A. Ross, Hume.
J. Perry, M.L.A.	— Sides, Hay.
	T. Waddell, M.L.A.

The Conference proceeded to discuss the subject for which they had assembled.

The result of the deliberations of the Conference was the adoption of the following resolutions :—

That the Preamble be passed as printed.

A BILL to provide for the eradication and destruction and for preventing the growth of Noxious Weeds, and to prohibit and regulate the importation of Noxious Weeds, and of articles which might spread their growth.

Be it enacted by the Queen's Most Excellent Majesty, by and with the advice and consent of the Legislative Council and Legislative Assembly of New South Wales in Parliament assembled, and by the authority of the same, as follows :—

That Clause 1. be amended as under :—

Except as provided in clause 8, noxious weeds shall mean Bathurst burr and such weeds as shall be declared noxious by the Governor by proclamation in the *Gazette* and local newspapers, on the recommendation of the local authorities; and such proclamation shall apply only to such districts or parts thereof named therein. The Governor may also by general election or special proclamation in the *Gazette* declare any plant to be a noxious weed within the meaning of this Act, and such plant shall be deemed to be a noxious weed throughout the Colony or such parts of it as named in the proclamation. The Governor may from time to time vary or revoke such general proclamation, providing that such general proclamation, shall not have the force of law until it has been laid before both Houses of Parliament for one month. And the Minister shall thereafter furnish the local authorities affected with a copy of every such general or special proclamation.

That Clause 2 be amended as under :—

Local authorities.

2. Subject to the provisions hereinafter contained the provisions of this Act dealing with the eradication and destruction of noxious weeds shall be administered by the following local authorities—

- (a) within the boundaries of any municipality or land set apart for public purposes, and for which trustees are or may hereafter be appointed, now or hereafter to be constituted the council of that municipality or land set apart for public purposes, and for which trustees are or may hereafter be appointed;
- (b) within the boundaries of any sheep district proclaimed under the Diseases in Sheep Act of 1866 or any Act amending the same, exclusive of land within the boundaries of any municipality or land set apart for public purposes, and for which trustees are or may hereafter be appointed the board of directors under the Stock and Pastures Act, with one Government representative for the purposes of this Act,

and in each case the area within which a municipal council, board of directors, aforesaid, or lands held in trust for public purposes, shall constitute a district for the purposes of this Act.

That Clause 3 be amended as under :—

Eradication and destruction of noxious weeds.

3. The local authority shall, within their district, have power to eradicate and destroy all noxious weeds growing on vacant Crown lands, roads, and public reserves not under lease or license.

Where the local authority are a municipal council or trustees of land set apart for public purposes, they shall eradicate and destroy all noxious weeds growing on all roads, including main roads, within the municipality, or lands set apart for public purposes.

That Clause 4 be amended as under :—

4. (i) On receipt of any information respecting the existence of noxious weeds on land within their district, the local authority shall, if satisfied of the existence of the noxious weeds, serve a notice on the occupier of the land, requiring him to eradicate and destroy, to the satisfaction of the Board, the noxious weeds within the time specified in the notice, and to execute such works and do such things as may be necessary for that purpose, and if the local authority think it desirable (but not otherwise) specifying any works to be executed.

(ii) Provided that where the occupier cannot be found, the local authority may themselves eradicate and destroy the noxious weeds.

(iii) If the occupier of land shall be unknown or absent from the Colony, and the expense incurred hereunder in clearing such land of noxious weeds cannot be recovered from him, and remain unpaid for more than months after the same shall have become due, the local authority may let such land for any period not exceeding five years, upon terms and conditions to be prescribed, and shall receive the rents and profits thereof, and shall apply the same in payment of such expenses with interest thereon at the rate of 10 per centum per annum, so long as the same shall be unpaid: And such authority shall hold the surplus (if any) upon trust for the person entitled to such surplus."

That Clause 5 be amended as under :—

5. (i) If the person on whom a notice to eradicate and destroy noxious weeds has been served as aforesaid makes default in complying with any of the requisitions thereof within the time specified, the local authority may by any person authorised by them in that behalf make a complaint to a justice, and such justice shall thereupon issue a summons requiring the person on whom the notice was served to appear before a police or stipendiary magistrate or any two justices in petty sessions.

(ii) The said magistrate or justices may, if satisfied that noxious weeds exist as alleged, by order require the said person to comply with all or any of the requisitions of the notice, or otherwise to eradicate and destroy the noxious weeds within a time specified in the order, and may, if thought desirable, specify the works to be executed by the said person for that purpose.

(iii) If a person fails to comply with an order of a magistrate or justices made as aforesaid, with respect to the eradication and destruction of the noxious weeds, he shall, unless he satisfies the Court that he has used all due diligence to carry out such order, be liable to a penalty not exceeding *twenty* shillings a day during his default. Moreover, the local authority may enter the land to which any order under this Act relates, and eradicate and destroy the noxious weeds, and do whatever may be necessary in execution of such order.

(iv) All costs, charges, and expenses incurred by a Local Authority, or any person authorised by a Local Authority, in clearing any private land of noxious plants under the provisions of this Act, shall be a first charge upon such land, and shall take precedence of all mortgages or other charges whatsoever upon such land: Provided always that a certificate under the hand of such Local Authority shall be a full discharge of all such costs, charges, and expenses up to the date of such certificate.

That Clause 6 be passed as printed.

6. The local authority may, for the purpose of carrying out the provisions of this Act, enter or authorise any person by writing properly authenticated by the said authority to enter, at any time, with men, vehicles, horses, and bullocks, and necessary appliances, into and upon any land within their district.

That Clause 7 be amended as under.

7. If it appears to the Minister that the local authority have neglected to exercise any powers conferred or duties imposed on them by this Act, the Minister may give notice in writing requiring the local authority to exercise the powers and perform the duties aforesaid within a period to be named in the notice.

If the said requirement is disobeyed, or is not complied with, it shall be lawful for the Minister to exercise the powers or perform the duties of such local authorities and recover the expense thereby incurred from such local authorities in the case of municipal councils or lands held in public trust and from the owner or holders of such other lands so occupied.

That Clause 8 be passed as printed.

Restriction of importation of noxious weeds.

8. The Governor may make regulations—

- (a) prohibiting the importation into New South Wales of any noxious weeds or of the seed of any noxious weeds, and providing for the destruction of the same if imported contrary to the said regulations;
- (b) regulating the importation into New South Wales of articles, the importation or use of which would, in the opinion of the Governor, tend to spread the growth of noxious weeds;

And the Governor may in those regulations impose any penalty not exceeding *twenty* pounds for any breach thereof.

All regulations made as aforesaid shall when published in the *Gazette* have the force of law, and shall be laid before both Houses of Parliament within fourteen days if Parliament be then sitting, but if not then within fourteen days after the commencement of the next following Session of Parliament.

That Clause 9 be passed as printed.

9. Whosoever hinders or obstructs any person in the exercise of a power conferred or duty imposed on him, by or under authority conferred by this Act, or by any regulations made thereunder, shall be liable to a penalty not exceeding *twenty* pounds.

That Clause 10 be amended to read as under:—

10. All sums of money expended by the local authority, under the authority of or in pursuance of the provisions of this Act, shall be paid as follows:—

- (a) Where the council of any municipality or trustee of any land set apart for public purposes is the local authority, payment shall be made out of the funds of the municipality or trustee of any land set apart for public purposes.
- (b) Where the board of directors aforesaid of a sheep district, is the local authority, payment shall be made out of the Consolidated Revenue Fund, or from such other source as provided for such purposes under this Act.
- (c) Where the Board of a district is the local authority, a charge shall be levied on all travelling stock, for the purpose of destroying noxious weeds on travelling stock routes or reserves.
- (d) Provided that no such payments shall be made under subsections (a) and (b) where land belongs to private owners, but shall be recoverable from such owner, on an order made by a Police or Stipendiary Magistrate or any two Justices in Petty Sessions.

That Clause 11 be passed as printed:—

11. Penalties imposed by this Act or by any regulations made thereunder may be recovered before, and offences against this Act may be heard and determined by, a Police or Stipendiary Magistrate, or any two Justices of the Peace in Petty Sessions.

That

That Clause 12 be passed as printed :—

12. In this Act, unless the context otherwise requires :—

“ Governor ” means the Governor with the advice of the Executive Council.

“ Justice ” means Justice of the Peace.

“ Minister ” means Secretary for Lands, and includes any Minister of the Crown having the administration of this Act.

“ Occupier ” includes the person having the charge, management, or control of the land referred to.

That Clause 13 be amended as under :—

13. This Act shall take effect on and after the _____ day of _____ one thousand eight hundred and ninety-seven, and may be cited as the “ Noxious Weeds Act, 1897.”

That the following be inserted as a new Clause :—

Clause 14.

“ That in every district or part thereof in which prickly-pear shall have been declared a noxious weed by proclamation under this Act, the Minister may vest the local authority, charged with the administration of the Prickly Pear Act of 1886, subject to the control of the Minister, to carry out and enforce the provisions thereof and the regulations issued thereunder.”

Before the conclusion of the sittings the Members desired that the following be urged on the Minister :—“ That, in view of the rapid increase of the sweetbriar, prickly-pear, and tobacco-plant, and other noxious weeds, and the necessity for a cheap and efficient means of dealing with same, this Conference urges the Government to offer a reward for the discovery of a cheap and efficient means of eradicating noxious growths.”

The Chairman (the Honorable Rupert Carington), together with Mr. J. M. Atkinson, Mr. Wilson, Mr. Davies, and Mr. Brown, M.P., were appointed a Committee to present the resolutions of the Conference to the Minister, and, if desired, to confer with him upon it.

RUPERT CARINGTON,
Chairman.

19th March, 1897.

NOXIOUS WEEDS CONFERENCE.

REPORT OF PROCEEDINGS.

FIRST DAY—16TH MARCH, 1897.

THE Conference met at 10 a.m., and the following gentlemen took part in the deliberations:—

Alfred Brown, Narrabri.	H. G. Freeman, at invitation of Minister.
John Dill, Hay.	A. H. M'Collough, Deniliquin.
F. W. Bacon, Brewarrina.	E. A. Stinson, Coolamon.
Philip Oakden, Cobar.	P. R. Brett, Urana.
J. Wilkes, Broken Hill.	J. J. Baylis, Narrandera.
J. W. Brougham, Menindie.	C. F. Bolton, Wagga Wagga.
A. Laurence, Balranald.	G. C. Little, Bullock Creek, N.
T. S. Pearse, Orange.	T. Brown, M.L.A., Budgerabong.
T. C. Worboys, Orange.	T. Looney, Bullock Creek, S.
R. T. B. Gaden, Dubbo.	R. H. Maund, O'Connell.
Thomas Leslie, Forbes.	R. H. Kirkpatrick, Nyngan.
A. Anderson, Corowa.	John Ward, Nyngan.
W. F. Lawry, at invitation of Minister.	G. Davidson, Condobolin.
W. H. Armstrong, Canonbar.	J. R. Varcoe, Hillston.
J. H. Davies, Gunnedah.	A. Cumming, Hillston.
J. M. Atkinson, at invitation of Minister.	P. J. Gorman, Berrigan.
W. Alison, Canonbar.	J. R. Cooke, Berrigerry.
R. Gibson, Hay.	A. T. Brooke, Boggabri.
The Honorable Rupert Carington, Jerilderie.	John M'Aneney, Trundle.
A. L. B. Cameron, Ivanhoe.	— Wilson,
J. Flanagan, Gunbar.	A. Ross, Hume.
F. A. Oatley, at invitation of Minister.	— Sides, Hay.
E. Hayes, do.	

The Honorable RUPERT CARINGTON was unanimously elected Chairman.

Mr. PHILIP OAKDEN (Cobar) proposed, "That the proposer of a motion be allowed ten minutes, and any seconder five minutes."

Carried unanimously.

Mr. ALISON (Canonbar) pointed out that the Bill proposed to lay very heavy and arduous responsibility on landowners. In many parts of the Colony the prickly-pear, which might be fairly described as a noxious weed, so heavily infested freehold land that to thoroughly destroy it by any private owner practically meant his ruin, or even if the Government had to destroy it it would almost swallow up the whole of the revenue of the Colony. If the Government were obliged, as he did not see they were obliged, in this Act to destroy all prickly-pear on all Crown lands, the expense would be something enormous. It would have been well, before this Bill had been brought before us, to have had some estimate made of what the cost would have been to private owners to begin with, and secondly to the Government. It would have assisted the Conference materially to have arrived at a conclusion with regard to the provisions of the Bill. He would like to see some provision in the Bill that private owners could not be ruined by any arbitrary action of the Boards under whose control this Act was placed, and it would be well to provide against the rights of individuals being seriously jeopardised. They would quite understand that if there was an arbitrary Board elected, they could ruin a man by compelling him to take action to destroy the weeds on his property. He thought it would be better to have progressive eradication of it, and great care would have to be taken by this Conference to see that no harsh or arbitrary action was taken. Take, for instance, the briar. There were parts of the country where, to provide for its total destruction, would simply mean ruination to the owner. They should see that all reasonable efforts should be made, but that an appeal should always be allowed in the matter. He drew attention to the principle they had adopted in the Rabbit Act, and he thought they had made a very great mistake in allowing arbitrary power to the Boards to say that the rabbits "shall" be destroyed. There was no appeal, and there was the mistake. They should not allow any tyrannical action to be taken by any Boards. They should simply see that all reasonable efforts were made; otherwise private interest might be seriously injured.

Mr. LAURENCE (Balranald) pointed out that the whole of the Western Division, from Balranald to the South Australian border, was infested with a plant known as the tobacco-tree, and he could state that as much as 30s. per acre had been paid on some of the runs adjacent to Balranald to eradicate this plant. The leasehold areas were greatly infested, and because lessees only have a tenure of twelve months they have not spent the same amount of money as they should have done. He held letters from several gentlemen

gentlemen in the Balranald district which he would read for the information of the Conference. Some of the letters told him that if the lessees were told to clear their holdings without being subsidised by the Government they would have to abandon their holdings. He held that the eradication of this plant would be a benefit to the whole Colony. He thought, therefore, the Boards ought to have power to let by contract the eradication of this plant, both on the leasehold and resumed areas, and he considered it only fair that the Minister should pay on the leasehold area at the rate of, at least, 75 per cent. of the cost.

Mr. WILKES (Broken Hill) held with most of the remarks of the previous speaker. He thought they would help to embody in this Bill something that they threw out in the Rabbit Bill, and that was they could not declare the whole of the Colony infested. It would have to be divided in some manner into districts, and the majority of those interested, or the Minister, would have to declare certain weeds to be noxious weeds within that district. Previous speakers had referred to the arbitrary manner in which they had given power to the Board in killing rabbits. It was required in that Bill.

The Minister for Lands entered amid acclamation.

The Honorable J. H. CARRUTHERS said: Mr. Chairman and Gentlemen,—I convened this meeting to deal with the question of noxious weeds, in order that you might assist in the Bill which I propose to introduce in the ensuing session of Parliament. I submit the draft Bill, copies of which you have in your possession. You must understand that that draft Bill is just a rough draft. It has not been finally revised, so you may find some defects in the draftsmanship of it; but it will be a good basis to go upon. The principle of the Bill, practically, is to make it a legal obligation on landowners to destroy the noxious weeds on their own property, and to make it an offence if the noxious weeds are not destroyed, stating certain local authorities who will have the oversight and the administration of the Bill—municipalities and the Board of Directors of a Sheep District, and, in other portions of the Colony where there is no Board of Directors to look after the work, such persons as the Government may appoint—and there is also a restriction on the importation of noxious weeds. I believe most of the noxious weeds have been imported here, and that, therefore, the experience of the past shows us we ought to be very careful in the future to restrict the importation of noxious weeds, which at the moment may not seem to be dangerous, but which, perhaps, may bring about as big a danger as the Bathurst burr and the sweetbriar. In my travels I have been wonderfully struck with the change which has come over the vegetation which has been imported into the various districts. Everybody is thoroughly acquainted with the injury that has been done by the sweetbriar, and the large amount of money they have had to spend for the attempted eradication of it. There is not a pastoralist who is not acquainted with the injury which the Bathurst burr does for New South Wales. I have recently noticed a serious injury that is accruing in the colder climates of the Colony by the spread of the English blackberry, and I think we have in that a very great danger; but when I spoke to people in various parts of the Colony on the probability of the blackberry being declared a noxious weed, the protest was at once raised that it was an article of commerce. But I saw enough in the New England district to convince me the blackberry would be one of the greatest evils in these districts that has ever been introduced into this Colony. I have seen Crown reserves which were set apart for the purpose of travelling stock absolutely overrun. It would cost hundreds of pounds to rescue them. The whole of the surrounding country is being gradually sown broadcast with this, to my mind, very serious evil. In the neighbourhood of Sydney, in the National Park, which has been reserved for the benefit of the people of Sydney, a great deal of the country is being overrun by this mere weed, and it seems to me that we must put aside the little benefit that is gained by a few people picking blackberries. Now the Bill proposes that there shall be a Schedule to declare what shall be noxious weeds. The matter is one of great simplicity. The only question in the administration of whatever law is passed is, that if you make it an obligation on a landowner, you must put it in the power of small men to cope with the pest. And, therefore, if we say it is necessary to cause such steps to be taken by a small property owner to get rid of the pest on his property, you must consider what, first of all, is the object of so doing. The object is not so much to clear that man's land as to move a menace from surrounding property; and, therefore, having regard to that, the question comes in how far people who are indirectly benefited will have to do the work themselves. I have no doubt there will be considerable strength in the argument that the Crown ought to undertake its work of clearing all the Crown lands; but you must be well acquainted with the fact that the prickly-pear has now gained possession of tracts of Crown lands we cannot give away. I have plenty of lands that anyone can have on a ninety-nine years lease, for no rent, if they will clear them of the prickly-pear. We will have to approach the question of clearing Crown lands in the same way as we approach the clearing of lands for the poor man. We will have to be very careful in dealing with this matter. Legislation must be based on this fact, that the benefit of dealing with the pest is not a benefit wholly and solely to the individual whose property is affected, and whose property is cleared, but a benefit to the surrounding holders as well. You will find that the Bill provides that there may be an administration of the law with regard to any owner who proves that he is unable to deal with the pest within a given period—that is to say, that the local authorities may extend the time during which a person may deal with the pest on his own lands. Since this Bill was drafted it has impressed itself on my mind that it would be necessary to have some assistance given by a general local tax, of a very light character, so as to allow those who have small holdings heavily encumbered with the pest to have some assistance in the work of clearing their property. I do not think we need take very much time over this Bill. If you will submit your recommendation, I will have a Bill drafted on these recommendations, and send it on to a committee of gentlemen you may nominate to receive such a Bill.

Mr. WILKES (Broken Hill) (continuing) thought they had got a matter to deal with that would require great consideration, and he was of opinion that each representative there should take the Bill back, and call meetings within their own districts, and get the opinion of the district. The Minister pointed out one weed—prickly-pear; to attempt to eradicate that would mean ruination to scores. He would like them to say whether the matter could not be referred to the various districts of the Colony.

Mr. WILSON said he was glad of the opportunity of saying a few words while the Minister was present. He would point out that it was the travelling stock routes and reserves that were the most infested parts of the whole Colony. He thought the Bill should be placed in the hands of the Pastures and Stock Boards. He considered the Bill did not deal properly with the Central and Western Divisions. It would be a distinct gain to every stockholder, and everybody else, if the stock routes and reserves were kept in good order; but at the present time they were not. The State having provided public watering-places should have a certainty of a more or less regular income; but in good

seasons

seasons drovers, instead of using these public watering-places and reserves, and paying for the use of them, went on to other men's land, and eat up all the grass, and drank their water. It might be a very neighbourly way of doing things, and he liked to be as neighbourly as he could, but it did not pay, and they must look at the thing from a business point of view. He considered that about 8,000,000 sheep and 1,000,000 cattle travelled on the roads every year, and on an average they travelled 50 miles. If they charged 1d. per head for 50 miles, that would produce an income of £37,500, which would go a long way towards paying for the expense of looking after the public watering-places and reserves, and keeping the roads clear from burrs. Another question he would like to touch on was whether travelling stock routes should be withdrawn from lease or not. There were many places where the lessee would be agreeable to lease, and other places where the lessee would not be agreeable to lease. It seemed to him that the Pastures and Stock Boards, living in the district, should be the body to give a decision on that point. The Department of Lands was not a qualified authority. He begged to move that the following new clauses be inserted in the Bill:—

- "1. That in the opinion of this Conference the whole of the travelling stock routes and camping reserves in the Central and Western Divisions should be under the control of the Pastures and Stock Boards.
- "2. That all public watering places should be under similar control.
- "3. That the Pastures and Stock Boards be charged with the duty of keeping all travelling stock routes and reserves free from Bathurst burr and other noxious weeds.
- "4. That all travelling stock should pay a fee according to the distance travelled, such fee to entitle them to water at all public watering places without further charge."

He proposed that this Bill should be made to apply only to the Central and Western Divisions.

The CHAIRMAN pointed out that that was a matter which should be dealt with on the second reading of the Bill.

Mr. ALISON (Canonbar) drew the attention of the Conference to the fact that there was already a Prickly-pear Act in existence, and if it had been carried out properly the prickly-pear would have been eradicated long ago. The Government lands were so covered with these weeds that it would cost enormous sums of money to clear them. With regard to the noxious weeds to be put in the Schedule, he did not think it would do to have a hard-and-fast rule all over the Colony. It might be advisable to have certain weeds proclaimed noxious all over the Colony—such, for instance, as the Bathurst burr; but in other cases it should be left to the Boards to decide what should be noxious weeds in their particular districts.

Mr. PEARSE (Orange) said, with regard to dealing with these pests, he had been very glad to hear the remarks that had fallen from the Minister with regard to sweetbriar. Unless very stringent action was taken with regard to it, it would eventually cost them an enormous sum of money to eradicate it from the land. He had received a number of letters from gentlemen in his district with regard to the subject of noxious weeds, and they all thought that something should be done, and done at once, in regard to this matter. The longer it was allowed to go on the worse it would become, as the seed was scattered over the land. He was sure that if prompt action was taken the weeds could be quickly eradicated.

Mr. ATKINSON said the pest was felt very much more in the Eastern Division than in the less populated parts. He was a great believer in the eradication of these noxious weeds. One thing he would point out was, that although one person might do his best to eradicate the weeds, the person owning the adjoining property made no attempt. He himself had for several years done his best to get them under; but his neighbours seemed not only not to eradicate them, but to cultivate them; in fact, one man had told him it added considerably to the weight of his wool, and he could assure them as a positive fact that that man cultivated them.

Mr. DILL (Hay) said that it had cost him something like £4,500 to get the burrs under. There were burrs on every stock route and reserve in the country, and they were let grow without any hindrance. Up the Murrumbidgee way they were all over the country. He had travelled over most of the Colony, and therefore spoke as a man with some experience.

Mr. ROSS (Hume) said that every travelling stock route was covered from side to side, but if some proper means were taken they could easily be kept down and thoroughly eradicated. He agreed with Mr. Alison that something ought to be done to protect travelling stock. As far as Bathurst burr was concerned, he thought it was very easily destroyed. In the Western District the blackberry was a great pest, and there were some parts where no stock could be carried on account of it. He did not think they wanted any Government assistance at all if some compulsory instructions were issued making every man kill the weeds on his land. At the same time he did not think it was fair that they should be called upon to eradicate the weeds upon travelling stock reserves. He thought the Government should clear them, because if they were kept clear it would be an easy matter to keep the other lands clear.

Mr. T. BROWN, M.L.A. (Budgerabong), said that they must recognise the principle that different districts have different peculiarities; and the law that might be applicable to one district would not be so to another. They would have to keep that in view, and the Schedule would have to be sufficiently elastic. There were such weeds as were generally prevalent—such as the Bathurst burr—that would be required to be declared noxious weeds over the whole of the Colony, and the sweetbriar, in the agricultural districts immediately between Sydney and the Central district, and also the prickly-pear. They recognised that all these noxious weeds were importations; and the Bill provided that the Minister could step in and prevent importations of seed that were likely to become a danger to the vegetable growth of the country. That was a piece of legislation that should have been in operation years ago; and he was quite sure, if it had been, it would have prevented the loss of untold sums of money to the producers in this country; and he did not think they could go far wrong in placing stringent power in the hands of the Minister in this direction. In dealing with the eradication of these weeds they must remember that there were vast areas of country that it would be impossible to eradicate. Under the present system the man who was spending his money in eradicating some of the noxious weeds was completely at the mercy of his neighbour; and some Crown lands were equally bad in the vicinity of his holding. They should endeavour to enforce a reasonable amount of compulsion in the direction of compelling owners to do something towards the destruction of the weeds on their holding, and also clear the routes.

Mr. PEARSE (Orange) said that in the Bill it was provided that municipalities should be called upon to destroy the weeds within their areas; but it appeared to him that if enforced stringently that would practically make a number of these municipalities bankrupt. Municipalities in the past had been doing something in this direction, but they had to go to the Government for a special grant. One great mistake they always made was that they never thought of dealing with this noxious vegetation—such as

Bathurst

Bathurst burr—until the damage was done; they only cut them down after they had seeded. It should be within the powers of some Board to enforce the killing at a particular time; it made all the difference when these weeds were killed, especially the Bathurst burr. If they left it a week or two after they had seeded, it was of no effect. With respect to outside holdings, it was proposed that Stock Boards should have the control of the destruction of these weeds, but he was inclined to think the Land Boards could better deal with Crown lands, because in dealing with these matters they had mostly to deal with Crown lands, which were a strong factor in spreading the vegetable growth around. In dealing with them in this way, the Bill provided that a private owner might receive notice to destroy noxious weeds, and if he did not do so, it was competent for the Authority to send in persons to do it, and he was liable to a fine of 20s. a day. There was no provision made as to how the Authorities were to recover the expenses they were put to from the holder; therefore it paid him to incur a fine of 20s. a day. With regard to what Mr. Wilson had said about stock routes and the providing of water, he was quite in accord with him; and he thought anybody who had anything to do with travelling stock would agree with him that some reasonable charge should be made, and the proceeds should be used to keep these reserves clear, and great benefit would then occur to those immediately concerned. At the present time stock routes were completely over-run, and they were practically useless to travelling stock. With regard to Mr. Wilson's proposal with respect to watering places, he did not see how he was going to apply it.

The CHAIRMAN pointed out that the resolutions were not under discussion.

Mr. WADDELL, M.L.A., agreed with Mr. Wilson in some of his remarks. Last session he introduced a Bill after considerable thought, dealing with this particular pest. It appeared to him then that the wisest course was to give each landholder who cleared his land of the sweetbriar the right to compel his adjoining neighbour to clear his, and at the same time, that his adjoining neighbour should be protected from any harsh provision that might be inserted in the law, that he should be given a reasonable time to clear his land. For instance, one provision was that a man who cleared his land of sweetbriar should have the right to give his neighbour notice that he would have to clear a piece of his land 1 chain wide along his boundary fence, and then clear the rest within three years. He thought there should be one part dealing with the Eastern Districts and another with the Central and Western.

Mr. BOLTON (Wagga Wagga) said that sweetbriar was the worst weed about Wellington and he thought that required special legislation.

Mr. A. BROWN (Narrabri) pointed out that while the travelling stock routes were infested the travelling stock would carry the burr from one part of the country to the other. He considered that as private holders had to get rid of the burr on their own holdings, the Government should keep the stock routes clear. If the Government put the stock routes in the hands of the Pastures and Stock Boards, then an Inspector would have to see that they were kept clear. It was no use partly cutting them down; they must be cut from fence to fence.

Mr. BROOKE (Boggabri) said that the Minister had pointed out that the probabilities would be that they should have a new tax on the people whose lands were already taxed. He could not see why a man should be taxed after he had cleared his land in order to help the man who had done nothing. As to putting it in the hands of the Land Boards he thought the Pastures and Stock Boards knew more about it than the Land Boards.

Mr. PERRY M.L.A., said he had come to the conclusion that by the time this Bill passed the Conference there would be very little for Parliament to do. He hoped the matter would receive fair consideration and not that consideration of one part of the Colony as against another. He considered that the noxious weeds in the Eastern Division were a greater curse than they were in the Western Division. He was speaking from the Eastern Division standpoint. In the North Coast Districts, for instance, they had got weeds that were considered garden plants, which in other parts would be considered noxious weeds; therefore it would be necessary in discussing the Schedule to be very careful as to what weeds they declared noxious weeds all over the Colony, but they should give power to the different districts to proclaim or define in those districts what were noxious weeds. They would have to carefully consider this matter, because it would be almost as much as a man's land was worth if you asked him to clear some weeds out. He had been along the coast a good deal and he had come to the conclusion that the people themselves were not so much to blame for the trouble as the Government. The people had asked time after time for legislation in this matter. The Government had been the worst offenders of the lot. He thought the Government should take the matter in hand and spend money in clearing these stock routes of the country. It would be better than sand-shifting.

Mr. DAVIES (Gunnedah) considered the Government had been the worst offenders. He supported Mr. Waddell's suggestions.

The CHAIRMAN said that he had before him certain resolutions by Mr. Wilson, which he had carefully considered; but he did not wish to take the extreme course of declaring them out of order, but still he would like to point out that if these resolutions were carried it would be no use going on with the Bill. He would ask the Conference whether they thought it wise, that, under the cover of these resolutions which had been suddenly sprung upon them, certain districts should be put under enormous expense, and others be left out. He appealed to Mr. Wilson to withdraw questions Nos. 1, 2, and especially No. 4, because putting a tax on travelling stock had really very little to do with noxious weeds. He would ask Mr. Wilson to accept a compromise in this matter, and that was, that he should move as an amendment, "That the Pastures and Stock Boards be charged with the duties of keeping travelling stock routes free from burrs."

Mr. WILSON thought that some of his proposals would easily come under the clauses of the Bill—that was, to put everything under the control of the Pastures and Stock Boards. He thought the main suggestions of his resolutions could be discussed, and amendments made in them. He thought he said enough before to show that one question hinged on the other. He was, however, quite willing to leave it to the meeting.

Mr. ALISON (Canonbar) moved, "That they proceed with the Bill."

Mr. ATKINSON seconded the motion, and it was carried.

Mr. ATKINSON proposed, "That the Preamble be postponed."

Mr. ALISON (Canonbar) seconded the motion.

The question was put before the meeting and carried.

Mr. ALISON (Canonbar) moved, "That clause 1 be postponed."

Mr. LESLIE (Forbes) seconded the motion.

The question was put to the meeting and carried.

Clause

Clause 2.

Local Authorities.

2. Subject to the provisions hereinafter contained the provisions of this Act dealing with the eradication, destruction, and prevention of the growth of noxious weeds shall be administered by the following local authorities—

- (a) within the boundaries of any municipality now or hereafter to be constituted, the council of that municipality;
- (b) within the boundaries of any sheep district proclaimed under the Diseases in Sheep Act of 1866 or any Act amending the same, exclusive of land within the boundaries of any municipality, the board of directors of the sheep district;
- (c) within any portion of the Colony proclaimed by the Governor, and not within the boundaries of the areas mentioned in subsections (a) and (b) of this section, any person appointed by the Governor in that behalf: Provided that the Governor may revoke or alter any proclamation made as aforesaid;

and in each case the area within which a municipal council, board of directors of a sheep district, or person appointed by the Governor has authority as aforesaid shall constitute a district for the purposes of this Act.

Mr. ATKINSON moved, "That on page 1, subsection (a), clause 2, should read 'within the boundaries of any municipality or township now or hereafter to be constituted, the council or trustee of that municipality or township.'" He said his object in moving this amendment was that they should of necessity include the township and the trustees of the townships in the Act of destruction of these noxious weeds. He thought they had all noticed that the reserves in the smaller townships were covered with noxious weeds, and therefore his object was to bring the townships which were in municipal areas and the trustees of that township within the meaning of this Act, that was as regards the compulsory destruction of these burrs.

Mr. BACON (Brewarrina) seconded Mr. Atkinson's amendment. He would point out that as regards trustees of country commons, that their jurisdiction did not extend to land within the township, and he would ask Mr. Atkinson to explain how he would meet that difficulty.

Mr. WILSON pointed out that as regards township reserves nobody but the Crown was responsible.

Mr. ALISON (Canonbar) moved as an amendment, to insert the following words as an addition to Mr. Atkinson's motion, "All trustees of commons, parks, recreation grounds, or racecourses, shall be held, and deemed for the purposes of this Act, to be the occupiers of the lands contained in such commons, parks, recreation grounds, and racecourses."

Mr. ATKINSON accepted Mr. Alison's suggestions to add those words to his motion.

Mr. T. BROWN, M.L.A. (Budgerabong), said he would like to say a few words before it went to a vote. It seemed to him to be pretty well identical with what was proposed in the Bill. Suppose they included, as was proposed, the trustees of commons, parks, racecourses, and so forth, where were they to get their revenues from. He did not see how that was provided for, and then again there were large areas of land held by the Railway Commissioners. Who was going to compel them to clear their land?

Mr. ATKINSON pointed out that he only wished that the townships and reserves adjoining such townships should participate in the trouble and expense of eradicating these burrs. They were all agreed that they not only did not destroy them but they propagated them. He certainly thought that the people who used these lands should come under the provisions of the Bill. They should be compelled not only to destroy but to keep them under.

Mr. T. BROWN, M.L.A. (Budgerabong), said that it appeared to him that the object of this amendment was to charge certain local bodies with the destruction of noxious weeds, &c. They would have to go farther and give these bodies powers they did not at present possess. As Mr. Alison pointed out, the Bill provided for this. The Bill took the municipality which had the power to raise revenue and charged that body with the destruction of noxious weeds within the area that it could raise revenue for that purpose, but the other lands that Mr. Alison proposed to include such as commons and racecourses were dealt with as Crown lands and charged to the Crown. He moved, "That the subsection be passed as printed."

Mr. ATKINSON's amendment, with the addition of the words suggested by Mr. Alison, was put to the meeting and lost.

Mr. T. BROWN's, M.L.A. (Budgerabong), motion that the subsection be passed as printed was carried.

Mr. ALISON (Canonbar) moved, "That in line 4, subsection (b), after the word 'of,' the words 'Stock and Pastures' should be inserted, and that the word 'sheep' should be eliminated, and the words 'Stock and Pastures' substituted."

Mr. BACON (Brewarrina) seconded the motion.

The question was put to the meeting and carried.

Mr. ALISON (Canonbar) moved, "That subsection (c) be postponed."

Mr. WILKES (Broken Hill) moved, "That the Conference adjourn until after the conclusion of the Rabbit Conference."

Mr. ATKINSON seconded the motion.

The question was put to the meeting and carried.

The CHAIRMAN then adjourned the Conference until the conclusion of the Rabbit Conference the next day.

SECOND DAY—17TH MARCH, 1897.

The Hon. RUFERT CARINGTON (Jerilderie) took the Chair at 10 a.m.

The minutes of the previous meeting were read and confirmed.

Mr. ATKINSON said that as many gentlemen who were present the previous day did not appear to understand the purpose of his amendments, he would ask that they start from clause 2 *de novo*—that was to say, to practically recommit the Bill.

Mr. ROSS (Hume) seconded the motion.

The question on being put to the meeting was carried.

Mr.

Mr. T. BROWN, M.L.A. (Budgerabong), proposed, "That after the word 'municipality' in the first line of subsection (a) and in the second line of subsection (a) the following words be added, 'or lands set apart for public purposes, and for which trustees are or may be hereafter appointed.'" His idea was to have municipalities proclaimed noxious districts, Stock Protection Boards as provided for, areas as provided for in subsection (c), and he also wanted public lands set apart for public purposes, and the trustees of those lands to be separate districts. He said his proposal, if carried, would mean that all those lands that were set apart for public purposes would be districts in themselves for the destruction of these weeds, and the trustees themselves would be charged with the destruction of the noxious weeds in those areas. He understood they were within the Pastures and Stock Boards' areas.

Mr. ATKINSON said that that was substantially what he was proposing. He thought it was a most important thing that the townships or village reserves should be included. They should be specified and set out in the Bill, and not left to the Minister to approve or disapprove of making them into separate districts. It should be settled in the Bill that the Minister shall make these separate districts, and therefore he wished to introduce the words, "townships or recreation reserves or race-courses."

Mr. WILSON said he did not know whether the proposer and seconder of this motion clearly saw its effect. This motion decided that the council of any municipality was to be the local authority to deal with these matters. He would suggest that they should pass the clause as it was. If they wished to deal with the commons, &c., that should be a separate subsection. The two things should not be mixed. He said they could not put it in there; they must first indicate how they were to get the money to spend. Of course, they all agreed that the municipalities should be left as that clause set up. If parks and other grounds with trustees were to be made local authorities, well and good; he was quite willing that should be done. He thought it was best, however, to do that separately, and not mix the things up.

Mr. T. BROWN, M.L.A. (Budgerabong), thought that either they misunderstood Mr. Wilson or Mr. Wilson misunderstood them. They proposed to let municipalities deal with the lands under their control; then they found that there were other lands in towns that were not under control of municipalities, and this amendment proposed to constitute the trustees of these lands authorities for the purposes of this Act. They did not intend to bring these bodies under the control of the municipalities, but the present Act did not provide that these bodies should have any existence at all for the purpose of this Noxious Weeds Act, and what was proposed to be done was to give them existence under this Act.

The CHAIRMAN then put the question to the meeting, and it was declared carried.

Mr. T. BROWN, M.L.A. (Budgerabong), moved, "to insert the following words in subsection (b) after the word municipality 'or lands set apart for public purposes and for which trustees are or may hereafter be appointed.'"

Mr. ATKINSON seconded the motion.

Mr. WILSON differed from the view taken by Mr. Brown. The amendment was careful to exempt these lands from the operation of the Pastures and Stock Board. He was quite sure no provision would be put in the Bill that would sufficiently nail them down and make them responsible, and there was no provision to give them any funds. They should be left under the Pastures and Stock Boards. This was a most dangerous amendment.

Mr. LESLIE (Forbes) thought with Mr. Wilson that they ought to be very careful before they added the words proposed by Mr. Brown. It might be there would be no power by which these lands would be kept cleared of noxious weeds, but by leaving the provision as it was in the Bill he thought they would come under either the municipalities or under the jurisdiction of the Pastures and Stock Boards.

Mr. FERRY, M.L.A., would like to point out that they were not dealing now with a matter that affected only the sheep-owners. They were dealing with a matter that affected the agriculturist as well. It was to widen the franchise in that respect. Because they elected the Sheep Directors from men subject to taxation under that particular Act, there was no doubt there would be some taxation under that Act to carry it out, and they would require to give the farmers a voice.

The CHAIRMAN pointed out that this was not the place to discuss the franchise.

Mr. T. BROWN, M.L.A. (Budgerabong), said if the Chairman would permit him to explain the position it might get over the difficulty. In subsection (a) they had decided that certain bodies should be constituted authorities. These bodies were the municipalities and lands or areas set apart under trust. The Council was to be an authority under this Act for the municipal areas and the Trustees were to be the authorities for those other lands set apart for public purposes. They had already carried an amendment to that effect giving these Trustees that power and this provision was to exempt them from operations of the municipal councils.

Mr. T. BROWN's (Budgerabong) amendment was then put to the meeting and carried.

Mr. ALISON (Canonbar) said that Mr. Bruce, the Chief Inspector of Stock, had kindly come down to assist them in amending this Act. Mr. Bruce had placed in front of him a number of amendments which he thought would facilitate the working of the Act. They would therefore understand that he simply moved these amendments for the Conference to consider. He would first move, "That after Mr. Brown's amendment the following words be added 'or vacant Crown lands in such district.'"

Mr. BRUCE (Chief Inspector of Stock) seconded the motion.

Mr. T. BROWN, M.L.A., (Budgerabong), said that before the motion was put he wished to point out that in subsection (c) the kind of land which was now proposed to be dealt with had been already dealt with. At least that was what he understood. He moved that subsection (b) be left as it was, and that subsection (c) read as follows:—"Within any portion of the Colony proclaimed by the Governor to be a noxious weed area or district, and not within the boundaries of the areas mentioned in subsections (a) and (b) of this section, the Governor may appoint any person or persons to be a local authority for the said area or district provided that the Governor may revoke or alter any proclamation made, &c." He did not see how Mr. Bruce's amendment could be put in. By this amendment he proposed to make it clear that it was intended to apply the provisions of this Act to those areas, and to allow the Minister to control these bodies.

Mr. BRUCE (Chief Inspector of Stock) thought that there were three sets of local authorities, the Municipalities, the Pastures and Stock Board, and the Government. He said that unless his amendment was put in in subsection (b) there was nothing at all to be done under subsection (c)—that was plain enough—because it exempted the areas contained in the sheep districts of the Colony.

Mr.

Mr. T. BROWN, M.L.A. (Budgerabong), said that Mr. Bruce's opposition was a perfectly fair and legitimate one. Subsection (b) gave the power of the local authorities to Stock Boards and exempted other bodies that were constituted from the operations of the Stock Boards. They had already exempted municipalities, and they exempted lands held for public purposes, because they had constituted the trustees a separate authority. He therefore saw the force of Mr. Bruce's contention. They must exempt also those other public lands, unoccupied lands or reserves, so called, in order to make subsection (c) read properly. He would therefore support Mr. Bruce.

Mr. ALISON (Canonbar) said that he had moved this as a matter of form. He regretted, with much deference to Mr. Bruce, that he could not find his way to support it, although he had moved it. He did not propose to exempt any lands from the Sheep Boards—this third authority was not necessary. They did not want any lands exempted at all except municipalities.

Mr. BRUCE (Chief Inspector of Stock) wished to know who was to make the municipalities do the work.

Mr. ALISON (Canonbar) said the Minister would make the municipalities do the work; they were supposing in that instance that the Sheep Boards and the municipalities would do their duty, as there was a clause later on in the Bill which would give the Minister power to enter and make them do their duty. It seemed to him that if they exempted Crown lands, they were exempting from the operations of the Sheep Boards and municipalities something like twenty million acres in the Colony.

Mr. ROSS (Hume) did not think a third authority should be brought in at all. His idea was that the municipalities should be the authority for everything within their boundaries, and outside the municipalities the Sheep Boards should do everything. Wherever the Government had to do anything they did it at as much cost as anybody else. He thought all lands should be under the Sheep Boards if outside the municipalities. If the Government were to come in and pick out little pieces it would emasculate the whole thing.

Mr. WILSON said that if those amendments were carried it would be throwing the Crown lands out into a sort of no man's land.

Mr. ALISON's (Canonbar) motion was then put to the meeting and lost.

Mr. ALISON (Canonbar) moved that the words, "of the sheep district" be cut out, and "the Board of Directors under the Stock and Pastures Protection Act" be put in.

Mr. BACON (Brewarrina) seconded the motion.

The question was then put to the meeting and carried.

Mr. ALISON (Canonbar) moved, "That after the word 'Act,' which was now at the end of that section, the following words be inserted, 'with one Government representative for the purposes of this Act.'" They had included Crown lands, and he thought it was only right to add a Government representative, in accordance with Mr. Carruthers' desire, in the same way as they had done under the Rabbit Act.

Mr. BAYLIS (Narrandera) seconded the motion.

The question was put to the meeting and carried.

Mr. T. BROWN, M.L.A. (Budgerabong), moved, "That after the words 'in each case,' the following words be inserted, 'or lands held in trust for public purposes.'"

Mr. ROSS (Hume) seconded the motion.

Mr. PERRY, M.L.A. (Budgerabong), would like to ask the gentleman who moved the motion, whether this alteration would not virtually take from under the municipality such a thing as a cemetery which might be outside the municipality. They would have two controlling authorities inside a certain area, and it would lead to no end of trouble.

The question was put to the meeting and carried.

Mr. T. BROWN, M.L.A. (Budgerabong), said if Mr. Alison would permit him, he would move, "That the word 'aforesaid' be inserted instead of 'Sheep District.'"

Mr. ALISON (Canonbar) seconded the motion.

The question was put to the meeting and carried.

Mr. BROWN, M.L.A. (Budgerabong), said it would be necessary to strike out the words "or persons appointed by the Government as authority as aforesaid." It was consequential on the previous resolution.

Mr. BAYLIS (Narrandera) seconded the motion.

The question was put to the meeting and carried.

Clause 2, amended as under, was put to the meeting and carried:—

Local authorities.

2. Subject to the provisions hereinafter contained the provisions of this Act dealing with the eradication and destruction of noxious weeds shall be administered by the following local authorities—

- (a) within the boundaries of any municipality or land set apart for public purposes, and for which trustees are or may hereafter be appointed, now or hereafter to be constituted the council of that municipality or land set apart for public purposes, and for which trustees are or may hereafter be appointed;
- (b) within the boundaries of any sheep district proclaimed under the Diseases in Sheep Act of 1866 or any Act amending the same, exclusive of land within the boundaries of any municipality or land set apart for public purposes, and for which trustees are or may hereafter be appointed, the board of directors under the Stock and Pastures Act, with one Government representative for the purposes of this Act;

and in each case the area within which a municipal council, board of directors, aforesaid, or lands held in trust for public purposes, shall constitute a district for the purposes of this Act.

Clause 3.

Eradication and destruction of noxious weeds

3. The local authority shall, within their district, have power to eradicate and destroy and prevent the growth of all noxious weeds growing on vacant Crown lands, roads, and public reserves not under lease or license, and to prevent a recurrence of the growth of noxious weeds eradicated and destroyed.

Where the local authority are a municipal council they shall eradicate and destroy all noxious weeds growing on all roads, including main roads, within the municipality.

Mr. ATKINSON said this was a clause for the eradication and destruction of noxious weeds, and it empowered not only the destruction but the prevention of a recurrence of the growth of noxious weeds eradicated and destroyed. That seemed to him to be very far reaching and he proposed, "That the words from 'and' down to the word 'destroy,' inclusive, be omitted."

Mr. WILSON seconded the motion.

Mr. ATKINSON wished to know how they could prevent the Bathurst burr growing again. They could not guarantee that they could prevent these noxious weeds growing, and he thought these words should be struck out. The Board might order them to do a lot of things, and he did not see how they could give that power to anybody. It seemed to him to be absurd that there should be any doubt on that question.

Mr. ALISON (Canonbar) supported Mr. Atkinson, and pointed out that he should also strike out the words "and prevent the growth of."

Mr. ATKINSON accepted the suggestion.

The question was put to the meeting and carried.

Mr. T. BROWN, M.L.A. (Budgerabong), moved a consequential amendment in line 6 of clause 3, "To insert after the word 'council' or 'trustees of land set apart for public purposes' and also after the word 'Municipality' in line 9."

The question was put to the meeting and carried.

Clause 3 amended as under was put to the meeting and carried.

Eradication and destruction of noxious weeds.

The local authority shall, within their district, have power to eradicate and destroy all noxious weeds growing on vacant Crown lands, roads, and public reserves not under lease or license.

Where the local authority are a municipal council or trustees of land set apart for public purposes, they shall eradicate and destroy all noxious weeds growing on all roads, including main roads, within the municipality, or lands set apart for public purposes.

Clause 4.

4. (i) On receipt of any information respecting the existence of noxious weeds on land within their district, the local authority shall, if satisfied of the existence of the noxious weeds, serve a notice on the occupier of the land, requiring him to eradicate and destroy or prevent the growth of the noxious weeds within the time specified in the notice, and to execute such works and do such things as may be necessary for that purpose, and if the local authority think it desirable (but not otherwise) specifying any works to be executed.

(ii) The local authority may also by the same or another notice served on the occupier require him to do what is necessary to prevent the recurrence of the growth of the noxious weeds, and if they think it desirable specify any works to be executed for that purpose, and may serve that notice notwithstanding that the growth of the noxious weeds may have been abated if the local authority consider that it is likely to recur on the same land.

(iii) Provided that where the occupier cannot be found the local authority may themselves eradicate and destroy the noxious weeds, and do what is necessary to prevent the growth of a recurrence of the growth thereof.

Mr. ALISON (Canonbar) moved, "That the word 'any' be left out."

Mr. ATKINSON opposed that very strongly, because this clause would give any individual the power of inflicting or levying black-mail. He simply had to lay the information before the Board, and if he did not do that, how was it possible for them to know where the Bathurst burr was.

Mr. ALISON (Canonbar) said the authorised officers would report.

Mr. ATKINSON said that their authorised officer could not get about everywhere. In this case there was no chance for a man to levy black-mail, and he must certainly protest against Mr. Alison's motion. If these noxious weeds were to be eradicated each one of them must be to a certain extent a detective on his neighbours. He would say that the Board should act on receipt of information no matter where it came from.

Mr. BACON (Brewarrina) supported Mr. Atkinson

Mr. BAYLIS (Narrandera) seconded Mr. Alison. But thought the word "any" was superfluous.

Mr. WILSON said he was pleased to find himself able to support Mr. Atkinson on such an occasion. He thought that if this word were not retained the principle of this Act would be lost. The giving of information to the Board that Bathurst burrs were growing on any land was surely not an unneighbourly offence. It was the assistance and the active concurrence of everybody interested, that would bring about the purposes of that Bill.

Mr. ROSS (Hume) thought they ought to leave the clause as it stood in the Bill. He did not think it was a very criminal matter if he saw a patch of Bathurst burr growing on his neighbour's land to inform the Board. He thought the best thing that they could do was to let the clause stand as it was.

Mr. T. BROWN, M.L.A. (Budgerabong), pointed out to Mr. Alison that this clause did not provide that any person laying information was to take proceedings. The local authorities had to serve a notice and take such action as they thought necessary. He thought the words should stand as they were, because they would be a great assistance to the local authorities.

Mr.

Mr. ALISON (Canonbar) thought he had been misunderstood in this matter. He did not desire to prevent anybody who had an interest in the matter giving information, but he desired to prevent frivolous complaints which would move the Board. It was quite possible that if these words were retained, any Tom, Jack, or Harry coming along could say he saw so and so. He could write a letter to the Board, and they must take action. The Bill provided that they must. He was quite willing to meet them by altering it to read "on receipt of information through their authorised officer or any landowner interested."

Mr. ATKINSON said that that was his contention and intention.

The CHAIRMAN then put Mr. Alison's amendment to the meeting, and it was lost.

Mr. ALISON (Canonbar) said he would try to get in his ideas if he could. He moved that after the word information that the following words be inserted: "through their authorised officer or any landowner interested."

The CHAIRMAN said he did not think that was in order. They had just settled that any information would do; therefore he ruled Mr. Alison out of order.

Mr. ALISON (Canonbar) said he would like if possible to take the opinion of the meeting, so as to have some little restriction placed on it.

The CHAIRMAN asked if Mr. Alison wished to dissent from his ruling.

Mr. ROSS (Hume) said he did not wish in any way to disagree from the Chairman's ruling, but he would like to support Mr. Alison.

Mr. ATKINSON said it appeared to him that what Mr. Alison feared was that every traveller—any Jack, Tom, Bill, or Harry, coming along the road—could give information. He did not think those tramps would take the trouble.

The CHAIRMAN ruled that no further discussion could be allowed on the matter. They had settled the question two minutes ago that anybody could give information; therefore he ruled, as he was bound to do, that any further amendment to negative what they had just done was out of order. If they wished now to go back on what they had done, he would not take it as any disrespect to himself; but the proper method to adopt, if they so wished it, was to dissent from his ruling.

The Conference then adjourned until 2 p.m.

The CHAIRMAN took the Chair at 2.10 p.m.

Mr. ATKINSON moved, "That the words 'or prevent the growth of' be omitted."

Mr. T. BROWN, M.L.A. (Budgerabong), seconded the motion.

Mr. ALISON (Canonbar) said it seemed somewhat of a repetition of what they had already done. No harm could accrue from leaving those words in. In his mind the difficulty was at what stage the local authority could step in and order destruction. It was necessary to kill the weeds at an early stage, and this would prevent the growth of them. These words were put in to try and prevent any loop-hole in this way. To "prevent the growth of" was really the proper term to apply in this Noxious Weeds Bill. He suggested that these words be left in.

Mr. ATKINSON said that Mr. Alison's contention seemed to have no bearing on the case, because they were already required "to eradicate and destroy."

The question was put to the meeting and carried.

Mr. ALISON (Canonbar) moved, "That in clause 4, line 5, after the word 'him' the following words be inserted: 'to use all reasonable efforts.'"

Mr. BRETT (Urana) seconded the motion.

Mr. T. BROWN, M.L.A. (Budgerabong), said he opposed this proposal of Mr. Alison's, because it was setting up a standard of which the owner was largely the judge, and by which the objects of this Bill could be defeated, and had been defeated in other colonies in the same way. They had knocked out this standard on Mr. Alison's proposal in the Rabbit Bill, and had substituted something else; and he did not see why they could not carry the same principle into the Noxious Weeds Bill that they had put in the Rabbit Bill. He would, therefore, propose an amendment, and move that instead of these words the following be added after the word destroy: "to the satisfaction of the Local Authorities."

Mr. ATKINSON seconded the motion.

Mr. ALISON (Canonbar) said that all through this Bill he had felt the necessity of guarding the interests of the individual, and he was very much afraid that harsh measures might be taken, which would jeopardise the interest of the individual, and cause him to be put to ruinous expense. Now, he did not believe in putting such a tyrannical power in the hands of any body of men without a power to appeal. Mr. Brown's amendment simply meant this, that the men should appeal to the same body who would order them to do the work. He wanted a man to have an appeal to someone else, and the person he wanted him to appeal to was the Minister. He could conceive such a position that there might be a most tyrannical Board, who were possibly little interested themselves, and they might go, as the Minister had pointed out to them, and ruin the individual. Take a property which was very much covered with prickly-pear. Supposing the Board ordered a man to destroy the prickly-pear in three months or less—they might order him to do it within six days. They could conceive of them doing all sorts of unreasonable things. There ought to be an appeal, and his amendment was that a man might have an appeal—that he may not be absolutely ordered to do anything. What more did they want men to do than to use reasonable effort? If a man could show he had used reasonable effort, and was continuing to do so, what more could they ask of him?

Mr. ATKINSON, in supporting Mr. Brown's amendment, said that Mr. Alison's remarks showed him the desirability that legislation should be separate for the Western Division of the Colony, and for the Eastern. Mr. Alison's experience only went for the western part of the Central Division, and he had not had any experience of the more populated parts of the Eastern Division. He believed that the Prickly-pear Act was inoperative. He contended that the prickly-pear should not be included in the weeds for destruction under this Noxious Weeds Bill. That, of course, would come in in the Schedule, and when the Schedule was made out would be the time to move that the prickly-pear should be excluded. What was wanted more particularly in this matter was the destruction of the Bathurst burr. He would say this, that if the words were left—"all reasonable efforts"—the whole of the Bill would be inoperative. They would never get the Bathurst burr destroyed. It was important that there should be no loop-hole by which the owners of country which produced these Bathurst burrs could get out of it; and he was quite satisfied that if they introduced these words they would be taken advantage of by large growers of Bathurst burrs to evade the Act.

Mr.

Mr. T. BROWN, M.L.A. (Budgerabong), wished to know who was going to decide what was "reasonable effort." That kind of legislation had obtained in Victoria some time ago, and there was a continual struggle between the owners and the Boards charged with the powers of destroying rabbits, particularly as to what were reasonable efforts, and the Legislature had to be called in to clear the matter up by saying, "to the satisfaction of those Boards"; and he now proposed to add the same words—"to the satisfaction of the Boards." They could not enforce it if it were left "all reasonable efforts." They had got to go to the Courts of law to enforce it, and if the Courts were satisfied that the matter was being pushed on as vigorously as could be, they were the authority to deal with it. Mr. Alison wanted to set up the owner of the land as the man to interpret what was reasonable effort.

Mr. ALISON (Canonbar) said that Mr. Brown had just pointed out that there was an authority to go to to define what was reasonable effort. It would give a man the power to go to the Courts, and show he had used reasonable efforts.

Mr. ATKINSON believed he could do that any way. The question of reasonable effort was very much an individual idea.

Mr. ALISON (Canonbar) said they were going to set up eight men to be the judges of what was reasonable effort. A bare quorum might do it. Three men were left to decide what was reasonable effort. He thought it was a matter that should be left for adjudication. He would not like the Board to have the power in its hands, nor would he like to leave it in the hands of individuals, but he would put it in the hands of an impartial body.

Mr. ATKINSON said the Bathurst burr must be destroyed at a certain time. A man might contend that by putting on three men he was using reasonable effort. Very often it would require fifty men to cut them down before they seeded. If they did not cut them before they seeded they were not using reasonable effort. That was why he objected to the individuals deciding what was reasonable effort.

Mr. ALISON (Canonbar) said that Mr. Atkinson had remarked that they must sometimes put on fifty men. The Board could order a small man to put on fifty men or 100 men. A man might have a property of 100,000 acres, and the Board had to decide whether he was to put on fifty, 500, or 1,000 men. A man could be ruined in a week. It was very autocratic. The interest of the individual might be swamped altogether by some arbitrary decision of three men on the Stock Board. Three men were a quorum, and thus three men might put a fourth man to untold expense to put down prickly-pear, the Bathurst burr, or any other noxious weeds.

Mr. BRETT (Urana) asked the Chairman to give his ruling as to whether they were dealing with the Bathurst burr alone or with the prickly-pear, or with any other noxious weeds.

Mr. ATKINSON said that it had been said at the beginning of the Conference that the Bathurst burr was the common enemy all over the Colony, and that we were to deal with that only.

Mr. ALISON (Canonbar) said that this Bill had to go before the Parliament of New South Wales, and he thought there was enough common sense in Parliament to see that no law, so far as their prevision could prevent it, would allow anybody to be crushed. As to the judge of reasonable effort, they had a committee of nine or ten to decide that, and they were not deciding on their own affair. Now, surely a committee of nine men, probably in the same case in general, but not in this particular instance, knowing that a decision given against men to-day might apply to themselves to-morrow, would give a reasonable decision. Then again, they must remember that if a law were made unreasonable it inevitably fell to the ground. Common sense declared that the law in Victoria to put down the Scotch thistle was foolish and it failed. He would like to say that most of these conferences, every now and then, had a tendency to rush to the Minister. What a destruction it would be of the power of the Board if the tax-payers' influence with the Minister were allowed to decide these things.

Mr. DILL (Hay) said that for two seasons the expenses on his run for cutting down noxious weeds were equal to the expense of a second shearing, and within four years they had spent £2,500 in the eradication of the burrs. But the heaviest expense had been for burrs, and he had had on two occasions as many as sixty men cutting the Bathurst burrs—two overseers and sixty men—from six weeks to two months, and he thought most of the gentlemen present would admit that was equal to a second shearing. In dealing with this question he would not like to see individual owners pressed too hard, but at the same time he recognised it was imperative they should use caution in dealing with this very important question.

Mr. T. BROWN's (Budgerabong) amendment was put to the meeting and carried by 15 to 5.

Mr. ATKINSON moved, "That subsection (II) be struck out." He said it was consequent on the other amendment which he had proposed. He would not take up the time of the Conference in expatiating upon it.

Mr. T. BROWN, M.L.A. (Budgerabong), seconded the motion.

The question was put to the meeting and carried.

Mr. ALISON (Canonbar) moved, "That after the word 'executed' in subsection (I) the following words be inserted:—'and may subsidise the said occupier to the extent of not exceeding £2 for each and every £1 expended by the said occupier.'"

Mr. T. BROWN, M.L.A. (Budgerabong), asked that the motion be left over until the question of taxation was decided.

Mr. ALISON (Canonbar) consented.

Mr. T. BROWN, M.L.A. (Budgerabong), moved, "That in subsection (III), after the word 'thereof,' the following words be inserted:—'Provided that notice of such intention to proceed shall be published in some local paper at least one month before such action is taken.'" This was so as to make provision to give the owners sufficient notice of the action which was contemplated.

Mr. DILL (Hay) seconded the motion.

Mr. ATKINSON opposed the motion. Supposing there was no owner to be found when the burrs were at their worst, the burrs might seed before the owners were found. If they had to take a month's notice in the local paper, the effect would be that the Act would be made of no avail. Municipalities cut these burrs themselves, and they would hold that as a legal charge on the land. He therefore failed to see why this amendment should be passed. He presumed it applied to municipalities and towns. It would be a very great mistake to allow a month to pass. Notice could be stuck up at the post office. Time would slip by and the plants would seed.

Mr.

Mr. WILSON said that this was another of those dangerous protections to the individual which would destroy the value and the whole intention of the Bill. It was these same absent, non-extensive owners, so to speak, who were the cause of a lot of these legal Bills. The land tax would bring some of these matters to a head. These lands were almost worse than vacant Crown lands, and more difficult to get at. Mr. Brown's proposal would render nugatory the efforts of the whole Act to destroy noxious weeds. Those people who were not to be found on the ground would certainly not see the local paper, no matter how attractive it might be. He appealed to Mr. Brown to withdraw his amendment.

Mr. T. BROWN, M.L.A. (Budgerabong), failed to see that any harm could be done, and that the powers of the Boards and Authorities would be limited. Some reasonable notice should be provided for the owner. It would be well known in the municipalities what lands had been infested and were likely to be a danger; and if they were not able to find an owner, and intended to take action, they could take action beforehand, and issue this notice in plenty of time to enable effective action to be taken at the right moment. It was not intended to hinder the Board in any way—only to safeguard the owners.

Mr. ATKINSON said this would affect the municipalities, and the municipalities were empowered to destroy the burrs in the town. They did so now and merely sent in a Bill after it was done. He had never been notified yet to destroy burrs within the municipality, but he had invariably received a Bill for the destruction of the same after it had been done. They would see that Mr. T. Brown's amendment might affect the Municipalities Act. The main object was to destroy those burrs, and Mr. T. Brown was trying to find a loophole so that it might not be done. Mr. Brown had not been dealing practically with these things, so that he did not have the knowledge which would enable him to deal with this Bill.

Mr. T. Brown's, M.L.A. (Budgerabong) amendment was put to the meeting and lost.

Mr. ALISON (Canonbar), moved the consequential amendment, "That in subsection (II) of clause 4, all the words after the word 'weeds' be omitted."

Mr. ATKINSON seconded the motion.

The question was put to the meeting and carried.

Clause 4, amended as under, was put to the meeting and carried,—

4. (I) On receipt of any information respecting the existence of noxious weeds on land within their district, the local authority shall, if satisfied of the existence of the noxious weeds, serve a notice on the occupier of the land, requiring him to eradicate and destroy, to the satisfaction of the Board, the noxious weeds within the time specified in the notice, and to execute such works and do such things as may be necessary for that purpose, and if the local authority think it desirable (but not otherwise) specifying any works to be executed.

(II) Provided that where the occupier cannot be found, the local authority may themselves eradicate and destroy the noxious weeds.

(III) If the occupier of land shall be unknown or absent from the Colony, and the expense incurred hereunder in clearing such land of noxious weeds cannot be recovered from him, and remain unpaid for more than _____ months after the same shall have become due, the local authority may let such land for any period not exceeding five years, upon terms and conditions to be prescribed, and shall receive the rents and profits thereof, and shall apply the same in payment of such expenses with interest thereon at the rate of ten per centum per annum, so long as the same shall be unpaid: And such authority shall hold the surplus (if any) upon trust for the person entitled to such surplus."

Mr. BRUCE (Chief Inspector of Stock), moved that the following be an additional subsection: "If the occupier of land shall be unknown or absent from the Colony, and the expense incurred hereunder in clearing such land of noxious weeds cannot be recovered from him, and remain unpaid for more than _____ months after the same shall have become due, the local authority shall let such land for any period not exceeding five years, upon terms and conditions to be prescribed, and shall receive the rents and profits thereof, and shall apply the same in payment of such expenses with interest thereon at the rate of ten per centum per annum, so long as the same shall be unpaid: And such authority shall hold the surplus (if any) upon trust for the person entitled to such surplus."

Mr. ALISON (Canonbar), said that Mr. Bruce should put this fresh subsection on the notice paper for the next day, moving the recommittal of clause 4 to insert it. It would then be printed and all the members would be able to understand in what way it would affect the Bill.

Mr. BRUCE (Chief Inspector of Stock) consented.

Clause 5.

5. (i) If either—

(a) the person on whom a notice to eradicate and destroy or prevent the growth of noxious weeds has been served as aforesaid makes default in complying with any of the requisitions thereof within the time specified; or

(b) the growth of the noxious weeds though abated since the service of the notice, is, in the opinion of the local authority, likely to recur on the same land,

the local authority may by any person authorised by them in that behalf make a complaint to a justice, and such justice shall thereupon issue a summons requiring the person on whom the notice was served to appear before a Police or Stipendiary Magistrate or any two justices in petty sessions.

(II) The said magistrate or justices may, if satisfied that noxious weeds exist as alleged, or that although the growth is abated, it is likely to recur on the same land, by order require the said person to comply with all or any of the requisitions of the notice, or otherwise to eradicate and destroy or prevent the growth of the noxious weeds within a time specified in the order, and may, if thought desirable, specify the works to be executed by the said person for that purpose.

(III).

(iii) If a person fails to comply with an order of a magistrate or justices made as aforesaid, with respect to the eradication and destruction of, or prevention of the growth or a recurrence of the growth of the noxious weeds, he shall, unless he satisfies the Court that he has used all due diligence to carry out such order, be liable to a penalty not exceeding *twenty* shillings a day during his default. Moreover, the local authority may enter the land to which any order under this Act relates, and eradicate and destroy and prevent the growth of the noxious weeds, and do whatever may be necessary in execution of such order.

Mr. ATKINSON moved, "That in subsection (a) the words 'or prevent' be omitted, and also the whole of subsection (b)."

Mr. DILL (Hay) seconded the motion.

Mr. ALISON (Canonbar) asked Mr. Atkinson to move these two amendments separately.

Mr. ATKINSON withdrew his amendment and then moved, "That in subsection (a) the words 'or prevent' be omitted."

Mr. DILL (Hay) seconded the motion.

The question on being put to the meeting was carried.

Mr. ATKINSON moved, "That the word 'or' in subsection (a) be omitted, also the whole of subsection (b) and the word 'either' at the beginning of the clause."

Mr. T. BROWN, M.L.A. (Budgerabong), seconded the motion.

The question was put to the meeting and carried.

Mr. ATKINSON moved, "That the following words in subsection (ii) be omitted 'or prevent the growth of.'"

The question was put to the meeting and carried.

Mr. BAYLIS (Narrandera) moved, "That the following words be omitted: 'or that although the growth is abated it is likely to recur on the same land.'"

Mr. T. BROWN, M.L.A. (Budgerabong), said that was consequential on the previous amendment. He seconded the motion.

Mr. ATKINSON moved, "That in subsection (iii) the words from 'or' down to 'growth' in lines 3 and 4 be omitted."

Mr. BAYLIS (Narrandera) seconded the motion.

The question was put to the meeting and carried.

Mr. BAYLIS (Narrandera) moved, "That in line 8 the words 'or prevent the growth of' be omitted."

Mr. ATKINSON seconded the motion.

The question was put to the meeting and carried.

Mr. T. BROWN, M.L.A. (Budgerabong), moved, "That the following words be added to clause 5 subsection (iii) after the word 'order' in line 10, 'and recover all reasonable cost of the said eradication or destruction of noxious weeds from the owner or holder of such land as hereinafter provided for.' He said that the Bill provided that the local authority should come in and destroy; and should cause the owner of the land to be fined for not carrying out the instructions of the Act. It did not provide that the local authority should recover the cost of that destruction; and his proposal was to enable them to recover the cost of destruction.

Mr. LESLIE (Forbes) said he had an amendment in clause 6 on the same thing, and he thought Mr. Brown should put that in after his amendment.

Mr. T. BROWN, M.L.A. (Budgerabong), thought Mr. Leslie's amendment should come in after his. He would withdraw his amendment and allow Mr. Leslie's to come in in clause 5 instead of clause 6.

Mr. LESLIE (Forbes) moved, "That the following be added to clause 5, 'and the persons owning or occupying the land where such entry has been made shall be liable for the amount expended in the eradication and destruction of noxious weeds.'"

Mr. ATKINSON moved, as a further amendment, to add the following words "such costs to be a first charge on the land."

Mr. T. BROWN, M.L.A. (Budgerabong), did not think that was right. The local authority would have to proceed to the bench of magistrates, and they would make an order and then carry out what Mr. Atkinson wanted.

Mr. ATKINSON said the question was whether they would be able to proceed in that way. They might not be able to make it a first charge on the land. He wished it to be provided in the Bill that it might be a first charge on the land.

Mr. DILL (Hay) seconded Mr. Leslie's motion.

Mr. WILSON seconded the amendment.

Mr. ATKINSON said it had just been pointed out to him that the charge might be worth more than the land itself.

Mr. BRUCE moved, "That the following words be inserted: 'All costs, charges, and expenses incurred by a local authority, or any person authorised by a local authority, in clearing any private land of noxious plants under the provisions of this Act, shall be a first charge upon such land, and shall take precedence of all mortgages or other charges whatsoever upon such land: Provided always that a certificate under the hand of such local authority shall be a full discharge of all such costs, charges, and expenses up to the date of such certificate.'"

Mr. ATKINSON said he would withdraw in favour of Mr. Bruce.

Mr. ALISON (Canonbar) said it seemed to him that they were proposing to put a frightful load on the lands of the Colony. There were first charges under the Rabbit Act and first charges under the Noxious Weeds Act;—where was the mortgagee to come in? He wished to warn the gentlemen present that they were going rather fast. They were informed by the Minister that some lands were terribly infested with burr, briars, and prickly-pear. They had included the Crown, and made them liable to the local authority. The local authority could enter on the Crown lands and destroy noxious weeds; consequently the Crown was equally liable with any individual towards any expense which was gone to by the local authority. He could not conceive of any Parliament endorsing Mr. Brown's idea. They had got acres upon acres which they would give ninety-nine years' lease of for nothing, if people would only clear the noxious weeds off. If the Crown did not eradicate, the local authority would enter, and it would be a first charge on the Crown land. He protested this would add too much to the burdens of the country.

The

The CHAIRMAN thought this was a very important amendment, and it should be postponed until next day. It would be on the notice-paper, and they should consider it carefully.

Mr. T. BROWN, M.L.A. (Budgerabong), said that Mr. Bruce's amendment and Mr. Leslie's seemed to him to be on the same lines. They should both be printed and be on the notice-paper for next day.

The question of postponement was put to the meeting and carried.

Clause 6.

6. The local authority may, for the purpose of carrying out the provisions of this Act, enter, or authorise any person by writing properly authenticated by the said authority to enter, at any time, with men, vehicles, horses, and bullocks, and necessary appliances, into and upon any land within their district.

Clause 6, as printed, was put to the meeting and carried.

Clause 7.

7. If it appears to the Minister that the local authority have neglected to exercise, or to make reasonable efforts to exercise, any powers conferred or duties imposed on them by this Act, the Minister may give notice in writing requiring the local authority to exercise the powers and perform the duties aforesaid within a period to be named in the notice.

If the said requirement is disobeyed, or is not complied with, it shall be lawful for the Minister to exercise the powers or perform the duties, and where a municipal council is the local authority, to recover on behalf of Her Majesty from the council the expenses thereby incurred.

Mr. ALISON (Canonbar) moved that in line 2 the following words be struck out: "or to make reasonable efforts to exercise." He did not see why the Board should have the exclusive right to reasonable efforts when they would not give it to individuals.

Mr. T. BROWN, M.L.A. (Budgerabong), seconded Mr. Alison's motion.

Mr. ATKINSON wished the Conference to define that the only weeds they were now considering were the Bathurst burrs.

Mr. ALISON's (Canonbar) motion was put to the meeting and carried.

Mr. T. BROWN, M.L.A. (Budgerabong), moved that the following be added to the first paragraph of clause 7: "Such notice shall not be for a less period than one month."

Mr. ALISON (Canonbar) said he would oppose that. They had not allowed individuals a moment's notice, and why should the Board have a moment's notice. If they were not going to give the individual time, they should not give the Boards time.

Mr. ALISON (Canonbar) thought Mr. T. Brown was making a mistake in this. It was certain a considerable delay would occur before the Minister could be moved to give notice. Moreover, the Minister had to say what period. He thought the Boards were not a bit too decided, but he thought a month would be too much; it would be a pity to fix too short a date.

Mr. ATKINSON seconded Mr. Brown's motion.

The question, on being put to the meeting, was lost.

Mr. T. BROWN, M.L.A. (Budgerabong), said that clause 7 provided that the Minister could recover from a municipal council, but it did not provide that he could recover from private persons. He proposed to strike out all the words after the word "debt" in line 3, last paragraph of clause 7, and to insert the following: "Of such local authorities, and recover the expense thereby incurred from such local authorities in the case of municipal councils or lands held in public trust, and from the owner or holders of other lands so occupied."

The whole clause was then postponed in order that the amendment might be printed.

Clause 8.

Restriction of importation of noxious weeds.

8. The Governor may make regulations—

- (a) prohibiting the importation into New South Wales of any noxious weeds or of the seed of any noxious weeds, and providing for the destruction of the same if imported contrary to the said regulations;
- (b) regulating the importation into New South Wales of articles, the importation or use of which would in the opinion of the Governor tend to spread the growth of noxious weeds;

And the Governor may in those regulations impose any penalty not exceeding *twenty* pounds for any breach thereof.

All regulations made as aforesaid shall when published in the *Gazette* have the force of law, and shall be laid before both Houses of Parliament within fourteen days if Parliament be then sitting, but if not then within fourteen days after the commencement of the next following Session of Parliament.

Mr. ALISON (Canonbar) moved that clause 8 be passed as printed.

Mr. BAYLIS (Narrandera) seconded the motion.

The question was put to the meeting and carried.

Clause 9.

Supplemental.

9. Whosoever hinders or obstructs any person in the exercise of a power conferred or duty imposed on him by or under any authority conferred by this Act, or by any regulations made thereunder, shall be liable to a penalty not exceeding *twenty* pounds.

Mr. ALISON (Canonbar) proposed that clause 9 be passed as printed.

Mr. BAYLIS (Narrandera) seconded the proposal.

Mr. T. BROWN, M.L.A. (Budgerabong), would like to see this clause made clear. The Bill said the penalty should not exceed £20; he would like to add, to make it clear, "for every such offence."

Mr. T. Brown's (Budgerabong) amendment lapsed for want of a seconder.

The clause was put to the meeting and passed as printed.

Clause

Clause 10.

10. All sums of money expended by the local authority, under the authority of or in pursuance of the provisions of this Act, shall be paid as follows:—

- (a) Where the council of any municipality is the local authority, payment shall be made out of the funds of the municipality.
- (b) Where the board of directors of a sheep district, or a person appointed by the Governor is the local authority, payment shall be made out of the Consolidated Revenue Fund.

Mr. T. BROWN, M.L.A. (Budgerabong), moved that the following words be inserted in lines 1 and 2 of subsection (a), after the word municipality: "or trustee of any land set apart for public purposes."

Mr. ATKINSON seconded the motion.

The question was then put to the meeting and carried.

Mr. T. BROWN, M.L.A. (Budgerabong), moved that the following words be added to subsection (a):—

Providing it should be competent for such Municipality or Trust to make special provision for the purpose of this Act by levying a special rate, tax, or charge, as may be determined upon providing further that such special rate, tax, or charge shall be submitted to the Governor for his approval, and by him published in the *Gazette*, and laid before both Houses of Parliament within fourteen days if sitting, but if not sitting, then within fourteen days after the commencement of the next Session, and such notification shall thereafter have the force of law.

He wished to provide that these bodies should be able to make provision in whichever way they deemed fit, and as a safeguard it would be laid on the Table of the House.

Mr. ATKINSON seconded the motion.

Mr. T. BROWN, M.L.A. (Budgerabong), said that if the municipalities wished to raise funds specially for the destruction of noxious weeds that would give them power to levy a special rate, and the people concerned might object if they thought fit. As this was an important matter he would not object to let this part of the clause stand over in order to have it printed, and dealt with to-morrow.

The Chairman then adjourned the Conference until the next day.

THIRD DAY—18TH MARCH, 1897.

The Honorable RUPERT CARINGTON (Jerilderie) took the Chair at 10 a.m.

The minutes of the previous meeting were read and confirmed.

Mr. T. BROWN, M.L.A. (Budgerabong), moved that the following clause be added to subsection A, clause 10: "Providing it should be competent for such municipality or trust to make special provision for the purpose of this Act by levying a special rate, tax, or charge, as may be determined upon, providing further that such special rate, tax, or charge shall be submitted to the Governor for his approval, and by him published in the *Gazette*, and laid before both Houses of Parliament within fourteen days, if sitting, but if not sitting, then within fourteen days after the commencement of the next session, and such notification shall thereafter have the force of law." He said this was a simple provision to enable municipalities and trustees of land held for public purposes to provide revenue for themselves, and they might do so by agreeing upon a levying rate, or imposing a tax or a charge, as they thought best, to meet their case, and he had provided that it should receive the approval of the Governor, and should be laid before Parliament before it could become law, so that anyone wishing to object might be heard. He thought it was very necessary to empower these parties to raise the means of coping with the pest under this Bill in some such way as this.

Mr. J. M. ATKINSON seconded the motion.

Mr. A. ROSS (Hume) said that the clause read best as it was, he did not see that they wanted any extra tax at all. If they wanted more power, it would simply be too much of a burden upon the people. He did not see why it should go before the Governor and all that sort of thing. In any municipality the same men who were doing the roads would cut the burrs, and he did not see any reason at all for Mr. Brown's amendment. He did not think that this amendment should be passed in preference to the clause as it stood in the Bill.

Mr. J. M. ATKINSON said he had seconded this *pro forma*, because he thought it was being introduced for the purpose of raising revenue for each district for the eradication of these noxious weeds, and he did not think that that was generally understood. As far as it went at present the money had to be paid out of the Consolidated Revenue Fund.

The CHAIRMAN said that the money would only be paid out of the Consolidated Revenue Fund with regard to Sheep Boards.

Mr. J. M. ATKINSON said that they were taking all reserves, and Mr. Brown had introduced the word "Trustees," and that, he concluded, meant the trustees of Town Commons. They were all sufficiently taxed already; but Mr. Brown's motion was not for an extra tax, it was simply that these Boards should be made self-supporting. In other words, it was a small Local Government Bill. What he wanted to impress upon them was this, that the trust would empower the charging of so much for camping sheep on a reserve. That would be consolidated revenue to all intents and purposes, and it would be revenue for those Boards to eradicate the burrs and the noxious weeds on those reserves. In the same way, the trust in a township would be able to charge a certain amount to the residents of that township, and that money would go towards eradicating the burrs. Therefore, this provision would be favoured by those who did not want a tax. Now he wanted them to distinctly understand this—from what he understood from the Minister—the clean lands of the Colony were to be taxed in order to pay the £2 subsidy for every £1 spent in eradicating the pest. Now they did not want that. He contended that

that if the Crown would only destroy the burrs on their small areas of ground, and allow the trust to destroy—and compel them to destroy—they would have no more trouble with the Bathurst burr, the briar, the blackberry, or anything else. The Bathurst burr was the main thing; the others were easy to get rid of. He therefore contended that the motion submitted by Mr. Brown was the best motion they could pass, because it was doing away with the individual and wholesale taxation which was proposed.

Mr. T. BROWN, M.L.A. (Budgerabong), said that the subsection read as follows: "Where the council of any municipality is the local authority, &c." that had been amended to read as follows: "Where the council of any municipality or the trustees of any lands set apart for public purposes, &c., &c.," so now they had to go on and introduce some means for the trustees to raise funds. Now he proposed to enable them to fix upon that source of revenue which they considered necessary for their requirements, and it was necessary to give them the power to levy a tax, but he had given the right to appeal to Parliament. What he proposed had nothing at all to do with the Stock Boards, it simply dealt with lands in municipalities, or lands held by public trusts. If the municipalities had money, as had been stated, for this purpose, then they need not raise any more money, but if they wanted it he did not see that they should be denied the right.

The question of adding these words to subsection (a) was put, and lost by 13 votes to 9.

Mr. T. BROWN, M.L.A. (Budgerabong), said that before they went further he would like to point out that as far as he knew the municipalities might raise funds and have revenues at their disposal. He did not know that that would apply to trustees of public lands, and he would like to know if it were not desirable to make some provision here to enable them to carry out the obligations imposed on them by this Bill. While he knew that municipalities had sources of revenue, and the means of levying taxes, and could meet their obligations under this Bill by that machinery, he did know that the trustees of temporary commons, or of other public lands such as racecourses, had any machinery by which they could raise the money necessary to keep down the noxious weeds. What he wanted was to raise this point now and ask the Conference whether they were prepared to give these people some means of raising the necessary funds to carry out the Act. He begged to move as a further amendment to subsection 4, the clause that had already been moved, but omitting all reference to municipalities.

Mr. ALISON (Canonbar) seconded the motion.

Mr. WILSON said that Mr. Brown had asked for enlightenment on one point. All his trouble was about the funds the trustees would have to raise. Would the trustees not have rates to carry them on? Were not the trustees of all such lands the owners? Ifad they not income from these lands as racecourses or as grazing farms? Very often the racecourse was the most profitable grazing paddock in the vicinity of a township. Surely if they got a source of income from the land they were called upon to exercise their duties as proprietors and occupiers. There was no sort of public body to raise rates from. It seemed to him that it would be providing a lot of unnecessary whirligig machinery to do something that was entirely in the hands of the trustees as owners. As regarded municipalities they had machinery to get at the private owners. The owners might be a little hard to get at, and there might be a little loss out of the rates, but the municipalities did not need further funds.

Mr. FLANAGAN (Gunbar) supported Mr. Brown's motion, and said that Mr. Wilson had quoted an isolated case with regard to racecourses. Let them take burying grounds for instance. What interest had the Trustees of the ground in that ground? They were only working for the public. Mr. Brown's motion would enable the public to raise a tax on all persons concerned in the burying ground, and if Mr. Brown's motion were lost it would have the effect of compelling them to destroy everything out of their own pockets.

Mr. ALISON (Canonbar) said that Mr. Wilson was wrong in opposing this. It was provided that municipalities should provide the money out of their funds, and others should get it from the consolidated revenue, but where could the trustees get the money from? They had only money for specific purposes so far, and unless the Conference defined in this Bill where they were to get the money, they might be in a position to say, "Where are we to get the money?" when they were told to eradicate the weeds.

Mr. A. ROSS (Hume) said he must oppose Mr. Brown's amendment again. As a matter of fact if this Act were passed to-morrow, and if there were burrs on their land they would simply get notice and have to destroy the weeds as private owners.

Mr. BRETT (Urana) said he would oppose Mr. Brown's amendment. As far as commons, racecourses, and recreation reserves were concerned, they let their racecourses for certain purposes, and they could get sufficient rents to destroy all the noxious weeds they were likely to get on them.

Mr. PEARSE (Orange) rose to support Mr. Brown's amendment.

Mr. WILSON said that the only reason he would vote against this was that he did not like to put something absurd on record. What he wanted to know was—what was Mr. Brown proposing that these people should levy on? Mr. Brett had told them that these places had sources of revenue, and they had all to exercise reasonable care to look after the property under their control.

Mr. Brown's amendment was put to the vote, and lost by 14 votes to 13.

Mr. LESLIE (Forbes) moved that in the place of the words "Sheep District" the words "Pastures and Stock Board" be put in.

Mr. ALISON (Canonbar) said that the word "aforesaid" would do instead of the word "Directors."

Mr. LESLIE (Forbes) accept Mr. Alison's amendment.

The question was put and carried.

Mr. WILSON proposed to insert after the word "district" the following: "Funds shall be provided by levying a charge on all travelling stock."

Mr. ALISON (Canonbar) rose to a point of order. He said that Mr. Wilson had set it down on the Notice-paper as a new clause. He submitted that it was exactly similar to Mr. Wilson's now clause.

Mr. WILSON said that he considered it would come in there more conveniently.

The CHAIRMAN said that it would confuse matters very much if Mr. Wilson brought this in as an amendment—it should be brought in as a new clause.

Mr. WILSON said that the original object had been to lay down a general principle. The opportunity now occurred in him to bring that to a head in a concrete, definite form by a power given in the Bill. It seemed to him that that was a proper place to bring it in.

The CHAIRMAN pointed out that what Mr. Wilson called a mere principle would entail an Act of Parliament to tax the travelling stock.

Mr.

Mr. BROWN, M.L.A. (Budgerabong), thought it was necessary to put an amendment in here, but he did not agree with Mr. Wilson, because he hardly saw how his proposal would be worked. He would move that at the end of subsection (b) after the word "fund" the following words should be inserted: "or from such other source as provided by the Minister for such purpose." He said that Mr. Wilson might bring his amendment at the end of that as indicating one of the sources from which the revenue would be derived.

Mr. WILSON said that he would be willing to let the resolution stand, on the understanding that after Mr. Brown's amendment was dealt with, his clause would be taken afterwards as a subsection.

The CHAIRMAN said that that was correct, but it could not be taken until all the other proposals on the business-paper before Mr. Wilson's new clause had been dealt with.

Mr. LOONEY (Bullock Island South) said he would second Mr. Brown's motion.

Mr. ALISON (Canonbar) said that they had arrived at a very important clause indeed. In the clause which they had before them they found that payment had to be made in some mysterious manner out of the Consolidated Revenue. Of course, it was apparent that there was some error there. He felt satisfied that stock-owners would be called upon to pay these funds themselves. They may be prepared to have some fund or another, which the stock-owners would subscribe to, for the purpose of paying the expenses of this Act: The only thing that the Crown could be called upon to do was to destroy the noxious weeds on their own land. Now the other day it had been decided to take the discretionary power out of the Pastures and Stock Boards in this matter of the destruction of these weeds. He felt sure that unless there were some exceedingly elastic provision provided for funds that they would get themselves into a difficulty. They had already provided that on any information—not that the Board may start to destroy, but they shall destroy the weeds. That had been decided. The discretionary power had been taken out of the hands of the Board.

Mr. J. M. ATKINSON said he did not agree with that.

Mr. ALISON (Canonbar) said it was so. He would be glad to be put right if he was wrong. Now, he had the very strongest objection in a Bill like this to putting such enormous power in the hands of the Board. Before this Board could enter on the lands of private people to destroy the weeds, they must have the means of raising revenue. He did not know how the authors of this Bill were going to provide a revenue. Perhaps Mr. Brown and Mr. Atkinson would enlighten him. They had the power to call upon the owner to destroy the weeds, and to sue him afterwards for the money, but really they must have some fund to deal with. Now how were they going to provide that fund? Mr. Brown had said that the Minister was going to provide it out of the Consolidated Revenue, or from a fund which was to be got from somewhere else, but where was the Minister to get the money from?

Mr. J. M. ATKINSON said the Minister would tax them.

Mr. ALISON (Canonbar) said of course the Minister would tax them, but he was not quite sure how they were to be taxed, and he was not quite sure if Mr. Brown's amendment were brought in, how the money would be got. If they did not provide any machinery for getting the money, how was it to be got? It was proposed that a tax should be made upon travelling stock. Well, now, was that to be a consolidated charge, or was it to be divided *pro rata* among the different Boards of the Colony, or should the different districts which had the stock passing through get all the money?

Mr. WILSON rose to a point of order.

Mr. ALISON (Canonbar) said he need not bother as he would not discuss that any further. He would point out that if they did not take great care they would stultify themselves enormously over this business. They would compel the Boards to go on with the eradication of weeds. If they did not find some very elastic means by which they could collect revenue, the whole Act would be a farce. He would distinctly object to the extremely wide powers that were given to the Boards. From what Mr. Atkinson had said he supposed that the clean places should not assist the places which were affected. He would point out that in their last Bill they did not recognise that principle at all. They had recognised that if a man's land were out of the sphere, as it were, of the rabbits, he had still to pay half rates. Surely those runs which were free of weeds, and so on, were interested in keeping the weeds clear.

Mr. J. M. ATKINSON said that he hoped Mr. Wilson would exonerate him from encroaching on, or sucking his brains in any way. He would say that when he seconded Mr. Brown's amendment that trustees should have the power of raising money, he did it fully and solely with the object that the sheep districts should have the power to put a certain small sum on their reserves for the use of cattle—for travelling stock. This travelling stock would willingly pay that small sum, and that would be sufficient to eradicate the burrs. His intention had also been that the owners of racecourses should have the power of charging horses for exercising there, and that they might have various other means, which, without raising any tax, would be quite sufficient to keep the burrs in check. In many racecourses he noticed that they had been kept in check, and that remarkably well, but what they had to legislate for was the "dirty managers." He would like them all to remember that many people had been eradicating these noxious weeds for years, and kept their runs clear, and the dirty managers had year after year seeded their runs. He did not know whether he was in order at this stage in diverting to what the Minister had said about the briar and the blackberry. He was perfectly satisfied that the briar and the blackberry would be very easily eradicated. He was not a sporting man, and had not found any very great difficulties from either the briar or the blackberry, so far as he knew. A friend of his had bought an estate upon which the briars had been kept protected for many years, because the previous owner's sheep had been kept alive by them one year in a drought. In four years his friend had eradicated the briars. It was in the Goulburn district where briars were very bad. As for the blackberry, it was a revelation to him that the Minister called it a noxious weed. It could be very easily kept down. He felt sure that if revenue were raised in those districts where these weeds were, it would be very easily done without raising a tax over the whole Colony.

Mr. WILSON said that it was evident that this amendment of Mr. Brown's could not be discussed to any satisfaction without dealing with his motion. They should let the whole thing be discussed, and let his amendment and Mr. Brown's be separated afterwards.

Mr. FLANAGAN (Gunbar) thought they ought not to lose sight of either. He certainly agreed to raising a tax on travelling stock if the grass were preserved for travelling stock. For instance, the travelling stock rates embraced very nearly the whole of the land of the Colony that had to be dealt with in this Noxious Weeds Bill, and if they raised a tax on travelling stock, there ought to be some provision that

that the grass would be preserved for travelling stock. They knew that lessees of runs all over the Colony pastured their sheep on these roads. He would suggest that, in raising a tax for this purpose, the lessees of runs whose sheep fed over these stock roads should pay half, and the travelling stock owner should pay the other half.

Mr. A. ROSS (Hume) said he must oppose Mr. Brown's motion. He would not say that this was not a proper proposal, but it should not be done through the Minister. He understood that this Noxious Weeds Bill did not provide that any Board should do the work themselves. It simply provided to make the owners, whoever they might be, eradicate the weeds. He did not think any funds were required. Referring to the stock reserves, he did not see why the owners of land alongside the reserves should be taxed when they dare not put stock on these roads because of the burrs.

Mr. Wilson then said that Mr. Ross was discussing his motion by subterfuge.

Mr. ALISON (Canonbar) then moved that the Conference should have a general discussion on the financial clause. He moved that subsection (b) of clause 10 be struck out with the view of the insertion of a proper financial clause.

Mr. FLANAGAN (Gunbar) seconded the motion.

Mr. ATKINSON proposed to postpone clause 9.

Mr. LESLIE (Forbes) seconded the motion.

The question of the postponement of clause 9 was put and carried by seventeen votes to four.

The question of postponing clause 10 was put and carried.

Clauses 11, 12, and 13 were also postponed to allow of the discussion of Mr. Wilson's new clause.

Mr. WILSON then said he proposed to go straight at what he believed to be the key of this Bill. He was not going to talk for the edification of the meeting. He wanted to get some result, and he ought to be allowed to indicate that he was leading up to a resolution. In order to discuss this matter fully, the proper place was under subsection (b) of clause 10, and that discussion could have overlapped and been intermixed with the discussion on Mr. Brown's amendment on the same subsection. Now clause 10 was taken away, and he could only say that what he wanted to do was this, to indicate what he would do when clause 10 was brought back for discussion.

The CHAIRMAN then said that Mr. Alison's idea in moving the postponement of the clause was that Mr. Wilson might go on with the resolutions which he had on the business-paper. Mr. Wilson must confine himself to them, and not to the discussion of clause 10, which had been postponed.

Mr. ALISON (Canonbar) then moved that as Mr. Wilson had nothing to bring before them, they should go on with the clause which had previously been postponed.

Mr. J. M. ATKINSON said that he had moved the postponement of the other clause under the impression that it would facilitate and help Mr. Wilson in what he wished to put before them, and in what he also concurred in, and therefore he did it in a most friendly spirit. He could say nothing else. He wished to know whether it would now be in their province to go back to clause 10, subsection (b), and move it again. If they found they had made a mistake, surely it was not too late to rectify it.

Mr. ALISON (Canonbar) said that they had gone wrong altogether by departing from the ordinary course of business. Let them start afresh now, and let them get on with business. There was nothing before the Chair. He would propose the following motion, "That they go on and proceed with clause 1."

The CHAIRMAN said that now that they had got something before the Chair they would get some business done.

Mr. ROSS (Hume) seconded Mr. Alison's motion. He was very much surprised at Mr. Wilson's action in this matter, because he had supported the amendments to postpone these clauses with the intention of letting Mr. Wilson go on, and now Mr. Wilson would not go on with it. He considered that the best way they could do was for somebody else to move the clauses instead of Mr. Wilson. He considered it very childish to sit down in that way.

Mr. WILSON, in personal explanation, said it was not a very proper thing to call another member childish. He rose to discuss his motion, but the Chairman asked him what he was moving, and then said, "Where will that come in?" He was perfectly prepared to go on and discuss it. There was nothing childish about him.

The CHAIRMAN thought the business should be left in his hands to conduct it in the best way he could. There was an amendment by Mr. Alison to go on with clause 1, and he wanted to know if there was any amendment on that.

Mr. BROOKE (Boggabri) said he thought there was a misunderstanding when they moved that Mr. Wilson be heard. They did not intend any disrespect to the Chair, nor did they intend to take the business out of the Chairman's hands.

The CHAIRMAN said he was sure that no disrespect had been intended to the Chair, but he merely wanted to get the meeting into order.

Mr. J. M. ATKINSON moved, That they now discuss clause 10.

Mr. T. BROWN, M.L.A. (Budgerabong) seconded the motion.

The question was put and carried.

The CHAIRMAN then said that Mr. Brown's amendment should be discussed.

Mr. A. ROSS (Hume) said he was discussing this question before, but was not allowed to talk about Mr. Wilson's amendment. If he got up again he wished to know if he might discuss that now.

Mr. WILSON then said that he thought Mr. Brown's amendment and his would now run concurrently.

The CHAIRMAN said that he had ruled that the question before the Chair was Mr. Brown's amendment.

Mr. T. BROWN, M.L.A. (Budgerabong), said, with the sanction of the Conference, he would like to withdraw from his amendment the words "by the Minister," and then it would be as follows: "or from such other sources provided for such purposes by this Act," and then it would become a preliminary to Mr. Wilson's amendment.

Mr. WILSON then said he would propose to adopt his amendment that was now before the Conference.

Mr. T. BROWN, M.L.A. (Budgerabong) said that his amendment should be dealt with first. The business should be conducted in a business-like way.

Mr.

Mr. WILSON said that after the word "from" in Mr. Brown's amendment he wished to put in "a charge to be fixed on all travelling stock." It would then read "or from a charge to be fixed on all travelling stock, or from such other sources as provided for such purposes by this Act." His views were drawn from the western part of the Colony, and were not applicable to the eastern. The main source of supply and continuation of noxious weeds was the travelling stock reserves. When they proceeded to eradicate a disease they endeavoured to discover the source of it and to cut it off at the fountain-head. That was what he proposed to advocate in this matter. Now he thought that some of the representatives of the Conference did not see the force of what they had already decided as to dealing with this great source of supply. They had carefully laid it down that the whole of the travelling stock reserves under lease should be charged to the present lessee, and he should be liable to all the pains and penalties for dealing with those lands. Now, while he had in the main advocated a strict responsibility being put on the individual, he did not want to put an unfair responsibility on the individual, and he thought that this would do it. In many cases it was not the duty of the individual to keep the travelling-stock reserves clear, and it was not a fair charge to put upon him. It was well known that many of the Crown stock routes had been subject to a lease practically, and had been nothing but a curse for six months in the year when the burrs had been growing. From Narrabri to Moree was the most important stock route in the Colony. Some seven or eight years ago he got every lessee to agree to withdraw from that and fence it off, and the Minister for Lands absolutely refused. Now, he maintained it would be grossly unfair to make the care of that one road a charge on the adjoining owner; and some of the runs there were concerned in the care of three or four of those roads leading into such a station as Narrabri. He thought it was unfair to make those men pay for land which they never used, and which they never grazed upon. He thought his resolution would deal with the whole of the hitherto impossible difficulty of dealing with the stock reserves. There were some that should be withdrawn from lease, and some that should not. How could an equitable arrangement be made in respect of noxious weeds on those reserves. He had indicated the best way to arrive at that. Suppose one of them was very difficult to keep clear, but was the road to a water supply. It would be grossly unfair to make the adjoining lessee eradicate those weeds. The local Board, however, could say, "You must cut the burrs," and he would write back and say, "These burrs were brought here by travelling sheep"—that was a matter for equitable arrangement—"we have got a fund, and your share of eradicating these weeds would ordinarily be about 1s. 3d., and we would eradicate those weeds and charge you 1s. 3d." It would be to the interest of the lessee not to fight against his road being withdrawn from lease, but rather to fall in with it. He had indicated what he considered the nearest possible approach to a business-like arrangement, and where a division ought to be. It would, practically, be a bargain between neighbours as to who was responsible, and the Board, as they were not putting their hands into their own pockets, would be liberal to the unfortunate individuals who had infested stock routes through their leases. In the western division the stock routes were included in the leases, and without an Act of Parliament that would not be got rid of, and with his provision that would not be necessary. Things would remain as they were, and probably the lessee would be quite content to look after himself if he saw that everybody else was similarly dealt with. That was practically the whole object of his motion. As to a tax, well nothing could be done without money, and in this case he carefully kept away from the system of taxing the adjoining landowners in any way, but they certainly ought to tax the people who used their roads and water absolutely without return of any kind. If he had a place on a railway line and had to pay his interest and so on, why should he have to contribute towards a fund to eradicate the land of some small man adjoining him? People should pay for what they got. The people whose sheep ate the grass and drank the water would have to pay the tax. Of course it was very difficult to get at. He suggested that probably the average number of travelling stock in New South Wales was 8,000,000, and 1,000,000 thrown in for cattle. Now, he considered 1d. a head a fair charge. The distance travelled would be very difficult to get at, but an average of 50 miles would not be very far out. Of course some travelled 500 miles, but the immense numbers of stock travelled an average distance of about 50 miles. He found that there were practically thirty sheep districts in the territory he had in his mind's eye. Now he put it to them—they had some idea how far money would go in each direction—how far would £500 go in the direction of eradicating these weeds for each Stock Board. In some districts £500 would be twice over enough to do it; in other districts it would not. After the first year the cost would be reduced to one-third or one-half. He just wanted to bring it to the point of what taxation the owners would be liable to, and a good bit less than a ½d. per head for each journey would provide all the necessary funds. He thought he had kept himself as closely to the point as the meeting could wish, and he had not touched on one or two other matters that were down on the paper, but at the same time if the Conference liked he would be prepared to draft a whole Bill for them.

The Chairman then said that Mr. Wilson had exceeded the time limit of ten minutes.

The Conference decided that Mr. Wilson be further heard.

Mr. WILSON said the machinery could be dealt with afterwards. The detail would be this—that a man applying for a permit to travel his stock must also tender the agreed-upon rate, which would be an acquittance to the drover for the road he would travel on. That would have to be collected in a general way, in the same way as the sheep fund. But it would have to be ear-marked and kept for a specific purpose. That must go into the general fund, and then be re-distributed according to the necessities, not according to the acreage or mileage, because the subject was a general one. These districts outside the main trucking stations were the ones that wanted help; and it was just as much to the interest of the man 100 miles away to know that there was a clear road for him to travel his stock as to the interest of the man on the spot. He did not want them to go to the Government cap in hand. If they did that it would sooner or later mean an additional all-round tax. Of course he supposed he would be entirely out of order in saying anything about taking in the watering-places.

The Chairman then said it was clearly out of order.

Mr. T. BROWN, M.L.A. (Budgerabong), said if Mr. Wilson would permit him he would like to strongly urge him to withdraw this amendment of his, and have it dealt with free from difficulty. They were legislating for the whole of the Colony, where those proposals did not apply so strongly as they did in some particular districts of the Colony which had been referred to. He said that his resolution left it open for other sources beside that particular one which Mr. Wilson proposed. Mr. Wilson wished to make provision for certain divisions in the country. If Mr. Wilson carried that he would entirely destroy his amendment.

Mr.

Mr. WILSON said he did not take any word out of Mr. Brown's amendment.

Mr. BROWN (Budgerabong) then said that if Mr. Wilson would add "under this Act" he would withdraw.

Mr. WILSON thought he had made it clear that he did not interfere with Mr. Brown's amendment in any way.

Mr. FLANAGAN (Gunbar) said he would prefer Mr. Wilson's amendment to Mr. Brown's, because it was more definite. If Mr. Wilson would accept this amendment, "and the owners of other stock depasture on travelling-stock routes," he would be glad. There were further classes of stock routes in the Colony. There were stock routes that were cut off by fencing, but not excised from the run. There were other stock routes fenced off, and these stock routes were not excised from the run, but the keeper of the run did not use the grass, but rented the right to somebody else to put the sheep on. He thought his amendment would cover that. Supposing he was the owner of the whole of a run, and he had a stock route on the run, and he let the grass on that route to some selector, it would be very unjust to charge him, the holder, and to let that selector, who used the grass, go free. There were other routes where the lessee had the route fenced off, and yet he put his sheep on and had it eaten as bare as the floor, while he preserved the other parts of his run. It would be very unjust that he should pay half rates when he was taking all the benefit from that route. He thought Mr. Wilson should amend his motion in that direction, and he would then support him strongly. He would second it *pro forma*, but did not know whether he would vote for it if it were not amended.

Mr. FREEMAN supported Mr. Wilson in this matter. He considered that this travelling-stock reserve question was the one question that had been neglected. They had areas of country in the far west where sheep were depastured. He knew reserves which were supposed to be in the interests of the travelling public, which had been alienated, and they also found that people who held those reserves, depastured more on them to the acre than the country would possibly carry, and when people arrived with stock to travel, they found there was nothing for the stock to eat. In Deniliquin there was £40,000 being spent on the freezing works. All the selectors and run-holders round there were precluded from sending their stock, because the stock routes were not available to the public. The reserves had been fenced out. Stock were depastured on them, and they were absolutely eaten out. Now it might be said that where a travelling-stock reserve was in a paddock of another description, that sheep fed no more over that reserve than they did over the rest of the run, because the traffic frightened the sheep away. Then again, they might clear the route inside their fence of noxious weeds, but on their boundary their neighbours fenced it out, and it was practically no man's land, and became thoroughly infested with these noxious weeds. He did not think there was anything to say further. It had been proved on these re-appraisements before the Land Court that these people in the far west should have every consideration in the reduction of their rents, for the simple reason that they had no travelling-stock reserves to carry their sheep to market when they had got them.

Mr. LAURENCE (Balranald) supported Mr. Wilson's proposition. He thought, so far as the land was concerned, the district which the travelling stock went through should be able to hold the rent and pay the Minister the rent, and the money should be kept for the purpose of eradicating the noxious weeds. The stock routes were the worst infested part of the runs. It was simply impossible to get sheep from Kerang, because of this burr. They were made perfectly black with it.

Mr. DILL (Hay) was prepared to give a certain amount of support to Mr. Wilson's motion, but he would like to point out a matter that had escaped him. That was that the east had not been taken sufficiently into account.

Mr. WILSON said he did not exclude the east, but only specially referred to the west.

Mr. DILL (Hay) said the east should be considered. There were hundreds of thousands of acres in the east that were used in the summer months, and this area was very beneficial to the sheep in the Riverina and other parts on the border of Queensland. Those sheep would otherwise die. He had used that country himself for many years. If they put on such a tax as would make it too heavy for those who travelled their sheep 500 miles, then they would not only injure those people, but they would injure the people who held the country in the east. A great many of the burrs that came down the Murrumbidgee came from about Gundagai and right along the stock routes.

Mr. J. M. ATKINSON wished to move, as a further amendment, "That Mr. Wilson be requested to withdraw his amendment with a view to its being introduced as a subsection of clause 10, and that Mr. Brown's amendment be dealt with on its merits."

The CHAIRMAN said Mr. Wilson's proposition was not an amendment. If he were asked to put it as a subsection he would do it. That would be the simplest way.

Mr. WILSON then said he would accept that.

Mr. T. BROWN, M.L.A. (Budgerabong), then moved his amendment. He said that he had moved an amendment which would embrace the whole of the Colony, and Mr. Wilson had brought in a clause referring to only one part of the Colony. Mr. Wilson should withdraw, and then his amendment should come in as a subsection and be dealt with separately.

Mr. WILSON then moved, "That this be an additional subsection (c) to clause 10: 'Where the Board of the district is the local authority, a charge shall be levied on all travelling stock for the purpose of destroying noxious weeds on travelling-stock routes and reserves.'" He said that Mr. Flanagan had wanted him to alter that to deal with questions where stock routes were used by people who had no right to use them at all. Well, those people should be sued for trespass.

Mr. FLANAGAN (Gunbar) said he did not agree with that. He wanted Mr. Wilson to accept the following addition: "and the owners of other stock that depasture on stock routes." That was so that the tax would not be taken of people who did not use the stock routes.

Mr. WILSON proposed that that should be dealt with in detail when carrying out the proposal. If a pastoral lessee sublet the stock route to an adjoining landowner who scoured the country, that was exactly a case where the stock route should be taken out of the lease. They were there to educate the Minister to do it. Such cases would be amply dealt with, and in those cases the whole thing was under the local authority. He remembered one point raised by Mr. Laurence, and that was that the district should collect the money. Suppose a mob of sheep came in on the Queensland border and went to Moama district, the Moama district would collect the money. That was not right. It should be collected and distributed. He had anticipated all that. There would be heaps of difficulties come out in detail.

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As to Mr. Dill's case, he thought he was getting very nearly in the same boat with Mr. Flanagan. If this were carried out, the stock routes—which should be public property—would be made of the highest service to those who had to use them.

Mr. J. M. ATKINSON seconded Mr. Wilson's motion.

Mr. DILL (Hume) said he would like an explanation from Mr. Wilson as to whether the charge made with regard to a tax made on stock should be a first charge. Did he propose to make the tax on the travelling stock for every 50 miles?

Mr. WILSON said it should be for every 50 miles or every 10 miles—that was a matter of arrangement.

Mr. ALISON (Canonbar) said he should like to have seen Mr. Wilson bring forward a complete set of consecutive proposals. The only figures they had before them were 8,000,000 travelling stock. He had proposed that they should be charged so much for every 50 miles they travelled. He thought it was indicated in a very vague manner. Details should be furnished to them before they dealt with it at all. Were they going to commit themselves to a scheme of which they had no details? It was extraordinary. He had never heard of such a thing before. He would ask anybody reading that resolution to say who was to make the charge, how it was to be made, and what was to be done. The resolution said, "Where the Board of a district is the local authority, a charge shall be levied." He supposed that meant that the Local Board should levy the charge.

Mr. WILSON said it would mean that; and it should be paid into a general fund.

Mr. ALISON (Canonbar) asked if the Board would collect for the whole distance the stock might travel?

Mr. WILSON said they (the Board) would.

Mr. ALISON (Canonbar) then said it would be most advisable that they should have a full and comprehensive scheme drawn up by Mr. Wilson. Take the Queensland stock: he supposed that if they travelled across New South Wales it would probably be 1,000 miles. How were they going to share the charge among all the Boards through whose districts they would travel? It would be a terribly heavy charge.

Mr. WILSON said that was their look-out.

Mr. ALISON (Canonbar) said that they did not want to put a heavy tax on Queensland. They were all interested in the other colonies. Mr. Wilson did not point out how this tax was to be obtained, or how it was to be levied, or whether it was to be done by the Minister, or who was to do it; nor did he give them in any way clearly the duties of those Stock Boards; and he had cut out the Eastern Division—or wanted to cut out the Eastern Division.

Mr. J. M. ATKINSON said he seconded Mr. Wilson's motion; but he did so understanding it in this way: Mr. Alison did not understand how the tax was to be collected. It was a very simple thing. When a man applied for a permit he would have to state where he was going to, the distance he was travelling, and everything else, and the tax should be collected then. It was not necessary that a hard-and-fast rule should be laid down about $\frac{1}{2}$ d. or a 1d. or 2d. or a $\frac{1}{4}$ d. or anything else; it was according to the amount of weeds on the reserve. If after the first year it took so much less to clear them, the tax on the travelling stock should be so much less.

Mr. ALISON (Canonbar) said that Mr. Atkinson was dealing with it now as though the money was to be spent in the particular district in which it was collected.

Mr. ATKINSON said he was coming to that. This money would be paid into, and form part of, the Consolidated Revenue Fund, and would be ear-marked for this special purpose. It could be given out to the various districts according to their requirements, and subdivided into these districts. The Narrabri district might take £1,000 in one year, and another district to the east would only take £100. That would divide up the whole of this tax, which would really form part of the Consolidated Revenue Funds. Regarding Mr. Flanagan's objections that selectors who had rented the reserves would not be taxed, the best way to overcome this would be to put in "occupier." The occupier would be liable for those burrs. If ground were rented or occupied by a private individual, that private individual was liable for the eradication of those burrs. For instance, the travelling stock reserve that went through a man's run would have to be kept clear by that man; there was no question about that. It would be absurd to think that a man was going to be so very short-sighted in his policy that he would cut the burrs up to the edge of the stock reserve and allow his sheep to feed over them. What benefit would that be to him. The allotment of the money would be done from the Consolidated Revenue Fund. The different Boards would send in their requirements for the whole year, and if there was not enough money they must do with so much less. It would be allotted from the Consolidated Revenue Fund by the Minister; but that amount of money was ear-marked, and if he chose to add to it he might do so, but he could not take from it for any other purpose.

Mr. ALISON (Canonbar) moved "That before deciding on this motion of Mr. Wilson's, they should have a comprehensive scheme placed in front of them."

Mr. WILSON said he would make a suggestion. If the Conference would pass that resolution of his he would ask them to adjourn for a fortnight, and he would bring them back a Bill which he would ask Mr. Alexander Oliver to draft.

Mr. LESLIE (Forbes) said he agreed with the principles laid down by Mr. Wilson. He thought they were trying to do the right thing at the wrong time. It seemed to him that if they adopted the resolution now moved by Mr. Wilson, that that would amount to an alteration in the Land Act. They were practically dealing with taking lands out of leases and handing them over to the Pastures and Stock Boards, and he thought that was out of order. He did not know whether that Conference viewed this matter from the same standpoint. If they adopted this it would mean that the Land Act would be amended so as to withdraw some lands from stock reserves and hand them over to another body altogether.

Mr. BROOKE (Boggabri) thought they were now getting into the details before they had enunciated the general principles.

Mr. ROSS (Hume) thought Mr. Alison was right. With reference to what Mr. Leslie said about altering the Land Act, there was nothing whatever in the Land Act to stop the Minister from stopping the leasing of reserves. The Minister had the power to cancel the reserves, and do what he liked with them. At the same time he would support this motion of Mr. Wilson's, because it was to be followed with something else. However, he hoped he would do it in less than a fortnight. He did not think that Queensland stock should go through free, even if they did not want to destroy the burr. Mr.

Mr. WILSON said he would just like to say a word about Mr. Leslie's contention regarding withdrawing lands from lease. He was rather surprised that Mr. Leslie should raise such a question. They knew the Minister had power to withdraw any land from lease, and the exercise or non-exercise of that was one of the burning questions regarding those same stock rates. He had indicated what he considered an elastic provision that where the stock rate was absolutely agreed upon by the Minister and the local body, and where the local body and the owner decided in the public interest the lease must be withdrawn, it should be done. If public opinion and the Stock Boards took that view the Minister would not be able to stand against them. Besides, a great deal of the Minister's objection to this was that he lost rent, and had more claims coming on him to spend money in different ways. Now, with regard to Mr. Alison always cropping up about details. What was the use of his providing about ten or a dozen minor details, when the principle was not laid down in the first instance. If they gave him that support which he had asked for he would guarantee to bring them in as good a Bill as this or any other Bill would be. He did not think it necessary to burden this discussion with the distribution of the money. Every man in charge of a station had got to make an estimate of expenditure for three or six months ahead. Mr. Reid had got to do that, and he had got to put on new taxes, not knowing what they would bring in. Every Board would once a year send in an estimate to the Minister of what it would cost them. They would say, "There are 50 miles of road that is very bad, and then there are 50 miles where the people on this side are very careful, and they will not be very bad—they will not want much." The only thing the Board will have to do would be to say, "There are 5,000 acres which will take 2s. an acre to clear, and there are, say, 20,000 acres which will take 6d. an acre to clear, and then they will lump them together. That is the estimate. And then the Minister may say, "These estimates seem to me to exceed the fund, and therefore you must do with less." If they wanted to know more details he would say that he would ask the Minister to take a vote in Parliament, or he thought that the Minister himself would not be disinclined to assist the Boards if the Boards were found doing good work under this Bill. Under the original Pastures and Stock Act, the Board, if they ran out of funds, might go to the Minister and get advances, and these advances are afterwards repaid, because the pest is destroyed, and the funds afterwards come in and accumulate, and they pay off the advances. If the first year was heavy the Treasury would have to make an advance of a few thousands, and the fund would make it up later on.

Mr. Alison's (Canonbar) amendment was then put and carried.

The Conference then adjourned till 2 o'clock.

On resuming after lunch, the Chairman said that he proposed to go on with the Bill as it stood, following on from clause 10, going through clauses 11, 12, and 13, and then take any recommittals.

Mr. LESLIE (Forbes) then moved, "That the following be added as subsection (d) of clause 10:—

"Provided that no such payments shall be made under subsections (a) and (b) where land belongs to private owners, but shall be recoverable from such owner, on an order made by a Police or Stipendiary Magistrate or any two Justices in Petty Sessions."

He supposed they had followed the Bill sufficiently closely to see that no provision had been made for this, and he therefore proposed this clause to rectify the omission. He did not want the Consolidated Revenue or the municipal councils to be compelled to pay for the destruction of noxious weeds for private owners. No provision was made to compel private owners to pay for the destruction of weeds on their holdings.

Mr. DILL (Hay) seconded the motion.

The question was put and carried.

Clause 10, as amended, with subsections added as under, was put to the meeting and carried:—

10. All sums of money expended by the local authority, under the authority of or in pursuance of the provisions of this Act, shall be paid as follows:—

- (a) Where the council of any municipality or trustee of any land set apart for public purposes is the local authority, payment shall be made out of the funds of the municipality or trustee of any land set apart for public purposes.
- (b) Where the Board of Directors aforesaid of a sheep district is the local authority, payment shall be made out of the Consolidated Revenue Fund, or from such other source as provided for such purposes under this Act.
- (c) Where the Board of a district is the local authority, a charge shall be levied on all travelling stock, for the purpose of destroying noxious weeds on travelling stock routes or reserves.
- (d) Provided that no such payments shall be made under subsections (a) and (b) where land belongs to private owners, but shall be recoverable from such owner, on an order made by a Police or Stipendiary Magistrate or any two Justices in Petty Sessions.

Clause 11.

11. Penalties imposed by this Act or by any Regulations made thereunder may be recovered before, and offences against this Act may be heard and determined by, a Police or Stipendiary Magistrate, or any two Justices of the Peace in Petty Sessions.

Clause 11 was put to the meeting and passed as printed.

Clause 12.

12. In this Act, unless the context otherwise requires—

"Governor" means the Governor with the advice of the Executive Council.

"Justice" means justice of the peace.

"Minister" means Secretary for Lands, and includes any Minister of the Crown having the administration of this Act.

"Occupier" includes the person having the charge, management, or control of the land referred to.

Mr. BRUCE (Chief Inspector of Stock) moved to add to the definition of occupier the following—“and any owner or proprietor jointly or in severalty of land.” He said that they all knew that the owner of land, as well as the tenant, ought to be made liable. In many cases a man might be put in as a tenant, and then there would be no means of getting at the actual owner, nor providing for the destruction of the weeds.

Mr. WILSON asked that the following words be added, “or any sub-lessee.”

Mr. BRUCE (Chief Inspector of Stock) accepted it.

Mr. WILSON then seconded Mr. Bruce's amendment.

Mr. J. M. ATKINSON said that there was a question that he would like to ask, and that was, whether Mr. Bruce wished to include with occupied the word “owner,” and then “jointly and in severalty”; and, if so, were they not enlarging the liability of the Government to a very large extent in connection with the leased land in the Colony. If they put in these words, “jointly and in severalty,” it would couple in the Government—that was to say, the Government must do it themselves. He failed to see any other way out of it. How were they going to overcome that? He maintained that it would be better to define those things separately altogether. He could not see how it was possible to put the two together. They must either make the owner liable or the occupier liable. He moved an amendment, “That the words ‘jointly and in severalty’ be left out.”

Mr. BRUCE (Chief Inspector of Stock) said that the Government was taken care of by definition of private land, and also by the definition of vacant land, which the Government had to pay for. He wished to make every individual in the partnership liable. His resolution was intended to provide for public companies.

Mr. ROSS (Hume) said that if the Government were to be made liable it was a very large thing. Any taxes on the land ought to be a first charge on the land, and it should be put plainly.

Mr. WILSON seconded the amendment by Mr. Atkinson. He would suggest that the proposer of the original amendment should leave that matter to the Minister when he brought the Bill in, and for the Parliamentary Draftsman.

The CHAIRMAN then pointed out to Mr. Wilson that he had seconded the original motion.

Mr. Atkinson's amendment was put first and lost.

Mr. Bruce's original amendment was then put and lost.

Mr. BRUCE (Chief Inspector of Stock) then moved the following additions to clause 12:—

Private land shall be deemed to be—

- (a) Any land alienated from the Crown in fee-simple, or any less estate or interest, whether by Crown grant, lease, promise of lease, or otherwise.
- (b) Any land of which any person shall be in the actual occupation, or in receipt of rent, profit, or interest therefrom.
- (c) Any land vested in a municipal council, including the roads and streets in municipalities.
- (d) Any land vested in trustees.
- (e) Any land not included in the term unoccupied Crown lands, as hereinbefore defined.

(ii) All roads not exceeding 3 chains in width, which shall be held to be the property of the adjoining occupiers.

He thought it would be best to put in a plain definition of what was meant by private land.

The CHAIRMAN then ruled that these subsections should be dealt with separately.

Mr. A. ROSS (Hume) then seconded subsection (a).

Mr. WILSON wished to know why they should define the term private land when there was no recommendation in the Bill for dealing with private land. They had not applied any principle to private land anywhere in the Bill.

The question was then put and lost.

Mr. BRUCE (Chief Inspector of Stock) then withdrew all the remaining resolutions on the notice paper in his name.

Clause 12, as printed, was put to the meeting and passed.

Clause 13.

13. This Act shall take effect on and after the _____ day of _____ one thousand eight hundred and ninety-six, and may be cited as the “Noxious Weeds Act, 1896.”

Mr. BRUCE (Chief Inspector of Stock) pointed out that the words “ninety-six” in this clause ought to be “ninety-seven.”

The question of amending “ninety-six” to “ninety-seven” was carried.

Clause 13, amended, to read as under, was passed:—

13. This Act shall take effect on and after the _____ day of _____ one thousand eight hundred and ninety-seven, and may be cited as the “Noxious Weeds Act, 1897.”

Clause 1.

Noxious Weeds.

1. The plants named in the Schedule hereto shall be deemed to be noxious weeds within the meaning of this Act, and the Governor may, by proclamation in the *Gazette*, declare that any plant is a noxious plant within the meaning of this Act, and revoke or vary any declaration made under this section. And the Minister shall forthwith furnish to the local authorities hereinafter mentioned a copy of every declaration made as aforesaid.

Mr. T. LESLIE (Forbes) moved, “That the following words be inserted in place of clause 1: ‘Noxious weeds shall mean such weeds as shall be declared noxious by the Governor by proclamation in the *Gazette* and local newspapers on the recommendation of the local authorities.’”

Mr.

Mr. ALISON (Canonbar) said he would second the motion, but would like Mr. Leslie to add at the beginning, "except as provided in clause 8."

Mr. LESLIE (Forbes) accepted this alteration.

Mr. J. M. ATKINSON said it would hardly be right to pass the motion as Mr. Leslie had put it, with the addition, because it was only to be done on the recommendation of the local authority. That was to say that the local authorities where they were very much beset by the Bathurst burr might not declare that a noxious weed if it was going to affect their pockets considerably, and if such were the case it would not be eradicated if they did not recommend it. Therefore he thought this would require a little more thought before they eliminated that provision as Mr. Leslie proposed. He would ask the gentlemen to consider well before they voted on this matter how they should allow such powers to be given to trusts, because this was not alone a matter for the Sheep Boards to deal with; they were dealing with the various trusts, so that if they chose to declare anything a noxious weed there was no power in the Bill which would declare them noxious weeds, and it seemed to him to be a very ill-advised resolution. The Bathurst burr was such a serious noxious weed to the whole Colony, and should be, without exception, declared a noxious weed throughout the whole of the Colony, and therefore he would move, as an amendment to Mr. Leslie's motion, "That on line 3, of section 1, the Government may —"

The CHAIRMAN said he could not accept the amendment, because the question was that this clause be struck out, and he could not move an amendment on a clause which was to be struck out.

Mr. ROSS (Hume) said he really did not see any very great objection to Mr. Leslie's motion, and he did not think that the reasons advanced by Mr. Atkinson were very sound, because if there were good men on the Boards they would declare the weeds noxious which they found detrimental to their interests. It was a lot of trouble to get the Government to do it, and he thought the Pastures and Stock Boards should do it.

Mr. BACON (Brewarrina) said he would support Mr. Leslie's clause with the last amendment. Surely to goodness if they elected a Board they had sufficient confidence in their integrity that they would not, for their own reasons, declare certain weeds not to be noxious.

Mr. J. M. ATKINSON said that the gentlemen present could not get away from the fact of Pastures and Stock Boards. Now, he wished them to consider the trusts. He had said that the trusts, the reserves in townships, &c., if they did not wish to tax themselves would not declare the Bathurst burr a noxious weed. Municipalities would not declare Bathurst burrs noxious weeds because they did not care, they were away outside the sheep district. He wanted to bring it to a vote, and to show those people where it pinched them. The municipalities would not declare Bathurst burrs noxious weeds, and the routes would be of no use to travelling stock.

Mr. BRUCE (Chief Inspector of Stock) said he was with Mr. Atkinson. There was a large amount of coast country where the people did not care a bit about the Bathurst burr. They had cattle, and it did not affect them. They were all agreed that the Bathurst burr was noxious, then why not put it in so many words?

Mr. ALISON (Canonbar) said that Mr. Atkinson apparently could not get away from Bathurst burrs. He seemed to think that there was no other weed in the Colony but the Bathurst burr. He thought there was a good many others, and they were there to deal with noxious weeds. He thought Mr. Leslie's amendment put the matter in a nutshell. He wanted to reserve the power to the local Pastures and Stock Boards. They did not want the power taken out of their hands. They wished them to have the power to declare what was a noxious weed in their district. Were they going to declare that there were no other noxious weeds but Bathurst burrs in the Colony? That was Mr. Atkinson's idea, and they ought to take a broader view than that. It would be absurd to declare some weeds noxious all over the Colony. What better could they do than to leave it to the Boards that were interested to declare what weeds were noxious in their districts? They gave the Boards full power; they did not command them to do anything. There was clause 7 that provided if they did not do their duty, the Minister might; if they did not exercise their duty, he could come in and compel them to do it. He thought it would be entering upon a very dangerous thing making this Act mandatory in so many respects, and not making it permissive to the Boards. They should leave it to the Boards in this matter.

Mr. WILSON said he thought Mr. Alison had failed to grasp the point that while the Pastures and Stock Board would say, "We want the Bathurst burr destroyed," the municipality might say, "We do not want the Bathurst burr declared a noxious weed," and there they would have a key-stone for the dissemination of the Bathurst burr all round a wide territory. That was what Mr. Atkinson was driving at, and he thought he had taken up a very strong position indeed. Clause 7 said, "if it appears to the Minister that the local authority have neglected to exercise their powers," they had carefully abstained from clothing themselves with powers and taking on a duty, and may be, one small municipality would be the curse of 100 miles of country. Now he would be surprised if Mr. Leslie did not see the great gap in his proposal. He would suggest that they should first declare that the Bathurst burr was a noxious weed everywhere and deal with the rest afterwards.

Mr. BACON (Brewarrina) said there were very few towns in this Colony that were not surrounded by a sheep district, and they might be very well sure that the Minister would see that there was something like uniformity of action all over the Colony. The Minister would see that the municipalities carried out the Act on the same lines as the Pastures and Stock Boards. The Boards would very soon inform the Minister that any municipality was not doing its duty, and the Minister had the power to see that the legislation was on uniform lines.

Mr. FLANAGAN (Gunbar) said he thought it was requisite to give the power to the Minister to say what were noxious weeds, and then clause 7 would simplify everything.

Mr. J. M. ATKINSON said that Mr. Bacon had said that the Pastures and Stock Boards would see to its being done. They had arranged that the Pastures and Stock Boards should have no control over the townships, and the Boards could not make them cut those weeds, as they had no power to do it, and the local authorities might not care to declare them noxious weeds, and they would remain uncut, and the sheep would have to go through them.

Mr. LESLIE (Forbes) said, in replying to the arguments used against the resolution, he presumed that no gentleman there was in favour of allowing the Bathurst burr to grow in any part of the lands of New South Wales. He thought they all considered it their enemy, and were all prepared to exterminate it. He thought that the first principle that needed to be established was that laid down in his resolution.

He wanted the Boards to declare what were noxious weeds within their particular districts, as what would apply to one district of the Colony would not apply to the whole. The conditions were different, and therefore what would flourish in one district would not in some other district of the Colony. And if the Conference would affirm this resolution he was quite prepared to go with them in any resolution which they might move afterwards to declare the Bathurst burr a noxious weed throughout the whole of New South Wales.

The CHAIRMAN then said it was rather doubtful after that amendment was passed whether that could be done. It said, "The Governor, with the advice of the municipality, should declare certain weeds, noxious." He did not think they could go and put in the Bill that Bathurst burrs should be noxious because they would be simply contradicting that clause.

Mr. T. BROWN, M.L.A. (Budgerabong), said he had given notice of an amendment on that clause, and asked if it would be competent to move that as an amendment to Mr. Leslie's. He had proposed to substitute for clause 1 his notice of motion.

The CHAIRMAN said that if Mr. Leslie's amendment was carried he would rule that Mr. Brown's amendment and the other standing in Mr. Alison's name were out of order.

Mr. T. BROWN, M.L.A. (Budgerabong), said that what he proposed in his amendment was to allow the authorities to form their own schedule of what were noxious weeds. He would move as an amendment on Mr. Leslie's motion that all of his own amendment from the word "Governor" be added to Mr. Leslie's amendment so as to get rid of the opposition which had been offered. He thought it would meet the opinions of everybody if the words Bathurst burr were inserted after the words "shall mean" in Mr. Leslie's motion, so that the clause would declare the Bathurst burr to be a noxious weed and such other weeds as should be declared noxious by the Governor.

Mr. WILSON suggested that Bathurst burr be left out and when they dealt with the schedule it could be put in.

The CHAIRMAN then said that if they put it in the schedule they contradicted the clause. He had ruled that already, and he must insist on his ruling.

Mr. FLANAGAN (Gunbar) did not see that Mr. Leslie had altered the position one iota, as it was still left to the recommendation of the local authorities.

Mr. ROSS (Huine) said he understood that Mr. Atkinson's view was met in this way, that the Bathurst burr was put in as noxious all over the Colony, and the other plants wherever the Governor might declare on the recommendation of the local Boards.

Mr. LESLIE'S (Forbes) new clause without Mr. T. Brown's addition as under "Except as provided in clause 8 noxious weeds shall mean Bathurst burrs and such weeds as shall be declared noxious by the Governor, by proclamation in the *Gazette* and local newspapers, on the recommendation of the local authorities, and such proclamation shall apply only to such districts or parts thereof named therein," was then put and carried.

Mr. WILSON said he wished to move an amendment that "Bathurst burrs" be omitted from the resolution. He proposed to omit it there for the purpose of putting it in, in what he considered to be, its proper place.

The CHAIRMAN said he would not accept the amendment if he meant to put it in elsewhere.

Mr. WILSON said he would ask the meeting to dissent from the Chairman's ruling that he was not entitled to move the omission of the words "Bathurst burr" from the amendment.

The CHAIRMAN said that he had already told him that he was entitled to move the omission of the words "Bathurst burr" but he was not entitled to put them in the schedule because it would be contradictory of the clause.

Mr. WILSON said that he would still move that the Chairman's ruling be dissented from.

Mr. ALISON (Canonbar) rose to a point of order. Undoubtedly Mr. Wilson was out of order. They had put "Bathurst burr" in the clause and they had passed the clause.

Mr. WILSON's motion failed for want of a seconder.

Mr. T. BROWN, M.L.A. (Budgerabong), said he would move the addition of the following, "The Governor may also by general or special proclamation in the *Gazette* declare any plant to be a noxious weed within the meaning of this Act, and such plant shall be deemed to be a noxious weed throughout the Colony or such parts of it as named in the proclamation. The Governor may from time to time vary or revoke such general proclamation, providing that such general proclamation shall not have the force of law until it has been laid before both Houses of Parliament for one month. And the Minister shall thereafter furnish the local authorities affected with a copy of every such general or special proclamation." He said that the different authorities under this Act were given the power to declare that weeds were noxious in their districts. So far as the larger authorities under this Act were concerned, that would be sufficient to meet all cases; but they had also constituted some smaller local authorities, such as Municipal Councils and Trustees of Public Lands, who might not wish to declare some weed which was hurtful to be noxious, and, in the interests of the districts, the Governor should step in, at the instance of the local Pastures and Stock Boards, and declare such weeds noxious. And he provided in his amendment that that should not be arbitrary, but that notifications should be laid on the Table of the Houses, so that there might be time for protest.

Mr. FLANAGAN (Gunbar) seconded the motion.

Mr. WILSON asked Mr. Brown if he contemplated that it was possible that under this addition the municipality being a local authority could apply for a revocation of the general declaration that Bathurst burr was a noxious weed. That was just as dangerous a principle as they had been discussing some little time ago. They had put in Mr. Leslie's clause that the Bathurst burr was a noxious weed, but now they were giving the Governor power to revoke that.

Mr. T. BROWN, M.L.A. (Budgerabong), said that was not so.

Mr. WILSON said that was the way he read it. As far as he could judge, it seemed to him to be quite open to any municipality to apply to the Governor to absolve their district from cutting burrs, because they were not interested in sheep in that district. He would, therefore, oppose the amendment. He wanted "Bathurst burr" to stay in, in spite of the Governor and the Executive Council. Municipalities would apply to have the general proclamation that Bathurst burr was a noxious weed in every part of the Colony revoked so far as their particular municipality was concerned. And that was where the whole mischief would be done over again.

Mr.

Mr. T. BROWN, M.L.A. (Budgerabong), said that nothing of that kind had been provided for in the Act. The only Proclamation that the Governor could vary or change was the proclamation that he would make in pursuance of that section.

Mr. ALISON (Cannonbar) thought Mr. Brown's amendment out of order, because the power of the Governor to declare a weed noxious had been eliminated. Mr. Brown's amendment would practically restore clause 1, which had been cut out. If they inserted that they took it out of the hands of the local Boards, and they put it in the hands of the Governor to proclaim what was a noxious weed all over the Colony. The governor should have the power to prevent the importation of noxious weeds.

Mr. BRUCE, Chief Inspector of Stock, would point out that clause 7 as it stood already provided for what Mr. Brown was aiming at; and Mr. Brown's motion, as it were, repealed or cancelled the motion that had just been passed at Mr. Leslie's instance. Everything that was needed was provided for in the Bill.

Mr. LESLIE (Forbes) said he was inclined to support Mr. Brown's amendment, as Mr. Brown was afraid that municipalities and other smaller trusts would let the burrs grow, and might not consider it to their interest to destroy it; but on reading clause 7 he found that the difficulty that Mr. Brown sought to overcome was fully covered by that clause, because if Bathurst burr were declared a noxious weed in any particular district and the municipality failed to carry out the destruction of such weed, then the Minister under clause 7 had the power to come in and take it out of the hands of the local authority if it were not doing its duty. Therefore he thought Mr. Brown's amendment was quite unnecessary.

Mr. T. BROWN, M.L.A. (Budgerabong), said that clause 7 applied to noxious weeds that had been proclaimed noxious weeds. Now this addition was about proclaiming noxious weeds. So far as Live Stock Boards were concerned he saw no difficulty, and these Boards might name their own schedule, but to give them that right they must also give the smaller authorities—the trustees and so on—the same right. Now it came in this way that small bodies for the purpose of saving expense might decline to declare some weeds noxious weeds under the Act, and what he was aiming at was to give the Minister power, in the interest of the large stockowners or not, to proclaim a certain plant when the local authority refused to put the Act into operation with respect to it. That was all he was aiming at, and he thought he had safeguarded the interests of those smaller communities by saying that while the Minister might exercise this power it would be laid before Parliament for so long in order to protect those smaller interests when they wanted to protest.

The question of adding Mr. T. Brown's amendment to clause 1 was put and carried by a majority of one.

Mr. J. M. ATKINSON moved the following amendment on clause 1:—"That the prickly pear be not a noxious weed within the meaning of this Act." He thought that the fear the prickly pear would be included as a noxious weed under this Act had affected the vote of several gentlemen present. He thought that it should be under another Act altogether, and that it would be impossible to classify it with the other noxious weeds under this Bill. He thought it was important there should be another Act for it, and therefore he moved that the prickly pear be not a noxious weed within the meaning of this Act. He was informed on reliable authority that the Prickly Pear Act of 1883 was still in operation. He would therefore withdraw his amendment.

Clause 1, as amended, was put to the meeting and carried:—

Except as provided in clause 8, noxious weeds shall mean Bathurst burr and such weeds as shall be declared noxious by the Governor by proclamation in the *Gazette* and local newspapers, on the recommendation of the local authorities; and such proclamation shall apply only to such districts or parts thereof named therein. The Governor may also by general election or special proclamation in the *Gazette* declare any plant to be a noxious weed within the meaning of this Act, and such plant shall be deemed to be a noxious weed throughout the Colony or such parts of it as named in the proclamation. The Governor may from time to time vary or revoke such general proclamation, providing that such general proclamation shall not have the force of law until it has been laid before both Houses of Parliament for one month. And the Minister shall thereafter furnish the local authorities affected with a copy of every such general or special proclamation."

Clause 4, as amended:—

4. (1) On receipt of any information respecting the existence of noxious weeds on land within their district, the local authority shall, if satisfied of the existence of the noxious weeds, serve a notice on the occupier of the land, requiring him to eradicate and destroy, to the satisfaction of the Board, the noxious weeds within the time specified in the notice, and to execute such works and do such things as may be necessary for that purpose, and if the local authority think it desirable (but not otherwise) specifying any works to be executed.

(II) Provided that where the occupier cannot be found, the local authority may themselves eradicate and destroy the noxious weeds.

(III) If the occupier of land shall be unknown or absent from the Colony, and the expense incurred hereunder in clearing such land of noxious weeds cannot be recovered from him, and remain unpaid for more than months after the same shall have become due, the local authority may let such land for any period not exceeding five years, upon terms and conditions to be prescribed, and shall receive the rents and profits thereof, and shall apply the same in payment of such expenses with interest thereon at the rate of 10 per centum per annum, so long as the same shall be unpaid: And such authority shall hold the surplus (if any) upon trust for the person entitled to such surplus.

Mr. ALISON (Cannonbar) moved (for Mr. Bacon) the notice which stood in that gentleman's name on the notice paper, to re-commit clause 4 with a view to insert after the word "information" the words "through the local authorities or any landowners interested."

Mr. FLANAGAN (Gunbar) seconded the motion.

The question of re-committal was put to the meeting and carried.

Mr. ALISON (Cannonbar) thought it could be altered to read, instead of "local authorities," "the authorised officer."

Mr.

Mr. ATKINSON rose to a point of order. It had already been decided.

Mr. WILSON thought it was a pity that they should have to go over the same ground. He would put those words in, but for all practical purposes they meant the same thing. "Authorised officers" were simply a nullity. At the present time the places which were supposed to be supervised by the authorised officers were left alone, because the authorised officers had too much to do. Then again, who were the "owners interested?" There were no taxpayers under this Bill, and the "landowners" interested were a doubtful quantity. It seemed to him that this was a matter of such wide application that if the Boards received an anonymous letter, or if a swagsman strolling by thought that he might get a job from the local authorities, and so laid a complaint, he thought the local authorities should be pretty well able to judge of the merits of that complaint. He might be a landowner on the down stream side of a district. He would be very much interested, but if there was any contention in the proposed amendment he would be nobody, he would be an unknown quantity.

Mr. ALISON (Canonbar) said he would be interested.

Mr. WILSON said he wanted it to have a general application. If the representations were from a fishy source the Boards would know whether to make any movement. If he had sheep travelling, it was just as much to his interest to have the burrs cut for the last 10 miles, even though he came from Queensland, as it was to the interest of a man in the district. If he wrote to the Board the Board might say "Who the deuce is that man? He is from Queensland, he is not a taxpayer." He thought the meeting should let it stay as it was, and let the local authorities winnow the wheat from the chaff, and say who was making a reasonable complaint.

Mr. ATKINSON opposed this very strenuously before, and he thought if they wished to pass a Bill for the eradication of noxious weeds, it was imperative that they should not narrow down their limits for knowing where the noxious weeds were. If they had a local Board elected as Mr. Alison had so often said, they must leave something to the sense of that Board. If he was going to be elected by the whole of the people in that electorate surely they would elect good men to the Board, and he did not hesitate to say that those men had not in the past passed any foolish things, or anything that would require such immense care as Mr. Alison proposed.

Mr. FREEMAN said he supported Mr. Alison in regard to this. Let them take a drover entering Goodooga, when he got to Deniliquin he could complain of every run he came through, and he could have an authorised officer sent out to inspect the runs. They must carefully guard themselves from too many Government officers. They were always being inspected.

The MINISTER FOR LANDS then entered the chamber amid acclamation. He said:—I do not want to be accused of leaving you in an unceremonious fashion. You have been kind enough to come here at considerable inconvenience I am sure to yourselves, to assist the State in solving some very difficult problems, and I only regret that business of perhaps national importance necessitates that I should leave the Colony before you have completed your deliberations, and this prevents me from having that consultation which I am sure would have been productive of valuable results, at the conclusion of your labours. I hope you will not take offence at my departure from the Colony before you complete your deliberations. You understand the circumstances, and I am sure, therefore, you will excuse my absence. I cannot let the opportunity pass without coming here to thank you for the serious consideration you have given to these matters; and, although I cannot agree with all your proposals, I daresay you cannot agree yourselves, and I am sure that you yourselves, from the results of your deliberations, must appreciate my position, and therefore you will be less liable to be censorious of my actions, and I can only hope you will judge me leniently. I shall accept your advice whenever it is possible to do so. If I refuse to accept your advice you will give me at least the credit of placing my refusal on the large public interests which are at stake. I cannot sacrifice the great interests of the body of this country, who constitute the taxpayers, when I think they come into conflict with the interests, perhaps, of a section of the community. But I hope we shall not have differences of that character; that we shall be able, reasonable men as you are on the one side, myself as administrator on the other side—to harmonise our respective views, and by compromise make legislation which shall be acceptable to all parties. I do not propose to criticise your proposals. At a later stage I shall be glad to meet the committee you have appointed, and then to discuss any great matters of difference that may arise; and I believe that the result of all our efforts will be the introduction of a Bill which will be satisfactory, not only to yourselves but to the people of the country. You are engaged now in considering a measure with regard to noxious weeds. Your deliberations have not reached that stage when I can express any opinion whatever. You are breaking virgin soil, and therefore it is not likely the first attempt will be productive of unanimity of opinion. Therefore we must not be prepared at the first to strive to make such a comprehensive Bill as will last for all time, when perhaps experience will teach us more wisdom than we possess at the present moment. I have to thank your chairmen for the very great kindness which has been tendered to me by their presiding over your deliberations, and I can extend to you my thanks on behalf of the people of this country for your loyal and voluntary assistance; and I can only hope that the results will be as satisfactory to yourselves as our meeting has been to one another.

Mr. ALISON (Canonbar) said that they must heartily thank the Minister, Mr. Carruthers, for attending there now and again and for inviting them to come. They must now congratulate him exceedingly on the position he held in the Convention that was shortly to be held, and they wished him, he was sure, a pleasant voyage there, and a happy result to his efforts. He was sure that they would congratulate him and themselves and the country generally on having such an able representative to visit Adelaide. They had done and were doing their best to bring forward, to pass a Bill, which would be acceptable to him. They quite understood that it was impossible that he would be able to agree with everything. There were differences of opinion even among themselves on a few points, but he was quite satisfied in this, that they would all agree that whatever the Minister did bring in it would be brought in with the very best intentions, and he now proposed that they most enthusiastically thank the Minister for his kindness to them all.

The Minister for Lands then left the Conference amid acclamation.

Mr. FREEMAN (continuing), said he took it that the intention of the motion was simply this, so that there should not be a lot of frivolous complaints by anyone who chose to subject the lessees to expense. Part of the words of the motion were "landowners interested." He took it that people who had got sheep in this Colony were all interested landowners, and therefore they were the proper persons to make complaints, and he thought Mr. Alison's motion should be carried.

Mr.

Mr. ROSS (Hume) said he opposed this motion. They had had a great deal of discussion on this before. It was one of the hardest points in the whole Bill. He did not see why information should not be laid by anybody. The information was only conveyed to the Board. He did not see that there would be any harm when it was conveyed by any person, no matter who. He did not suppose a swagsman would bother his head about it, and even if he did, as they all knew very well, the Board would take it for what it was worth.

Mr. ATKINSON said that they did not seem to grasp that a notice had to be served on the occupier of the land by the Board. There was no expense, they only served the notice if they thought such information as was given them was correct. He did not see why any objection should be made to that.

Mr. ALISON (Canonbar) said that if the Board got a letter it was provided that the local authority "shall" that was the only thing, if the word was "may" it would be all right. If they would alter that, he would withdraw his amendment in order to cut out the word "shall," and insert the word "may."

Mr. WILSON said he objected to have "shall serve a notice if satisfied." The Board must be satisfied. They were not a collection of fools, they were sensible men. The Board were business men, met there for business purposes, and they would say, "This is some man's nest, who is this man?" If he were a public man he would be there to be held to obloquy if he were wrong. There was no compulsion that they should serve a notice until they were satisfied as to the existence of the noxious weeds. It was only the merest beginning of the proceedings altogether.

Mr. ALISON (Canonbar) said he would stick to his previous amendment.

Mr. WILSON's amendment was then put to the meeting and lost.

The Conference then adjourned until 10 o'clock the next day.

FOURTH DAY—19TH MARCH, 1897.

The Chairman, the Honorable Rupert Carington, took the Chair at 10 a.m.

The minutes of previous meeting were read and confirmed.

Mr. BRUCE proposed that clause 4 be recommitted, with a view to the addition of which he had given notice.

Mr. PEARSE (Orange) seconded the proposal.

The question was put to the meeting and carried.

Mr. BRUCE (Chief Inspector of Stock) moved that the following be added:—

If the occupier of land shall be unknown or absent from the Colony, and the expense incurred hereunder in clearing such land of noxious weeds cannot be recovered from him, and remain unpaid for more than months after the same shall have become due, the local authority may let such land for any period not exceeding five years, upon terms and conditions to be prescribed, and shall receive the rents and profits thereof, and shall apply the same in payment of such expenses with interest thereon at the rate of 10 per centum per annum, so long as the same shall remain unpaid: And such authority shall hold the surplus (if any) upon trust for the person entitled to such surplus.

Mr. FLANAGAN (Gunbar) seconded the amendment.

Mr. WILSON said he saw no objection to this clause, but he doubted the wisdom of allowing such a long term as five years. It might be a heavy punishment to a man to tie his land up for five years. He supported this clause with a view to opposing Mr. Bruce's next clause. He thought, however, five years was rather too long, and three years would be sufficient.

Mr. ATKINSON pointed out that the words were "not exceeding" five years. He would endorse Mr. Bruce's proposal for this reason, that some portions of this land might be so bad that they might have to let it for five years to get a tenant to clear it. Therefore, he thought they might leave the term of five years to the discretion of the people who had to let it.

Mr. FLANAGAN (Gunbar) said five years might not be sufficient. He thought the Board should have power to take possession of the land until such time as the owner appeared. He would move to omit the five years altogether, and state in the clause that the Board should have power to put the occupant on the land until such time as the owner turned up, and engaged to perform the duties devolving upon him.

Mr. ROSS (Hume) said he thought there was a good deal in Mr. Flanagan's contention on that matter. He thought a man might be away, and if his land were let for five years in the sixth year the land being idle might become foul again.

Mr. FLANAGAN's (Gunbar) amendment to leave out the words "five years" was put to the meeting and carried.

Mr. WILSON said that sometimes the unknown man came back again and yet they were giving Boards the power to lease the land in perpetuity. He thought that they should provide that if the owner came back and wanted to pay up he might turn the tenant out.

Mr. ROSS (Hume) said that they must either give the Boards power to let the land or else power to sell, he thought that this was the best way out of it. If a man came back when his land had been cleared it was more than probable that the tenant would not care to give up the lease.

Mr. ATKINSON asked if it would not be better to make this a first cost on the land. If those words were inserted it would obviate the necessity of Mr. Bruce leaving out those words, and it would have a definite period.

Mr. FLANAGAN (Gunbar) moved that the following words: "give the power to the Board to deal with the land until such time as the owner turns up" should be inserted instead of the words which were cut out. That they should leave out from the word "may" to the word "years" and put in "The local authority shall have the power to deal with the land until such time as the owner turns up, and will undertake to deal with the lands according to his responsibility under this Act."

Mr.

Mr. CUMMING (Hillston) seconded the motion.

Mr. ATKINSON said he must oppose the insertion of those words. They were now dealing with the small lands. There was no doubt about it, because on the larger areas of land they would never fail to find the owner, and, therefore, it would be a very outrageous thing to let any portions of those lands subject to a twenty-four hours' notice of ejection. They would get nobody to take those lands. Nobody would spend a farthing on them to eradicate the burrs. It was absurd for Mr. Flanagan to wish to introduce such a thing, what they wanted was to keep the burrs eradicated. It was absurd to expect that anybody would take land subject to twelve hours' notice of ejection. The facts of the matter briefly were these: if a man did not come and claim his land or say he was the owner of that land during the process of this Act, and did not come and say "This is my land, I am the owner," then the local authorities were justified in letting that land to a tenant for a period not exceeding five years. When the owner turned up, if he did turn up afterwards, and said he objected to this, they would say "Very well; you own the land, if the tenant likes to leave it now, very well; take it and eradicate the weeds; but if the man will not go out you must put up with the penalties you have incurred." The same thing was done in other directions with the lands of the Colony. If they wanted to keep the land clear they must give facilities to people to come and eradicate the weeds. A man might spend some money on the land and perhaps erect a small house, and then the owner might come along and say "Clear out of my land, I want it to-morrow."

Mr. BRUCE (Chief Inspector of Stock) said he was altogether of Mr. Atkinson's opinion that he had explained it properly, and he thought it would practically render the Act inoperative.

Mr. WILSON said he would like to point out that this would only apply to limited areas, and he questioned very much whether it would not be better for the Board to be without the power, for he thought it would lead to litigation, where the costs would be more than the amount to be recovered. He thought the term should be five years. There were many things they must submit to without putting the law in motion.

Mr. FLANAGAN (Gunbar) said Mr. Atkinson had told them that no man would take this land. A man might go and build a house on it. What for?

Mr. ATKINSON: To live in.

Mr. FLANAGAN (Gunbar) said he thought a man would be an idiot to build a house on that land on such a tenure as the Board would give him. Suppose he had an allotment in a town, and suppose he was destroying the weeds under the Act, and there was an allotment alongside of his and no one knew the owner. The Board would simply have the power to deal with that until such time as the owner turned up and the Board might make a bargain with him. He might run his fowls or his cows on that land, and would eradicate the weeds. He would not be such a fool as to build a house on it. The Board would let him know what he might expect, what his tenure would be, and he might have to give it up any day. It was absurd talking of building a house on such a tenure.

Mr. Flanagan's (Gunbar) motion was then put to the meeting and lost.

Mr. Bruce's (Chief Inspector of Stock) amendment, "That five years should be reinserted in his previous amendment," was put and carried.

Mr. Bruce's (Chief Inspector of Stock) original amendment without any further amendment was put to the meeting and carried.

Mr. ALISON (Canonbar) said he would like to move the recommittal of this clause with a view to alter the word "shall" into "may." He now moved that the following words be inserted after the word "purpose" in subsection 2, clause 4: "and may subsidise the said occupier to the extent not exceeding £2 for each and every £1 expended by the said occupier." He moved this with a view of allowing the Boards to assist in such cases as they might see that the insistence upon the absolute letter of the law would ruin the occupier, and as he was sure they had no desire that such a thing should be enforced on any person, he wished to give them the power to assist any person whom they might deem it desirable to assist in this way. He did not propose it as a mandatory clause; they might or might not advance it if they chose. It was quite feasible as it stood, as the Act stood, that a weak financial man might very easily be ruined by the stringent operation of this Act. He entirely disagreed with the principle upon which this Act had been carried out in the Conference. It had been carried out simply from the point of view of the people who had got rid of the weeds themselves, and they did not regard the different circumstances that might occur in the different parts of the Colony. Now they were going to make a mandatory law, and the result must be very serious injury to a great many people all over the Colony. Now, the mode of thought which had actuated the Conference in regard to this Noxious Weeds Bill was that they had only to pass a law compelling everybody to destroy their weeds, and the thing was done. Why not bring in a law in that case compelling everybody to destroy wallabies, rabbits, and kangaroos, and give them no assistance, and the thing would be done. That was a very crude idea of legislation which they had embodied in this form. If they were to have legislation foisted on this Colony it would result in a reaction such as would sweep away all their efforts. They must not make things mandatory, but must make them permissive, and allow Boards to assist individuals who would otherwise be ruined. One could contemplate the invasion of the weed suddenly into some district which would make most serious injury. It was most advisable that the Boards should have the power to assist the individual, and of working to some extent on the co-operative principle. They were all praising the Stock and Pastures Protection Act, and that was the principle on which that Act worked. Why not adopt the principle of that Act, and make it permissible that the Boards should have power to assist different people in the destruction of noxious animals or noxious weeds. He submitted that this resolution of his would not be a mandatory one, but it would give the Boards the power to deal with the weeds, so as to assist the weaker men in the district.

Mr. FLANAGAN (Gunbar) seconded Mr. Alison's motion. He was in no way jealous because Mr. Alison had taken up his motion, he would strongly assist him. His motion on the paper read as follows: "provided that where it comes under the knowledge of the authorities administering this Act, that the eradication of noxious weeds from any one holding would be ruinous to the owner or occupier of such holding, the law should provide to distribute the cost of eradication over all the lands of the district which may not be affected, but are in danger of becoming so."

Mr. ALISON (Canonbar) said he would withdraw his motion in favour of Mr. Flanagan.

Mr. WILSON pointed out that Mr. Alison's proposition was definite and reduced it to a point, whereas Mr. Flanagan's was indefinite.

Mr.

Mr. ALISON (Canonbar) rose to a point of order. The clause had not been recommitted. He would now move that the clause be recommitted, for the purposes of this amendment.

Mr. MOORE (Goodooga) seconded the recommittal.

The question was put to the meeting and lost.

Clause 4, as amended, was put to the meeting and carried.

Clause 5.

5. (1) If either—

(a) the person on whom a notice to eradicate and destroy or prevent the growth of noxious weeds has been served as aforesaid makes default in complying with any of the requisitions thereof within the time specified; or

(b) the growth of the noxious weeds though abated since the service of the notice, is, in the opinion of the local authority, likely to recur on the same land,

the local authority may by any person authorised by them in that behalf make a complaint to a justice, and such justice shall thereupon issue a summons requiring the person on whom the notice was served to appear before a police or stipendiary magistrate or any two justices in petty sessions.

(ii) The said magistrate or justices may, if satisfied that noxious weeds exist as alleged, or that although the growth is abated, it is likely to recur on the same land, by order require the said person to comply with all or any of the requisitions of the notice, or otherwise to eradicate and destroy or prevent the growth of the noxious weeds within a time specified in the order, and may, if thought desirable, specify the works to be executed by the said person for that purpose.

(iii) If a person fails to comply with an order of a magistrate or justices made as aforesaid, with respect to the eradication and destruction of, or prevention of the growth or a recurrence of the growth of the noxious weeds, he shall, unless he satisfies the Court that he has used all due diligence to carry out such order, be liable to a penalty not exceeding *twenty* shillings a day during his default. Moreover, the local authority may enter the land to which any order under this Act relates, and eradicate and destroy and prevent the growth of the noxious weeds, and do whatever may be necessary in execution of such order.

Mr. LESLIE (Forbes) withdrew the notice of motion standing in his name, which read as follows: "And the persons owning or occupying the land where such entry has been made shall be liable for the amount expended in the eradication and destruction of the noxious weeds," in order to adopt that standing in the name of Mr. Bruce.

Mr. BRUCE proposed that the following be added as subsection 4, of clause 5:—"All costs, charges, and expenses incurred by a local authority, or any person authorised by a local authority, in clearing any private land of noxious plants under the provisions of this Act, shall be a first charge upon such land, and shall take precedence of all mortgages or other charges whatsoever upon such land: Provided always that a certificate under the hand of such local authority shall be a full discharge of all such costs, charges, and expenses, up to the date of such certificate."

Mr. LESLIE (Forbes) seconded the proposition.

Mr. WILSON thought they had done enough in hampering the people's land in what they had passed a little while ago. He objected to their being any temptation to pile up charges which would in many cases total perhaps more than the cost of the land.

Mr. FLANAGAN (Gunbar) said if a man did his duty there would be no charges, and it was absurd for them to come there to make a law and not make a penalty for the criminal and idle men in the districts.

Mr. ATKINSON said he must endorse Mr. Bruce's amendment also. He could not agree with Mr. Wilson. There were many of the medium sized holders that he knew of who would be their chief enemies. It was not the small holder or the big holder, but the medium sized holder who was their chief enemy.

Mr. ALISON (Canonbar) said he thought that was following in the steps of very bad legislation that had gone before. It seemed to him that everything was going to be a first charge on the land. He would suggest they should pass clauses saying how properties which would fall into the hands of the Noxious Weeds Boards should be put up for sale.

Mr. Bruce's motion was put to the meeting and carried.

Mr. FLANAGAN (Gunbar) moved the following addition to clause 5,—

Provided that where it comes under the knowledge of the authorities administering this Act, that the eradication of noxious weeds from any one holding would be ruinous to the owner or occupier of such holding, the law should provide to distribute the cost of eradication over all the lands of the district which may not be affected but are in danger of becoming so.

He might say that this question or the subject contained in the motion did not affect either his district or himself personally. He was informed by some gentlemen that this Conference thought there were many individuals in different localities all over this Colony to whom it would be ruinous if they were compelled individually to clear their holdings, and therefore it appeared to him a wise thing to introduce these words. They could fence out the emu, the kangaroo, and the rabbit, but they could not fence out the weeds. Floods rose and carried the weeds on to a man's land just like an enemy. Suppose an enemy landed tomorrow in Adelaide then it would not be right to leave the people of South Australia to fight that enemy, every man in Australia should put his hand in his pocket to help them to fight that enemy. There people of the district where these noxious weeds grew were in danger of having their lands overrun by the weeds. Of course if it were a rich man who neglected his duty he would not propose for one moment to assist that negligent rich man. If it were a banker who took these lands over the Board would certainly never compel the residents of the district to subscribe to help that banker to clear the weeds off that land. All he wanted was to enable the Board, where they saw a case of hardship in eradicating the weeds, to distribute the cost all over the district. He thought it only wise and just that this new principle should be introduced.

Mr. ALISON (Canonbar) seconded the motion.

Mr. ATKINSON said he need hardly say he was going to oppose this tooth and nail. They would all see, in fact it seemed to him they had seen already, that this was giving an incentive to a man who did not clear his land, in so far as it was an inducement to a man who had an accumulation of filth on his land that he should go and get £2 for every £1 that he spent in clearing the land. Mr. Flanagan had said that floods would carry the weeds down, but the floods must carry the weeds from somewhere, and that somewhere must be cleared of these weeds. If those lands were cleared the flood could not carry noxious weeds down. If this proposition was carried it would be an inducement to a man to get a subsidy for every £1 he spent.

The question was put before the meeting and lost.

Clause 5, as amended, was put to the meeting and lost.

Clause 6.

6. The local authority may, for the purpose of carrying out the provisions of this Act, enter, or authorise any person by writing properly authenticated by the said authority to enter, at any time, with men, vehicles, horses, and bullocks, and necessary appliances, into and upon any land within their district.

Clause 6, as printed, was put to the meeting and carried.

Clause 7.

7. If it appears to the Minister that the local authority have neglected to exercise, or to make reasonable efforts to exercise, any powers conferred or duties imposed on them by this Act, the Minister may give notice in writing requiring the local authority to exercise the powers and perform the duties aforesaid within a period to be named in the notice.

If the said requirement is disobeyed, or is not complied with, it shall be lawful for the Minister to exercise the powers or perform the duties, and where a municipal council is the local authority, to recover on behalf of Her Majesty from the council the expenses thereby incurred.

Mr. T. BROWN, M.L.A. (Budgerabong) moved the addition of the following words "of such local authorities and recover the expense thereby incurred from such local authorities in the case of municipal councils or lands held in public trust or from the owner or holders of such other lands so occupied." He said that this clause as originally drafted in the Bill provided that the Minister should exercise certain powers under the Bill to eradicate noxious weeds in certain cases where local authorities failed to do so. The clause went on to say that "if the said requirement was disobeyed, or was not complied with, it should be lawful for the Minister to exercise the powers, or perform the duties, and, where the municipal council is the local authority, to recover on behalf of Her Majesty from the council the expenses thereby incurred." That clause made provision for the Minister to enter into areas held under other authorities than that of municipal councils, but it made no provision to enable the Minister to recover from those other bodies, and his proposal was to widen that clause so as to enable the Minister to recover from those other local authorities the expenses incurred in destroying the weeds that they had neglected to destroy. He proposed to strike out all the words after the word "duties."

Mr. ATKINSON seconded the proposal.

The question was put to the meeting and carried.

Mr. BRUCE (Chief Inspector of Stock) moved the addition of the following, clause 7,—

"Before taking proceedings against an occupier who is not entitled to the actual occupation of any land infested with noxious weeds, the local authority shall serve such occupier with a notice in the prescribed form: and if the person who is entitled to the actual occupation of such land shall not, within fourteen days from the service of such notice, arrange with such occupier for the eradication of the noxious weeds on such land, such occupier shall be deemed, as regards such land, to have all the powers of an Inspector or local authority under this Act."

Mr. DAVIES (Gunnedah) seconded the motion *pro forma*.

Mr. WILSON said that the following words did not appear to him to convey any concrete idea: "before taking proceedings against an occupier who was not entitled to the occupation of any land." He confessed he did not understand them.

Mr. BRUCE said that occupier included owner.

Mr. ALISON (Canonbar) said that he would point out that the following words were unnecessary: "such occupier shall be deemed as regards such land to have all the powers of an Inspector," because everybody under that Act was an Inspector.

The question was put to the meeting and lost.

Mr. BRUCE proposed the following as an addition to clause 7,—

Whenever there are more occupiers than one of any infested private land, and one of such occupiers is, under this Act, in any way compelled to pay the whole or more than his fair share of the cost of eradicating the noxious weeds on such land, he may, in any Court of competent jurisdiction, recover from the other occupiers of such land such proportion of the cost, charges, and expenses incurred by him in or about such eradication, as is, in the opinion of the Court, fairly proportionate to the respective interests of the occupiers in such land.

He said that wherever there were more occupiers than one, and one paid more than his fair share the others should be liable to pay a fair proportion.

Mr. FLANAGAN (Gunbar) seconded the motion.

Mr. BACON (Brewarrina) did not see any necessity for the additional clause. He did not understand how one owner could be compelled to destroy weeds if another were not compelled to do so. Supposing three people owned a piece of land, how could one of them be supposed to destroy noxious weeds and not another?

Mr.

Mr. WILSON suggested to Mr. Bruce that, not only this amendment but the other which was on the business paper, was really a matter for legal minds to discuss. These were legal provisions, and he did not think they were competent to deal with them. He would like to have as little to do as possible with this part of the Bill. The draftsmen could do everything much better than they could.

Mr. BRUCE said he would adopt that suggestion. This clause had been adopted from the Prickly Pear Bill. He would withdraw the amendment. He moved that the following addition be made to clause 7:—

“The expense incurred in eradicating any noxious weed other than prickly pear, on land not being land held under lease from the Crown, shall as between landlord and tenant, in the absence of any special agreement, be borne in the following proportions respectively, namely:—

- (a) Where the interest of the tenant at the time when such expense was incurred is for a shorter period than three years, the whole of such expense shall be borne by the landlord.
 - (b) Where the interest of the tenant is for a longer period than three years and shorter than five years, two-thirds of the expense shall be borne by the landlord and one-third by the tenant.
 - (c) Where the interest of the tenant is for a longer period than five years and shorter than eight years, the whole of the expense shall be borne by the landlord and tenant equally.
 - (d) Where the interest of the tenant is for a longer period than eight years and shorter than twelve, two-thirds of the expense shall be borne by the tenant and one-third by the landlord.
 - (e) Where the tenant's interest is for a longer period than twelve years, the whole of the expense shall be borne by him.
- (ii) In the case of leased land infested with prickly pear (the same not being land held under lease from the Crown), and with respect to the apportionment of the expense of the eradication thereof on such land there is no special agreement between the landlord and tenant, it shall be for the Board, on the application of either the landlord or tenant, to make such appointment, which shall be final and binding on all parties concerned.”

He said he would like a discussion upon this matter with respect to the interest of landlord and tenant. If this Bill were passed there would be many tenants who would have noxious weeds upon their land, and he thought it was only right this Conference should express the opinion as to how far the tenant and landlord were liable. When the Act came into force there would be some tenants every one, two, three, or perhaps ten years, and the question was whether the landlord or the tenant should be at the cost of eradicating noxious weeds from the land. He had brought this forward simply with a view to discussion.

The motion lapsed for the want of a seconder.

Clause 7, amended as under, was put to the meeting and carried.

7. If it appears to the Minister that the local authority have neglected to exercise any powers conferred or duties imposed on them by this Act, the Minister may give notice in writing requiring the local authority to exercise the powers and perform the duties aforesaid within a period to be named in the notice.

If the said requirement is disobeyed, or is not complied with, it shall be lawful for the Minister to exercise the powers or perform the duties of such local authorities and recover the expense thereby incurred from such local authorities in the case of municipal councils or lands held in public trust and from the owner or holders of such other lands so occupied.

Clause 8.

Restriction of importation of noxious weeds.

8. The Governor may make regulations—
- (a) prohibiting the importation into New South Wales of any noxious weeds or of the seed of any noxious weeds, and providing for the destruction of the same if imported contrary to the said regulations;
 - (b) regulating the importation into New South Wales of articles, the importation or use of which would in the opinion of the Governor tend to spread the growth of noxious weeds;

and the Governor may in those regulations impose any penalty not exceeding *twenty* pounds for any breach thereof.

All regulations made as aforesaid shall when published in the *Gazette* have the force of law, and shall be laid before both Houses of Parliament within fourteen days if Parliament be then sitting, but if not then within fourteen days after the commencement of the next following Session of Parliament.

Mr. BRUCE moved the recommittal of this clause with a view to certain amendments.

The recommittal was put to the meeting and lost.

Mr. BRUCE then withdrew his amendment and all other amendments on the business paper standing in his name.

Mr. ALISON (Canonbar) moved that the following be inserted as a new clause:—

“That the provisions of this Bill shall not apply to lessees or licensees or tenants of less than five years' tenure. Where the interest of the tenant or licensee at the time when such expense is to be incurred is for a shorter period than five years the whole of the expense shall be on landlord.”

He said it was too unjust and too absurd to ask these people to destroy the whole of the weeds on their holdings. He considered it was altogether too inequitable.

Mr. BACON (Brewarrina) seconded Mr. Alison's motion.

Mr. ATKINSON said he would like first of all to ask Mr. Alison how he proposed to reconcile this new clause with what had already been passed, that was that the municipalities should have the right to rent the ground for a period not exceeding five years if they could not find the owner. He considered they were now going back and putting it on the owner again, so that they might rent it, and still not be liable

liable to keep down the noxious weeds. The majority of them would put a special clause in the lease, and that was that all noxious weeds should be eradicated, so that the passing of this clause, if it were passed, would simply negative all these leases that had been made. Any private lease that had been made would be negated by a clause like this. If Mr. Alison would insert the words, "Crown licensees or Crown tenants," he would not object to it so much.

Mr. ALISON (Canonbar) said he was quite willing to insert those words.

Mr. ATKINSON said he supported the motion.

Mr. ALISON (Canonbar) said this motion would now read, "that the provisions of this Bill shall not apply to Crown lessees, &c."

Mr. ATKINSON said they wanted to get something that was fair and equitable to all; and he would say that after considering this proposal he hardly saw how they could carry it, even with the addition that had been proposed. He thought they should leave it now, and let that sort of detail regulate itself. He would ask Mr. Alison to withdraw the motion. It would possibly be against the interest of any landholder in the Colony. This, of course, would either introduce one of two things; it would either introduce longer leases from the Crown, or the Crown would have to pay. Now, he need hardly say the Bill would never pass Parliament, where the Crown would render itself liable for that, therefore it would compel them to give longer leases.

Mr. T. BROWN, M.L.A. (Budgerabong), said, if he understood the reading of this clause aright, it was on all-fours with clause 7, that was proposed by Mr. Bruce and had been defeated a little while before, distributing the cost of the destruction of the noxious weeds between the tenant and the owner. He understood Mr. Alison wanted to eliminate the tenant phrase altogether. As the motion was on all-fours with Mr. Bruce's previous amendment, he considered it out of order.

Mr. FLANAGAN (Gunbar) said he was sorry to disagree with Mr. Alison; but this was a most dangerous proposition that they should throw millions of acres of land from under the operation of that Act which they were trying to get put into force. A selector might have a piece of country and the Crown lessee might have a piece of country under the occupation of the Act, and he could continue to hold that land for four years, and let noxious weeds grow all over it. Why should any lands be excluded from the operation of the Act? If they wanted to eradicate noxious weeds, and if occupiers of land did not like to incur the responsibility under this Act, then by all means let them throw up the land, and then the Crown would incur the responsibility, or the selector who held the adjoining land would be glad to take the land into his own holding.

Mr. BACON (Brewarrina) opposed Mr. Alison's proposal. If it referred to private owners it would interfere with any leases now existing, and in other leases that might hereafter be made. The parties to these leases would make them in conformity with the Act, and they were simply legislating as between private persons. With regard to the addition of the Crown lessees and licensees that Mr. Atkinson proposed should be inserted, he opposed that, for he considered it would be an absurdity. It would take out two-thirds of the land in the Colony from the operation of the Act. The Bill would be thrown in the waste-paper basket, and their time would be wasted.

Mr. WILSON said he endorsed Mr. Flanagan's very decided opinion that this would practically destroy the whole work they had done. It did not matter whether the land was public or private, and he would point out that it seemed to him that so far as this Act could apply it applied to a plant that could almost be got under and exterminated inside of one or two years—certainly inside five years—that was if the opportunities of the reseeded of the plant were reduced to a minimum. It was held also that a great deal of the land that was now held under five years' lease was to be under conditions that the tenant had to be responsible for the prevention of any noxious growth. He thought the present Land Act gave them a very good cue as to how they could proceed. It was not to be expected that this Bill should deal with prickly-pear, and blackberry, and so on. That required a great deal of expert calculation, and he did not think they would ever arrive at any definite sensible result on such points, but with regard to the more or less annual weeds which cost less for the time being, and which the succeeding owner or tenant may or may not require to deal with for a time. In the following years the landlord was probably in a worse position than before. It was the tenant who would nearly always get the benefit of dealing with noxious weeds under this Bill.

Mr. ALISON (Canonbar) said he was astounded that there was so much opposition shown in this matter. It seemed to him so extraordinary to think that where the tenant had a lease for a year with no provision with regard to the destruction of weeds that they should propose to throw on him a burden which might be altogether beyond his strength. He had got a yearly lease under certain conditions, and they were proposing to throw on him the onerous responsibility which he never contemplated having to be upon him at the time he took up his lease. They were near the end of the Bill now, and he did not know whether Mr. Wilson intended to bring forward his resolution to complete the scheme of taxation. It seemed to him that they were passing the Bill without any scheme of taxation which would allow the Boards to have any funds to carry out the provisions of the Bill. He could not understand how they had got into such a muddle over this Bill. They had provided no means for collecting money, but had simply passed odd resolutions here and there.

The CHAIRMAN did not think Mr. Alison was in order.

Mr. ALISON (Canonbar) said the Chairman was perfectly right, and all he could say was that he could see his motion would not be carried. At the same time he was convinced that this Bill was too inequitable to receive the approval of the country. All leases could have enormous burdens thrown upon them to exactly the same extent as freehold land or land held under ninety-nine years' tenure. He entered a strong protest against them stultifying themselves so much by rejecting the amendment.

The question was put to the meeting and lost.

Mr. DAVIES (Gunnedah) moved the following as a new clause, "That in every district or part thereof in which prickly pear shall have been declared a noxious weed by proclamation under this Act, the Minister may vest the local authority charged with the administration of this Act with the administration of the Prickly Pear Act of 1886, subject to the control of the Minister, to carry out and enforce the provisions thereof and the regulations issued thereunder."

Mr. ATKINSON seconded the motion.

The question was put to the meeting and carried.

Mr. BACON moved "The recomittal of clause 10 with a view to the omission of subsection C."

The motion lapsed for want of a seconder.

The Preamble.

A BILL to provide for the eradication and destruction and for preventing the growth of Noxious Weeds, and to prohibit and regulate the importation of Noxious Weeds and of articles which might spread their growth.

The preamble was put to the meeting and carried as printed.

Mr. PEARCE (Orange) moved, "That in view of the rapid increase of the sweet briar, prickly-pear, and tobacco-plant, and other noxious weeds, and the necessity for a cheap and efficient means of dealing with the same, this Conference urges the Government to offer a reward for the discovery of a cheap and efficient means of eradicating noxious growths."

Mr. LAURENCE (Balranald) seconded the motion.

The question was put to the meeting and carried.

Mr. ALISON (Canonbar) pointed out there were no financial clauses in the Bill.

The CHAIRMAN pointed out that a minority report could be written putting their views on paper with regard to that.

Mr. BACON (Brewarrina) said he would support Mr. Alison. The only clause in the Bill that proposed any funds was Mr. Alison's proposal which he desired to get expunged, because it was throwing on travelling stock the whole onus of providing funds for cutting noxious weeds in the district.

Mr. LESLIE (Forbes) proposed, "That a sub-committee be appointed to present the resolutions to the Minister and confer with him upon it; such sub-committee to consist of the Honorable Rupert Carington, Mr. J. M. Atkinson, Mr. Wilson, Mr. Davies, and Mr. T. Brown, M.L.A."

The question was put to the meeting and carried.

Mr. ATKINSON, amid acclamation, moved a vote of thanks to the Chairman for the very able manner in which he had presided over the business of the Conference.

The Honorable RUPERT CARINGTON (Jerilderie) said that there was one thing they must not forget, and that was the able assistance rendered to them by the secretary and shorthand writer, who was reporting the proceedings, on behalf of the Metropolitan School of Shorthand, for the Minister.

Mr. ALISON (Canonbar) moved, "That a record be made in the Minute-book of the valuable service rendered to the Conference by the secretary and shorthand writer."

Mr. PEARSE (Orange) seconded the motion which was carried.

The Conference then adjourned.

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

TRUCK BILL.

(PETITION FROM CERTAIN RESIDENTS AT KENDALL, CAMDEN HAVEN, IN FAVOUR OF

Received by the Legislative Assembly, 14 October, 1897.

To the Honorable the Speaker and Honorable Members of the Legislative Assembly of New South
Wales in Parliament assembled.

THE Petition of the undersigned respectfully prays that the Truck Bill, which has been introduced and passed its first reading, may be amended so as to bring the timber-getters under the protection of the proposed law, and that the measure be placed on the Statute Book with the least possible delay.

And your Petitioners, as in duty bound, will ever pray.

[Here follow 19 signatures.]

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

TRUCK BILL.

(PETITION FROM CERTAIN RESIDENTS OF THE HASTINGS RIVER DISTRICT IN FAVOUR OF.)

Received by the Legislative Assembly, 6 July, 1897.

To the Honorable the Speaker and Honorable Members of the Legislative Assembly of New South Wales, in Parliament assembled.

The undersigned to this Petition are of opinion that all industries here suffer through the injurious practice of mill-owners paying their labourers, viz., mill-hands, timber-getters, and teamsters, in goods for their labour instead of money. And seeing that a Truck Bill is to be introduced by the Honorable Mr. Garrard, with the view of bettering the condition of the working class, we, your Petitioners, pray that the said Bill be so amended as to bring the timber-getters and teamsters under the protection of the proposed law.

We also pray that the Truck Bill be dealt with at the earliest possible moment.

And your Petitioners, as in duty bound, will ever pray.

[Here follow 18 signatures.]

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

TRUCK BILL.

(PETITION FROM CERTAIN WOMEN RESIDENT OF CAMDEN HAVEN IN FAVOUR OF.)

Received by the Legislative Assembly, 29 July, 1897.

To the Honorable the Speaker and Honorable Members of the Legislative Assembly of New South Wales, in Parliament assembled.

The humble Petition of the Women of Camden Haven respectfully sheweth,—

That the present system of saw-mill owners having stores is impoverishing the community, and is reducing our families to a condition very much akin to slavery.

We are deprived of the freedom of action by being compelled to buy out of their stores.

And seeing the Government have put down the truck system in Government contracts, we ask that your Honorable House will amend the Truck Bill introduced by the Honorable Mr. Garrard, so that it shall not be lawful for them to keep or share in stores; for we are of opinion that anything less than that would fail to do any good. We also pray that the Truck Bill be dealt with at the earliest possible moment.

And your Petitioners, as in duty bound, will ever pray.

[Here follow 44 signatures.]

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

TRUCK BILL.

(PETITION FROM CERTAIN RESIDENTS IN THE MANNING ELECTORATE IN FAVOUR OF.)

Received by the Legislative Assembly, 28th April, 1897.

To the Honorable the Speaker and Honorable Members of the Legislative Assembly of New South Wales
in Parliament assembled.

The undersigned Petitioners are of opinion that all industries here suffer through the injurious practice of mill-owners paying their labourers, viz., mill-hands, timber-getters, and teamsters, in goods for their labour instead of money. And seeing that a Truck Bill is to be introduced by the Honorable Mr Garrard with the view of bettering the condition of the working class, we, your Petitioners, ask that the said Bill be so amended as to bring the timber-getters and teamsters under the protection of the proposed law.

We also pray that the Truck Bill be dealt with at the earliest possible moment.

And your Petitioners, as in duty bound, will ever pray.

[*Here follow 117 signatures.*]

1897.

LEGISLATIVE ASSEMBLY.
NEW SOUTH WALES.

TRUCK BILL.

(PETITION FROM CERTAIN RESIDENTS OF THE HASTINGS RIVER DISTRICT IN FAVOUR OF.)

Received by the Legislative Assembly, 24 June, 1897.

To the Honorable the Speaker and Honorable Members of the Legislative Assembly of New South Wales, in Parliament assembled.

The undersigned Petitioners are of opinion that all industries here suffer through the injurious practice of mill-owners paying their labourers, viz., mill-hands, timber-getters, and teamsters, in goods for their labour instead of money. And seeing that a Truck Bill is to be introduced by the Honorable Mr. Garrard, with the view of bettering the condition of the working classes, we, your Petitioners, pray that the Bill be so amended as to bring timber-getters and teamsters under the protection of the proposed law.

We also pray that the Truck Bill may be dealt with at the earliest possible moment.

And your Petitioners, as in duty bound, will ever pray.

[Here follow 18 signatures.]
